

NEW GENERA AND SPECIES OF MEXICAN AND SOUTH AMERICAN DELTOCEPHALINE LEAFHOPPERS (HOMOPTERA, CICADELLIDAE, DELTOCEPHALINAE)

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ABSTRACT

The following new taxa from Mexico are described and illustrated: *Bandara spinella* n.sp., *B. similis* n.sp., *B. procera* n.sp., *B. (Bandarana) mimica* n.subgen. et n.sp., *Bardana depressa* n.gen. et n.sp., *Eutettix (Guadlera) discapa* n.subgen. et n.sp., *E. Guad.* *copula* n.sp., *E. (Guad.) placida* n.sp., *E. (Guad.) copula* n.sp., *Mesamia torcipata* n.sp., *M. ruptura* n.sp., *Sanuca badia* n.gen. et n.sp., *Omanana spinara*

n.sp., *O. divisa* n.sp., *O. trileta* n.sp., *Deltocephalus penonus* n.sp., *Acunasus viridis* n.sp., *A. angustatus* n.sp., *Norvellina spatulata* n.sp., *Ollarianus advenus* n.sp., *O. mexicanus* n.sp., *Parabahita igualae* n.sp., and the following from Brazil, *Scaphytopius rubidus* n.sp., *S. labellus* n.sp., *S. (Protranus) abutus* n.subgen. et n.sp., *Chlorotettix tessellatus* n.sp. and *Sinchonoa machua* n.sp. from Peru.

INTRODUCTORY STATEMENT

Most of the new species described at this time were collected in Mexico by the author and his coworkers during the period 1939 to 1945, or by Dr. A. Dampf and J. Parra at earlier dates. One new subgenus and five new species are described from material collected in Brazil and Peru. All types unless otherwise designated are in the DeLong collection, the Ohio State University.

BANDARA SPINELLA N.SP.

(Figs. 1 - 5)

Length of male 4.5 mm, female 5 mm. Crown with margin rounded, twice as wide at base between eyes as median length. Color orange with irregular whitish spots. Crown with black lines just above and below margin, forming a narrow white or pale orange marginal band. Crown, pronotum and scutellum orange with a few white spots. Forewings orange, subhyaline, with white areolar spots and areas.

Female 7th sternum with posterior margin slightly concavely rounded each side of a broad slightly produced median lobe.

Male plates twice as long as width at middle, apices narrowed, rounded. Style with apophysis curving slightly laterally. Aedeagal shaft appearing semicircular, curving caudally and dorsally, with apex divided into two divergent portions. Two processes arising near base, slightly enlarged on anterior margin near middle, extend dorsally almost to curved portion of shaft. Pygofer bearing a ventral caudal spine which extends dorsally almost to dorsal margin of pygofer.

Holotype male, Chilpancingo, Gro. Mexico, X-25-1941, DeLong, Good, Caldwell and Plummer colls. Female allotype, Taxco, Gro. Mex. X-26-41, same colls. Paratypes: 18 males, 1 female same data as holotype; 1 male, 4 females same as allotype; 46 males, Iguala, Gro. Mex. IX-11-'39; 16 males same except X-25-41; 1 male, 3 females Zamora, Mich. Mex. X-2-41 DeLong, Good, Caldwell, Plummer colls. All types in DeLong collection.

B. spinella resembles *B. johnsoni* in coloration and general appearance but can be readily separated by the distinct genital characters.

BANDARA SIMILIS N.SP.

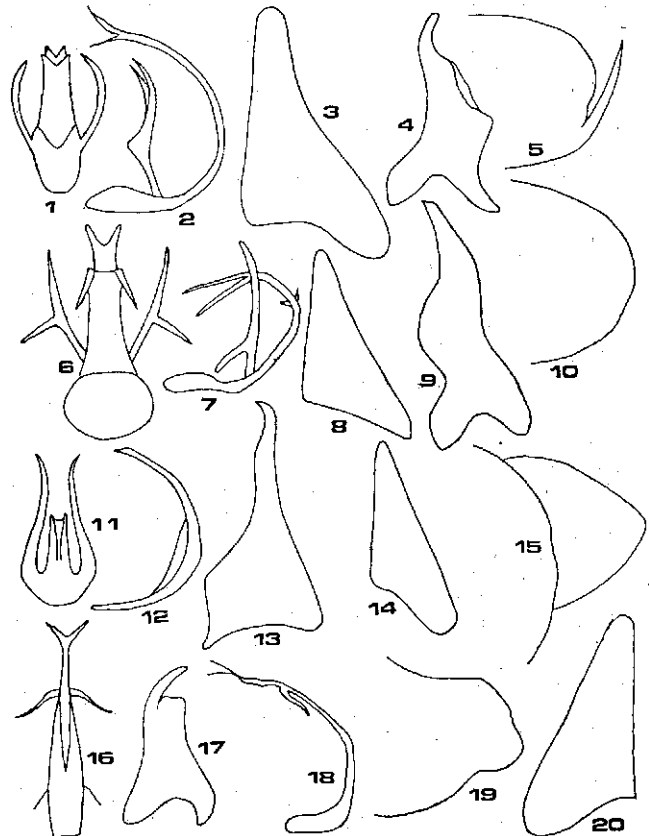
(Figs. 6 - 10)

Length of male 5.5 mm, female 6 mm. Crown more than half as long at middle as basal width between eyes. Color, crown orange yellow with a row of 6 black spots, the two at middle more prominent, above margin, connected by a fine black line. Margin white with a fine black line, scarcely visible, and a black spot next to each eye, below. Pronotum orange with three longitudinal grayish stripes on

disc. Scutellum orange. Forewings orange subhyaline with pale brownish markings on clavus along commissure.

Female seventh sternum posterior margin broadly, concavely rounded, each side of a broad median tooth, notched at apex, half width of segment and produced beyond the length of lateral angles.

Male genital plates two and one-half times as long as median width, apices blunt. Style with apophysis straight,



Figs. 1 - 5 **BANDARA SPINELLA** n.sp.: 1. aedeagus ventrally, 2. aedeagus laterally, 3. plate ventrally, 4. style laterally, 5. pygofer laterally, apical portion.— Figs. 6 - 10 **BANDARA SIMILIS** n.sp. 6. aedeagus ventrally, 7. aedeagus laterally, 8. plate ventrally, 9. style laterally, 10. pygofer laterally, apical portion. Figs. 11 - 15 **BANDARA LYRATA** n.sp.: 11. aedeagus ventrally, 12. aedeagus laterally, 13. style laterally, 14. plate ventrally, 15. pygofer laterally, apical portion.— Figs. 16 - 20 **BANDARA PROCERA** n.sp.: aedeagus ventrally, 17. style laterally, 18. aedeagus laterally, 19. pygofer laterally, apical portion, 20. plate ventrally.

with truncate apex. Aedeagal shaft caudodorsally curved as in *B. spinella* and bearing a pair of short processes near apex of enlarged portion. Apex of shaft divided forming two divergent processes. A pair of processes arise near base of shaft, each bearing a conspicuous lateral process near base. Pygofer broadly rounded apically.

