

STUDIES OF THE GYPONINAE
(HOMOPTERA: CICADELLIDAE) –
FOURTEEN NEW SPECIES OF *GYPONA* FROM
CENTRAL AND SOUTH AMERICA^{1, 2}

DWIGHT M. DELONG AND CANDACE MARTINSON

Department of Entomology, The Ohio State University, Columbus, Ohio 43210

ABSTRACT

Fourteen new species of South American *Gypona* (Homoptera: Cicadellidae) are described. Thirteen are placed in the subgenus *Gypona*: *G. gilba* n. sp., *G. laxa* n. sp., *G. cerina* n. sp., *G. nigricara* n. sp., *G. medica* n. sp., *G. plaga* n. sp., *G. patula* n. sp., *G. pallida* n. sp., *G. pallidula* n. sp., *G. fumida* n. sp., *G. reversa* n. sp., *G. infuscata* n. sp., and *G. viridans* n. sp. and one species, *G. aurantica* n. sp., is placed in the subgenus *Marganalana*.

A revisional study of the species of *Gypona* was published by DeLong and Freytag (1964), in which some 140 species were treated and placed in four subgenera. Species of *Gypona* are known to occur only in the Americas, but many of the types are in European museums. The types are often represented by only one sex, which in several cases is the female. However, only the males are readily separated by morphologic characters of the genital chamber, and in general, males and females cannot be referred to the same species name unless collected together in the field. Since completing and publishing the above synopsis, material from Central and South America, which contains apparently undescribed species, has been received for study from the U.S. National Museum (J. P. Kramer), the University of Michigan (T. E. Moore), the British Museum of Natural History (W. J. Knight), the American Museum of Natural History (J. G. Rozen, Jr.), the Muscu de Zoologia da Universidade de São Paulo, Brazil (Hans Reichardt), and the Musco La Plata, Argentina. These specimens are called "apparently undescribed" because the males described here cannot be associated with already-described females.

All of the species described below have been placed in the subgenus *Gypona* except *aurantica*, which is placed in the subgenus *Marganalana*.

***Gypona gilba* n. sp.**

(Figs. 1-5)

Length of male 7 mm; female unknown. Crown broadly rounded, more than twice as broad between eyes at base as median length. Color of crown, pronotum, and scutellum golden yellow. Pronotum with small round, black spot behind each eye, located at half the length of pronotum. Forewing yellow, subhyaline.

Male genitalia with plates three times as long as wide; apices narrow, blunt. Style with blade short, apical half curved dorsally, tapered to narrow, bluntly pointed apex; ventral margin on basal portion serrate. Aedeagal shaft with apex narrow, round; two subapical processes arising laterally and extending basad; apical half of each recurved, folded