Holotype male, Iguala, Gro. Mexico IX-11-39 DeLong coll. Paratypes: 2 females are placed in this species, 1 female, Tolosa, Oaxaca, Mex. 1-1-1932 J. Para coll; 1 female Buena Vista Gro. Mex. X-23-'41 K-340 DeLong, Good, Caldwell, Plummer colls. in the DeLong collection.

BANDARA LYRATA N.SP.

(Figs. 11 - 15)

Length of male 4 mm, female unknown. Crown a little longer at middle than width at base between eyes. Color, crown white with fused spots forming a transverse black band on median fourth just above margin, and two black spots each side, connected by a black line, between median band and eyes. A rather heavy black line beneath margin. A round black spot next each eye and at middle, at base of crown. A broad transverse orange band extends between eyes. Pronotum orange flecked with brown, and with three grayish longitudinal stripes. Scutellum orange. Forewings subhyaline tinted with orange, veins brown.

Male plates more than three times as long as width at middle, apices narrow, blunt. Style with apophysis short, apex angled, pointed, extending laterocaudally. Aedeagal shaft lyre shaped, curved dorsocaudally; two lateral processes arising at base extend dorsally with apices curved laterally, each side of a shorter median bifid portion, half the length of the lateral processes. Pygofer narrowed apically and rounded.

Holotype male, Vergel, Chiapis, Mexico V-20-35 A. Dampf coll.

B. lyrata is not similar colored to any known species of *Bandara* and is easily separated by the distinct genital structures.

BANDARA PROCERA N.SP.

(Figs. 16 - 20)

Length of male 3.5 mm, female unknown. Crown produced and rounded, more than half as long at middle as basal width between eyes. Crown slightly depressed behind margin which appears elevated at middle. Color, crown yellowish with spots at base. Margin yellowish. Two round contiguous black spots on elevated portion and a marginal black spot each side between the median spots and eyes. Beneath margin, on face, there are two median round black spots and a spot next to each eye. Pronotum orange along anterior margin, disc pale brown with longitudinal dull gray stripes. Scutellum orange. Forewings pale orange subhyaline without distinct markings.

Male plates more than three times as long as width at middle, apices rounded. Style with apophysis finger like, curved laterocaudally. Aedeagal shaft divided into two proximal processes which extend caudally, curve ventrally and are tapered to slender apices which are divergent; each process bearing a ventral process at two-thirds length of shaft which extends ventrolaterally. Pygofer slightly narrowed apically and rounded.

Holotype male, Iguala, Gro. Mexico X-24-1941 DeLong coll. Paratypes: 2 males same data as holotype; 1 male same except IX-11-'41.

B. procera can be separated from all other species of *Bandara* by the large black spots above margin of crown and by the genitalia.

SUBGENUS *BANDARANA* N. SUBGEN.

Superficially resembling species of *Bandara* with similar coloration of crown but broader and with a different type of male genital structures. Pygofer bearing ventro-

basal processes which curve from base of pygofer to dorsal portion then to apex where they protrude beyond the apical margin.

Type of subgenus *Bandara Bandarana mimica* n.sp.

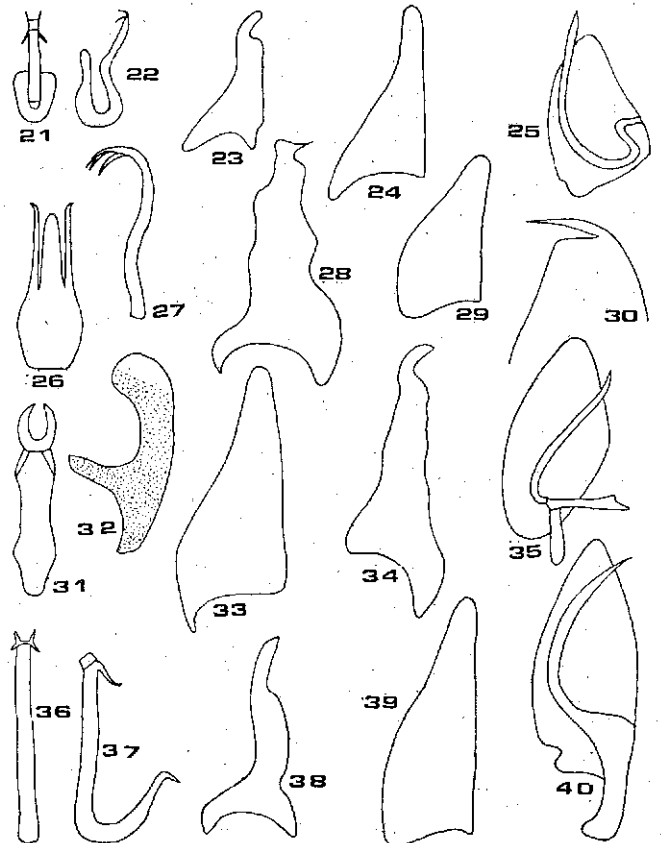
BANDARA (BANDARANA) MIMICA N.SP.

(Figs. 21 - 25)

Length of male 4.5 mm, female 5 mm. Crown broadly rounded, less than half as long at middle as width at base, between eyes. Color, crown orange with six black spots. The four median, rather elongate spots, connected by a narrow black line. The two next to the eyes are not connected by a line and are slightly more basal. Two very small round black spots are next to eyes at base. Margin white with a marginal black line each side of middle and a black spot beneath, next to each eye. Pronotum orange, pala brownish on disc, Scutellum orange. Forewings white subhyaline, clavus mostly pale brown with white circular spots. A dark brown, narrow, diagonal band extends from apex of clavus to costa. Apex slightly smoky.

Female seventh sternum with posterior margin angularly excavated almost one-half distance to base, apex of notch broadly V-shaped.

Male genital plates three times as long as width at middle, apices narrow, rounded. Style apophysis slender,



Figs. 21 - 25 *BANDARA (BANDARANA) MIMICA* n.sp.: 21. aedeagus ventrally, 22. aedeagus laterally, 23. style laterally, 24. plate ventrally, 25. pygofer laterally.— Figs. 26-30 *BARDANA DEPRESSA* n.sp.: 26. aedeagus ventrally, 27. aedeagus laterally, 28. style laterally, 29. plate ventrally, 30. pygofer laterally, apical portion.— Figs. 31 - 35 *EUTETTIX (GUADLERRA) DISCAPA* n.sp.: 31 aedeagus ventrally, 32. aedeagus laterally, 33. plate ventrally, 34. style laterally, 35. pygofer laterally.— Figs. 36 - 40 *EUTETTIX (G.) PLACIDA* n.sp.: 36. aedeagus ventrally, 37. aedeagus laterally, 38. style laterally, 39. plate ventrally, 40. pygofer laterally.

curved outwardly. Aedeagal shaft curved dorsobasally at half its length, divided apically, forming two short processes and with two short subapical processes. Pygofer with a slender elongate process arising basocaudally, which curves basally then dorsocaudally along pygofer wall, extending beyond apex of pygofer, each side.

Holotype male, Orizaba, Veracruz, Mexico, X-8-1941 DeLong, Good, Caldwell, Plummer colls. Allotype female same data as holotype. Paratypes: 1 female same as holotype; 2 females same except VIII-12-1961 Dreisbach coll.; 3 females Córdoba, Vera. Mex. X-8-31, DeLong, Good, Caldwell, Plummer colls.; 1 male 2 females Fortin, Vera., Mex. X-9-41, same colls.; 2 males, 1 female same except X-11-45, Shaw, DeLong, Hershberger colls.; 1 female Jalapa Vera., Mex. XII-1, 6-1961 R. & K. Dreisbach colls.; 1 female Yepoapa, Guatemala V-8-1953 A.O. Lea coll. All types in the DeLong collection.

GENUS *BARDANA* N. GEN.

Medium sized leafhoppers, 5.5-6 mm, related to *Bandara* with short, transverse head, two and one-half times as wide as median length. Crown with a distinct margin and slightly depressed just behind margin causing it to appear elevated on median portion. Venation as in *Bandara*. Pygofer with narrow process which arises at base and extends dorsally then apically the length of pygofer and projects from the pygofer wall apically.

Type of genus *Bardana depressa* n.sp.

BARDANA DEPRESSA N.SP.

(Figs. 26-30)

Length of male 5.2 mm, female 5.5 mm. Crown broadly rounded, two and one-half times as wide at base between eyes as median length. Crown with a distinct margin and slightly depressed behind margin, causing margin to appear elevated. Color, crown yellow with orange spots next to eyes. A black line above margin, each side of middle caused by fusion of two elongated spots. A round black spot next to each eye. Pronotum pale yellow with irregular brown mottling. Scutellum yellow with brown basal angles, apical portion bright yellow. Forewings gray subhyaline with brown veins and sparse round vermiculate markings.

Female seventh sternum with posterior margin convexly excavated one-third distance to base each side of a median spatulate process which is one-third length of excavation and broadly rounded apically.

Male genital plates twice as long as median width, apices narrow, rounded. Style with a short, slightly narrowed apophysis bearing a short, lateral apical spine at apex. Aedeagus composed of three parts, a central and two lateral slender portions which extend beyond the central part and curve dorsally. Pygofer bearing a ventrocaudal spine which extends dorsally beyond the dorsal margin of pygofer.

Holotype male, Mexico City, Mexico D.F. 43 mc. IX-5-39 1200 ft. el. DeLong & Plummer colls. Allotype female same data as holotype. Paratypes: 4 female, 4 males same data as holotype; 1 female La Guardia D.F. Mexico X-26-41; 1 male Mex-Guerravaca Rd., Mor. Mexico VIII-17-36 Ball & Stone colls.

EUTETTIS SUBGENUS *GUADLERA* N. SUBGEN.

The species placed in the subgenus *Guadlera* have a narrower head than Mexican species of *Eutettix*. Margin of crown not distinct and color markings of crown indistinct. Depression of crown as in *Eutettix* missing. Pygofer with narrow processes arising near base and extending along lateral walls, each side, to posterior ventral portion. A pair of short processes with broadened apices, resembling canoe

paddles, extend ventrally at base of pygofer and are conspicuous below walls of pygofers.

Type species *Eutettix (Guadlera) discapa* n.sp.

EUTETTIS (GUADLERA) DISCAPA N.SP.

(Figs. 31-35)

Length of male 6 mm, female 7 mm. Crown broadly rounded, twice as wide at base between eyes as median length. Color, crown yellow with faint brown mottling. Scutellum brown with darker brown basal angles and a yellow spot at middle, each side. Forewings gray subhyaline with brown veins and brown mottling or false veins.

Female seventh sternum with posterior margin roundly produced and slightly notched at middle. Male genital plates three times as long as width at middle, apices narrow, rounded. Style with apophysis short, rather stout and curved outwardly. Aedeagal shaft short, robust, apical portion curved dorsally. Shaft divided dorsoventrally at apex, forming two slightly sclerotized plates which curve dorsally. Pygofer with a slender process which arises basally, extends three-fourths length of pygofer along wall, each side and projects beyond pygofer wall at two-thirds length of pygofer. A short pygofer process, broadened apically, resembling a canoe paddle arises at base of pygofer each side and extends ventrally some distance beyond ventral pygofer wall.

Holotype male, Mexico-Guadalajara Rd. K 116, V-20-43. Allotype female, same data. Paratypes: 12 males, 14 females same data as holotype; 1 female Rio Frio D.F. Mexico K.65, X-10-45 DeLong, Hershberger, Elliott, colls.; 3 females Mexico City D.F. Mexico V-5-44. Types in the DeLong collection.

EUTETTIS (GUADLERA) PLACIDA N.SP.

(Figs. 36-40)

Length of male 6.5 mm, female 6 mm. Crown broadly rounded, two and one-half times as wide at base between eyes as median length. Color, crown pronotum and scutellum orange yellow, unmarked. Forewings white subhyaline, veins and irregular spots, brown.

Female seventh sternum with posterior margin roundly produced, slightly notched at middle.

Male genital plates more than two and one-half times width at middle, apices narrow, rounded. Style narrow with apophysis long and slender, curved slightly outwardly, apex pointed. Aedeagal shaft long, slender, bearing a pair of thin apical plates extending caudally and a pair of short antepical processes. Pygofer with a long, slender curved process which arises from a broad, elongate, sclerotized plate extending basally beyond base of pygofer, then to apex of pygofer where it projects beyond the ventral pygofer margin.

Holotype male, Carapan, Mich. Mexico K 432, X-2-41, DeLong, Good, Caldwell, Plummer colls. Allotype female, same data as holotype; 1 female same data as allotype; 1 male Zitacuara, Mich. Mexico IX-28-45 Plummer, DeLong, Hershberger colls. Type in DeLong collection.

EUTETTIS (GUADLERA) COPULA N.SP.

(Figs. 41-45)

Length of male 5 mm, female unknown. Crown broadly rounded, appearing parallel margined, twice as wide at base between eyes as median length. Color pale yellowish, two very faint small dark brown spots at apex. Pronotum yellowish with dark brown mottling, forming a transverse band across middle. Scutellum yellowish. Forewings whitish subhyaline with brown veins and false veinlets. Clavus with three brown spots along commissure, one close apex of scutellum, one at middle of clavus and at apex of clavus.

Male genital plates twice as long as width at middle, apices narrowed, rounded. Style with apical portion half as

wide as base, pointed on ventroapical margin. Aedeagal shaft curved dorsocaudally, with apex divided, forming two proximal processes. Pygofer with a basically broad spine like process which arises near base of anal tube, tapers to a slender process, curves ventrocaudally and extends distinctly beyond basocaudal margin of pygofer.

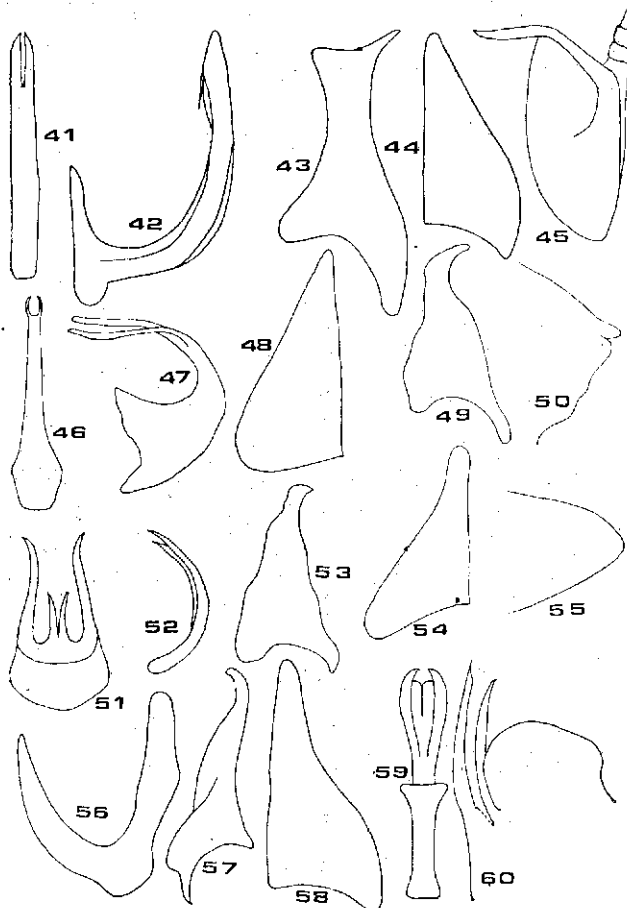
Holotype male, Mexico City D.F., Mexico V-5-'44. Paratype male same data as holotype.

MESAMIA FORCIPATA N.SP.

(Figs. 46 - 50)

Length of male 4.5 mm, female unknown. Crown more than half as long as width at base between eyes. Color, crown pale brown with a black stripe, broken at middle, between eyes. A pale yellow elongate spot next concavity of black line, each side. A black line on face below margin. Pronotum yellowish on anterior margin with three black spots behind each eye. Disc black with white punctate spots. Scutellum white with yellow basal angles, median portion gray. Forewings whitish subhyaline with brown veins.

Male genital plates three times as long as width at middle, apices narrow, rounded. Style with apophysis broad, apex pointed, curved outwardly. Aedeagus curved caudodor-



Figs. 41 - 45 *EUTETTIX* (G.) *COPULA* n.sp.: 41. aedeagus ventrally, 42. aedeagus laterally, 43. style laterally, 44. plate ventrally, 45. pygofer laterally.— Figs. 46 - 50 *MESAMIA FORCIPATA* n.sp.: 46. aedeagus ventrally, 47. aedeagus laterally, 48. plate ventrally, 49. style laterally, 50. pygofer laterally, apical portion.— Figs. 51 - 55 *MESAMIA RUPTURA* n.sp.: 51. aedeagus ventrally, 52. aedeagus laterally, 53. style laterally, 54. plate ventrally, 55. pygofer laterally, apical portion.— Figs. 56 - 60 *SANUCA BADIA* n.sp. 56. aedeagus laterally, 57. style laterally, 58. plate ventrally, 59. aedeagus ventrally, 60. pygofer laterally, apical portion.

sally, apex bearing two long apical processes which appear flattened laterally at point of origin and are half as long as shaft. Pygofer tapered on apical margin to a short, median, pointed tooth-like process.

Holotype male, Iguala, Gro. Mexico IX-11-39. DeLong coll. in DeLong collection.

M. forcipata is related to *M. ruptura* but can be separated by the male genital structures.

MESAMIA RUPTURA N.SP.

(Figs. 51 - 55)

Length of male 9.5 mm, female unknown. Crown more than half as long as width at base between eyes. Color, crown yellow with a broad black transverse stripe, broken at middle, extending between eyes, above yellow margin. Stripe broken next to eyes and where interrupted at middle. The black stripe below the margin is not broken at middle. Pronotum with anterior portion dull yellowish, a black spot and brown markings behind each eye and a black spot each side of middle near base. Disc and posterior portion dark gray. Scutellum dull white with yellow basal angles. Forewings white, subhyaline, with brown veins.

Male genital plates two and one-half times as long as wide at middle, apices rounded. Style tapered to narrow apex which is slightly broadened apically. Aedeagus lyre shaped with a median process half the length of the lateral processes. Pygofer with apex narrowed and rounded.

Holotype male, Iguala, Gro. Mexico, X-25-'41, DeLong, Good, Caldwell, Plummer, colls.

GENUS *SANUCA* N.GEN.

Sanuca is related to *Acunasus* but narrower and with crown only slightly depressed behind slightly upturned margin. Body slender. Genital structures different in general, with rounded V-shaped aedeagus, and pygofer with two long proximal ventrocaudal spines.

Type of genus *Sanuca badia* n.sp.

SANUCA BADIA N.SP.

(Figs. 56 - 60)

Length of male 5.2 mm, female unknown. Crown depressed behind elevated margin, twice as wide at base, between eyes, as median length. Color, crown bright yellow. Pronotum reddish brown. Scutellum yellow, pale brownish along basal margin. Forewings whitish subhyaline, pale brown at base along scutellum and on base of clavus. Two narrow, pale brownish, transverse bands extend from costa to clavus, one at middle and one at apex. Apical cells pale brownish.

Male genital plates three times as long as wide at middle, apices blunt, rounded. Style with apophysis narrow, curved outwardly at apex, with a pointed tooth on outer margin. Aedeagal shaft divided dorsoventrally near base, forming two pieces which diverge, then converge at apex around a central portion which is exceeded in length by the tips of the two processes. Pygofer rounded apically and bearing two long, pointed, spine like processes which arise at ventral margin of pygofer, and extend well beyond its apex.

Holotype male, Iguala, Gro. Mexico X-25-41, DeLong, Good, Caldwell, Plummer colls, in the DeLong collection.

OMANANA SPINARA N.SP.

(Figs. 61 - 63)

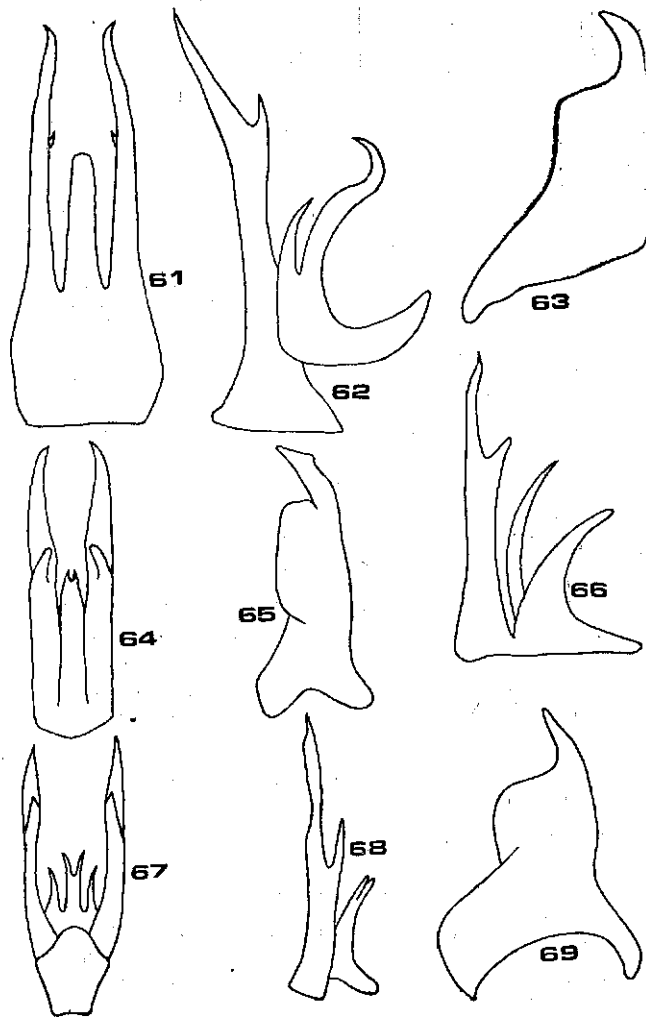
Length of male 5.5 mm, female 6 mm. Crown more than twice as wide at base between eyes as length at middle. Color, crown with a narrow, transverse, white band extending between ocelli, on margin. A broad, black, transverse band just beneath margin separated from brown face

by a narrow white band. Two heavy black transverse bands, separated by a white band extend between eyes just above marginal white band. A large, round, black spot next to each eye at base with a partial basal band extending between them. Pronotum brownish yellow with irregular black spots or areas. Scutellum yellow with black lines extending from base to apex each side of middle. Forewings white with brown veins, vermiculate markings and spots.

Female seventh sternum with posterior margin gradually produced each side of a broad, median, produced tooth which is one-sixth length and one fourth width of segment and is broadly rounded apically.

Male genital plates elongate triangular, with tapered apices. Style broad at base with apophysis curved laterally and pointed at apex. Aedeagal shaft composed of a pair of long slender processes terminating in sharp pointed apices, and bearing short spines on dorsal margins at two-thirds their length. The median portion between the elongate processes is composed of a short ventral pointed spine extending caudad, and a longer proximal process curving dorsally then caudally with a slender pointed apex. Pygofer broadly rounded apically.

Holotype male, Teguilá, Jalisco, Mexico VIII-24-37. Allotype female same data as holotype; 1 male same as holotype.



Figs. 61 - 63 OMANANA SPINARA n.sp.: 61. aedeagus ventrally 62. aedeagus laterally, 63. style laterally.— Figs. 64 - 66 OMANANA DIVISA n.sp.: 64. aedeagus ventrally, 65. style laterally, 66. aedeagus laterally.— Figs. 67 - 69 OMANANA TRILETA n.sp.: 67. aedeagus ventrally, 68. aedeagus laterally, 69. style laterally.

O. spinara is related to *O. arcata* but can be separated by the different genital structures.

OMANANA DIVISA N.SP.

(Figs. 64 - 66)

Length of male 4.5 mm, female 5.5 mm. Crown broadly rounded, one-third wider at base, between eyes than length at middle. Color, crown with a marginal white transverse band between ocelli. Beneath marginal band are two black transverse bands separated by a white band. The more basal line extends across only the median half of crown. Pronotum and scutellum yellow. Forewings brownish subhyaline, with apex of wing and veins of apical fourth brown.

Female seventh sternum with posterior margin gradually produced each side of a median produced tooth, one-fourth width and more than one-third length of segment.

Male genital plates elongate triangular, with long tapered apices. Style with apophysis extending caudolaterally, apex sharp pointed. Aedeagus with paired ventral processes, pointed at apex, and bearing a short spine on dorsal margin at two-thirds their length. The median dorsal portion is composed of two parts, a long slender ventral spine, and a shorter dorsal portion, broad at base and tapered to a slender, blunt, dorsally curved apex. Pygofer narrowed apically and bluntly pointed.

Holotype male, Mexcala, Gro. Mexico, X-2-45, Balock, DeLong, Hershberger colls. Allotype female and two male paratypes same data as holotype. Types in DeLong collection.

O. divisa is related to *O. arcata* but can be easily separated by the genital characters.

OMANANA TRILETA N.SP.

(Figs. 67 - 69)

Length of male 5 mm., female 6 mm. Crown broadly rounded, twice as wide at base between eyes as length at middle. Color, with markings similar to other described species. Crown with a narrow white band on margin between ocelli. Beneath this band is a heavy black band separated from black face by a narrow white band. Above the pale band are two parallel transverse black bands separated by a broader white band. Basal portion of crown tawny. Pronotum basal portion tawny, caudal two-thirds dark brown. Scutellum tawny. Forewings white with veins, vermiculate markings and false veinlets, dark brown.

Female seventh sternum with posterior margin gradually produced each side of a median produced tooth, notched at middle, one-fourth width and one-fourth length of seventh sternum.

Male genital plates elongate triangular with slender tapered apices. Style broad at base with a slender, apically pointed apophysis extending caudad. Aedeagus with slender paired ventral processes pointed apically and bearing a short spine, dorsally, at about half their length. The median dorsal portion is composed of three parts; a slender elongate spine-like process each side of a median, broader, slightly longer process, bifid at apex, terminating in two short spine like apices. Pygofer narrowed and blunt apically.

Holotype male Cuernavaca, Mor. Mexico IX-25-45, Plummer, DeLong, Hershberger, Elliott colls. Allotype female same as holotype. Paratype female same expect Baleck, DeLong, Hershberger colls. Types in DeLong collection.

O. trileta is related to *O. arcata* but these can be easily separated by the distinct genital structures.

SCAPHYTOPIUS (TUMEUS) RUBIDUS N.SP.

(Figs. 70 - 74)

Length of male 5 mm, female unknown. Crown wider at base between eyes than median length. Color, crown white with a black spot each side which broadens and merges as it extends basally forming a white spotted apex.

A large transverse reddish brown area surrounded by white extends between the eyes but does not extend to eyes nor to basal margin of crown. A blackish arm extends from black spot toward ocelli, each side, and a yellowish spot is enclosed near base, each side. Pronotum reddish brown with the lateral marginal areas and three longitudinal stripes, gray. Scutellum with reddish brown basal angles, a median anterior gray portion separated by narrow white bands and a white apical third. Forewings white, subhyaline, with brown veins and brownish areas.

Male genital plates twice as long as width at middle, apex curved laterally and pointed. Style elongate with apical portion finger-like, apex pointed. Aedeagal shaft curved dorsally and divided at two-thirds its length, forming two slender proximal apical processes. Basal two-third broader dorsoventrally, bearing a pair of slender dorsal processes where shaft narrows and is divided. Pygofer narrowed apically, apex blunt.

Holotype male, Rio Negro, Marg. Esq. Brazil, Obaixo, I Anayilhana, A.M. IV-20, 21-67. Exp. Parm. Amaz.

SCAPHYTOPIUS (TUMEUS) LABELLUS N.SP.

(Figs. 75 - 79)

Length of male 5 mm, female 5 mm. Crown produced, rounded at apex, distinctly longer at middle than width at base between eyes. Color, crown yellow with brown markings each side of a triangular yellow spot at apex. The brown coloration forming a triangular area with apex forming the base. An elongate brown marking each side of middle, between eyes, surrounded by yellow. Pronotum light brown with median third dark brown. Scutellum light brown with dark brown basal angles. Forewings pale brownish with brown veins, brown false claval veinlets and white areolar spots. Clavus brown next to corium with conspicuous white spots each side of commissure.

Female seventh sternum with posterior margin broadly, roundly produced.

Male genital plates more than three times as long as width at middle, apices rounded. Style with a short, slender, apophysis, blunt at apex. Aedeagal shaft with a pair of long, slender processes which arise at base extending caudodorsally, and a pair of shorter, proximal processes which arise at two-thirds length of shaft and extend dorsally. Apex of shaft slender, blunt. Pygofer broadly rounded apically.

Holotype male, Nova Teutonia, Brazil, IX-30-1949, 27° 11' B, 52° 23' L, Fritz Plaumann. Allotype female, same as holotype. Paratypes: 1, male same as holotype except X-12-1949; 1 female same as holotype except IX-10-1949.

SCAPHYTOPIUS (PROTRANUS) N. SUBGEN.

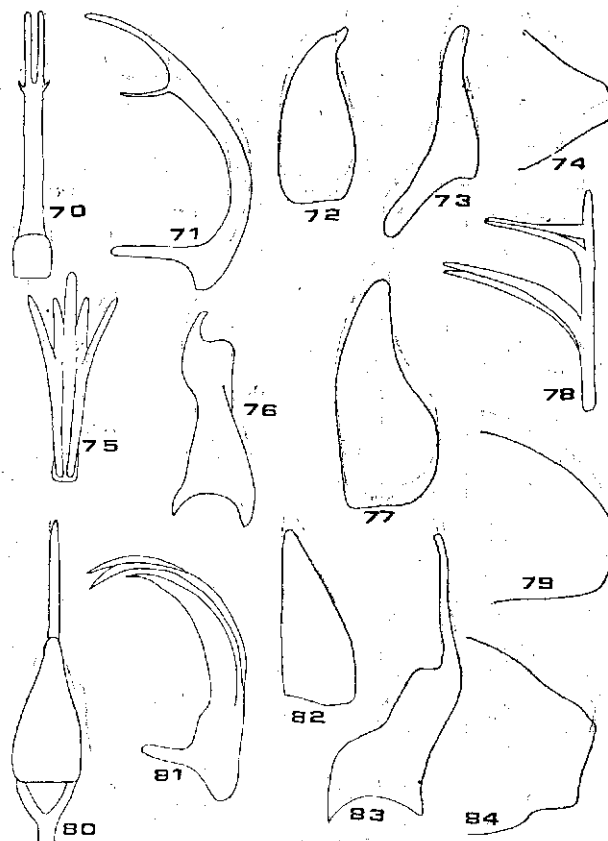
Resembling species of *Scaphytopius* in general appearance but with head shorter and without a distinct margin. Crown bluntly pointed, almost as wide at base between eyes as median length. Genital structures differing from those of typical *Scaphytopius*. Style of male with a long slender apophysis, almost as long as entire basal portion of style. Aedeagus simple, short and curved.

Type species *Scaphytopius Protranus abutus* n. sp.

SCAPHYTOPIUS (PROTRANUS) ABUTUS N.SP.

(Figs. 80 - 84)

Length of male 5 mm, female unknown. Crown as wide at base between eyes as median length. Color, crown mostly brown with a tiny yellow spot at apex, and a triangular yellow spot, widened basally, just above apical spot. A pair of yellow spots each side of middle next to eyes; the larger spot just above margin. Median line on basal half of crown and basal margin yellow. Pronotum yellowish brown with darker brown irregular markings. Scutellum dull yellowish, basal angles brown. Forewings pale brownish subhyaline with darker brown veins and dark brown spots on commissure at apices of claval veins.



Figs. 70 - 74. *SCAPHYTOPIUS RUBIDUS* n.sp.: 70. aedeagus ventrally, 71. aedeagus laterally, 72. plate ventrally, 73. style laterally, 74. pygofer laterally, apical portion.— Figs. 75 - 79 *SCAPHYTOPIUS LABELLUS* n.sp.: 75. aedeagus ventrally, 76. style laterally, 77. plate ventrally, 78. aedeagus laterally, 79. pygofer laterally, apical portion.— Figs. 80 - 84 *SCAPHYTOPIUS ABUTUS* n.sp. 80. aedeagus ventrally, 81. aedeagus laterally, 82. plate ventrally, 83. style laterally, 84. pygofer laterally, apical portion.

lowish, basal angles brown. Forewings pale brownish subhyaline with darker brown veins and dark brown spots on commissure at apices of claval veins.

Male genital plates twice as long as width at middle, apices narrow, rounded. Style with apophysis long, straight, slender, almost as long as basal portion. Aedeagal shaft stout, curved dorsally and tapered to a short pointed apex. A pair of slender proximal processes arise ventrally at base and extend along ventral margin of shaft beyond its apex. Pygofer with apical margin narrowed and almost truncate.

Holotype male Caraguatatuba (Res. Flor 40 m.) Brazil sp. VII-1965, Exp. Dept. Zool. Col.

DELTOCEPHALUS PENONUS N.SP.

(Figs. 85 - 89)

Length of male 2.5 mm, female unknown. Crown produced, bluntly rounded, five-sixths as long at middle as width at base between eyes. Crown rounded to front, without a distinct margin. Color, crown, pronotum and scutellum yellow tinged with green, ocelli black. Forewings subhyaline, veins yellow.

Male genital plates with apices narrowed, rounded, curving outwardly. Style with a straight, slender, finger-like apophysis two-thirds length of basal portion. Aedeagus elongate, tapered to a dorsally curved, divided apex, form-

ing two proximal sharp pointed apices. Connective linear, fused. Apex of pygofer almost truncate.

Holotype male, Penona Marquez, D.F. Mexico V-11-24, A. Dampf coll. Paratypes: 2 males same data as holotype.

ACUNASUS VIRIDIS N.SP.

(Figs. 90 - 94)

Length of male 5 mm., female unknown. Crown flat behind keeled margin, slightly produced at middle, with sharp edge. Color, pale green tinged with yellow with a pair of proximal small black spots at apex. Scutellum more yellowish. Forewings yellowish green, subhyaline.

Male genital plates long, gradually tapered to bluntly pointed apices. Aedeagus S-shaped, similar to other species of the genus but without a visible coiled basal portion. Apical portion single at apex, bluntly pointed and heavily sclerotized on dorsal margin of apical portion. Pygofer with a long spine arising ventrally at apex and extending dorsally along curved ventral portion of caudal margin.

Holotype male, San Teresa, Gro. Mexico VIII-26-30, J. Parra coll. (M.F. 1784). Paratypes: 6 males, Zitacura, Gro. Mexico IX-2-30 (M.F. 1789).

A. viridis is closely related to *A. nigriviridis* but differs in its almost uniform coloration and different genitalia, especially the aedeagus.

ACUNASUS ANGUSTATUS N.SP.

(Figs. 95 - 97)

Length of male 7 mm., female unknown. Crown produced, apex rounded, two-thirds as long at middle as width at base between eyes. Color similar to *O. hyalinus* and other species of the genus. Crown yellowish marked with orange, with six black spots on margin, two at apex, one each side just anterior to each ocellus, and one next to each eye. Pronotum orange with a row of white spots just behind anterior margin. Scutellum orange, a longitudinal white stripe each side of middle third, apical third pale orange, bordered by white. Forewings subhyaline, veins orange.

Male genital plates elongate, triangular, apices bluntly pointed. Style with apophysis narrow, finger like. Aedeagus with apical half broadened, bearing an anterior and posterior process, widely separated by a broad U-shaped excavation. The anterior process is bluntly pointed, the posterior process is more truncate apically. The basal portion of aedeagus is coiled and tubular as in most species of the genus. Pygofer bearing a caudally projecting spine on ventrocaudal margin, and a projecting, tapered, rounded lobe on dorsocaudal margin.

Holotype male, Iguala Gro. Mexico 10-15-41, DeLong, Good, Caldwell, Plummer, colls.

A. angustatus resembles *A. hyalinus* in general color but the crown is narrower and more produced, and the male genitalia are different.

MORVELLINA SPATULATA N.SP.

(Fig. 98)

Length of female 5.5 mm., male unknown. Crown more than twice as wide at base, between eyes, as length at middle. Color, crown white with four small brown spots just above margin, between ocelli. Basal half dark brown with irregular white spots. Pronotum and scutellum brown with numerous white punctate spots. Forewings white with a broad dark brown median stripe, width of pronotum, extending from base of pronotum to apex of clavus. The brown coloration extends diagonally to costa, forming a broad transverse band, caudad to median portion of clavus. The apical portion of wings white with brown spots.

Female seventh sternum with posterior margin notched each side of a median short spatulate process which extends beyond the posterior margin, each side, and is slightly notched at middle.

Holotype female, Ixmiquilpan, Hgo. Mexico IX-27-1941, DeLong, Good, Caldwell, Plummer, colls., in the DeLong collection.

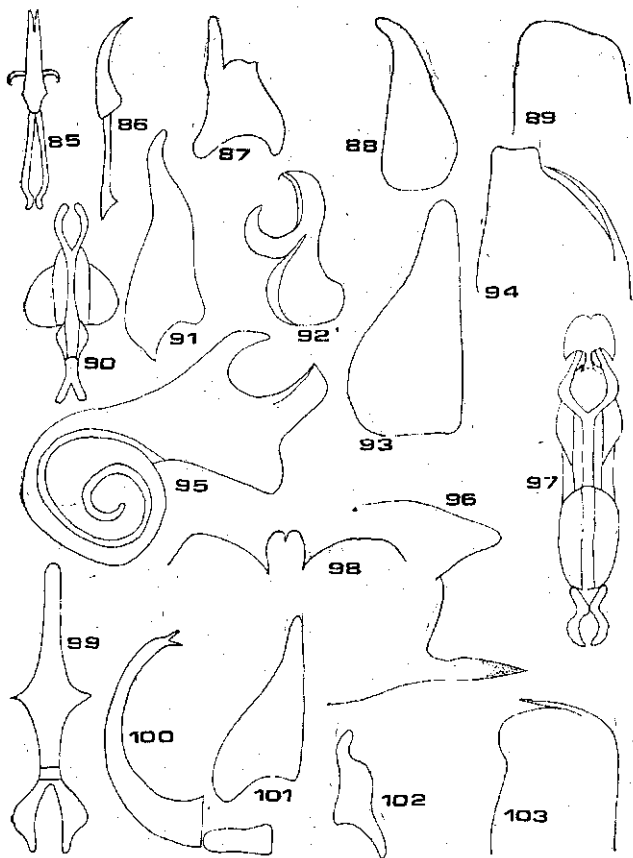
N. spatulata resembles *N. acuspina* in coloration but is distinguished by the spatulate process of the seventh sternum.

OLLARIANUS ADVENUS N.SP.

(Figs. 99 - 103)

Length of male 4.3 mm., female unknown. Crown broadly rounded and rounded to front, more than twice as wide at base between eyes as median length. Color, dull yellow, forewings yellow opaque, veins subdued.

Male genital plates two and one-half times as long as width at middle, apices narrowed, rounded. Style with apophysis finger like, curved slightly laterally. Aedeagus curved dorsally and tapered to a slender apex which bears a pair of short, spine like processes. Pygofer bearing a caudal spine which arises near ventral margin and extends dorsally along caudal margin of pygofer almost to dorsal margin.



Figs. 85-89 DELTOCEPHALUS PENONUS n.sp.: 85, aedeagus, ventrally, 86, aedeagus, laterally, 87, style, laterally, 88, plate, ventrally, 89, pygofer laterally, apical portion. Figs. 90-94 ACUNASUS VIRIDIS n.sp.: 90, aedeagus ventrally, 91, style, laterally, 92, aedeagus, laterally, 93, plate ventrally, 94, aedeagus, laterally, apical portion. Figs. 95-97 ACUNASUS ANGUSTATUS n.sp.: 95, aedeagus, laterally, 96, pygofer, laterally, apical portion, 97, aedeagus, laterally. Fig. 98 MORVELLINA SPATULATA n.sp.: 98, female seventh sternum, apical portion. Figs. 99-103 OLLARIANUS ADVENUS n.sp.: 99, aedeagus, ventrally, 100, aedeagus, laterally, 101, plate ventrally, 102, style, laterally, 103, pygofer laterally, apical portion.

Holotype male, Guerrero, Mexico, III-22-28, A. Dampf coll.

O. advenus is most closely related to *O. insignis* but with different genital structures.

OLLARIANUS MEXICANUS N.SP.

(Figs. 104 - 109)

Length of male 3.5 mm., female unknown. Crown broadly rounded, two-thirds as long at middle as width between eyes at base. Color greenish yellow without markings.

Male genital plates more than three times as long as width at middle, apices narrow, blunt. Style with apophysis rather broad, curved laterally and pointed at apex. Aedeagal shaft short and broad with apex rounded and a spine like process extending laterally, each side. Pygofer narrowed and rounded apically, with a heavily sclerotized horse shoe shaped ring on dorsal margin at base from which arises a pair of long, slender, slightly curved, clasper like structures which extend along dorsal portion of pygofer cavity to apex of pygofer. Pygofer rounded apically.

Holotype male Iguala Gro. Mexico, X-25-'41 DeLong, Good, Caldwell, Plummer colls. Paratypes: 2 males Tehuantepec, Oax. Mexico X-13-'41, same colls.; 1 male Navajoa, Son Mexico III-23-'27 A. Dampf coll.; 2 males (M.F. 1777) El Mante Tamalipas Mexico X-26-1930 A. Dampf coll.

O. mexicanus is closely related to *O. bullataus* but differs by having a heavily sclerotized dorsobasal pygofer plate, more slender dorsal pygofer spines and very short ventral pygofer spines. Also the known Mexican specimens are uniform in color and have no color forms as in *bullatus*.

SINCHONOA MACHUA N.SP.

(Figs. 110 - 114)

Length of male 6.5-7 mm., female 7 mm. Crown almost twice as wide at base, between eyes, as median length. Color, crown yellow, a pale brownish transverse marking just above margin, each side of middle. A wavy dark brownish line extending transversely between ocelli. Two brownish spots close each eye at base. Pronotum yellowish with irregular brownish mottling and a small round brown spot behind each eye. Scutellum tan, a white spot inside of each dark brown basal angle. A longitudinal row of white spots each side of median yellow third. Forewings subhyaline with a few white spots, veins and false veinlets, brown, and a few elongate brownish spots.

Female seventh sternum with posterior margin sloping basally each side of a median U-shaped notch one-eighth width of segment, black at apex.

Male genital plates more than three times as long as width at middle, apices narrow, rounded. Style with apical fourth narrow, finger like, apex rounded. Aedeagal shaft broad at base, narrowed and slender at one-third its length, curved dorsally, apex narrowed, bluntly pointed. Pygofer bearing a long spine basocaudally, extending dorsocaudally and pointed at apex.

Holotype male, Machu Picchu, Peru, XI-25-67 DeLong coll. Allotype female, same except X-23, 28-'67. Paratypes: 3 males, 7 females same as holotype; 3 males, 3 females same as allotype.

PARABAHITA IGUALAE N.SP.

(Figs. 115 - 119)

Length of male 5.5 mm., female unknown. Crown more than twice as wide at base, between eyes, as length at middle. Color, face black. Margin of crown with a narrow yellowish white band extending between ocelli. Below marginal band is a broad transverse black band, separated from black face by a narrow pale yellow band. Crown mostly yellow, mottled with brown. A black, transverse band just above ocelli, separated from a parallel dark brown band, which joins black band near eyes, by a rather broad white

band. Pronotum pale brown with dark brown irregular mottling. Scutellum pale brownish with a few dark brown spots and with white elongate spots at base and along anterior portion of lateral margins. Forewing whitish subhyaline with veins, false veins and vermiculate brown markings.

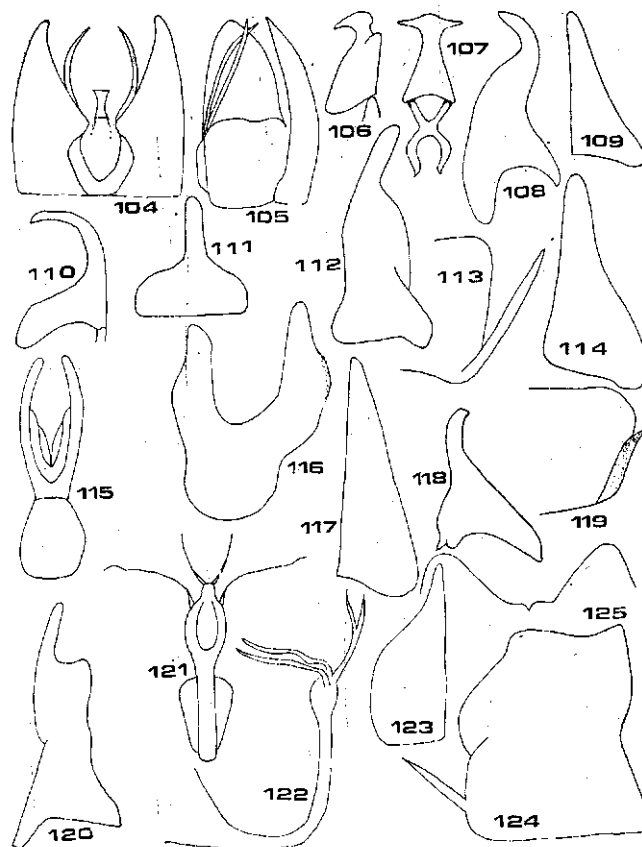
Male plates four times as long as width at middle, apices narrow, rounded. Style with apophysis narrow, curved laterally at apex. Aedeagus short and broad, shaft divided at base with the two lateral portions curved outwardly, then inwardly at apex. Pygofer bearing a ventrocaudal spine, which is contiguous with caudal margin extending dorsally.

Holotype male, Iguala, Gro. Mexico X-25-'41 DeLong coll. *P. igualae* resembles *Tapierhina biturcata* in coloration and appearance but should be placed in *Parabahita*.

CHLOROTETIX TESSELLATUS N.SP.

(Figs. 120 - 125)

Length of male 8.5 mm., female 8.5 m. Head short, broadly rounded, three times as broad at base, between eyes, as length at middle. Color, crown, margin pale brown, ocelli and a round spot at apex yellow. A broad transverse black band which reaches to base at middle, extends be-



Figs. 104-109 *OLLARIANUS MEXICANUS* n.sp.: 104. pygofer and preceding segment dorsally, 105. same laterally, 106. aedeagus laterally, 107. aedeagus ventrally, 108. style laterally, 109. plate ventrally.— Figs. 110-114 *SINCHONOA MACHUA* n.sp.: 110. aedeagus laterally, 111. aedeagus ventrally, 112. style laterally, 113. pygofer laterally, apical portion, 114. plate ventrally.— Figs. 115-119 *PARABAHITA IGUALAE* n.sp.: 115. aedeagus ventrally, 116. aedeagus laterally, 117. plate ventrally, 118. style laterally, 119. pygofer laterally, apical portion.— Figs. 120-125 *CHLOROTETIX TESSELLATUS* n.sp.: 120. style laterally, 121. aedeagus ventrally, 122. aedeagus laterally, 123. plate ventrally, 124. pygofer laterally 125. female seventh sternum, apical portion.

tween eyes just above ocelli. Basal portion of crown mostly yellow. Pronotum with basal marginal area white with black spots and blotches. Scutellum with anterior half black with white squarish spots in basal angles and each side of middle, along anterior margin, resembling a checker board. Apical half white. Forewings black, subhyaline, with white veins, except on apical third.

Female seventh sternum with posterior margin broadly angularly excavated half distance to base each side of a median truncate third which is slightly notched at middle.

Male genital plates two and one-half times width at middle, abruptly narrowed to slender apices which are bluntly pointed. Style with a rather long slender apophysis which is blunt at apex. Aedeagal shaft long, slender, enlarged apically and bearing four long slender processes, two arising proximally at apex of shaft, extending caudally, and two arising laterally and extending laterally, each side. Pygofer with apex broad, almost truncate.

Holotype male, Sao Paulo, Brazil III, '86, Allotype female same except Alto Ja Lirra, Brazil XII, 1925.
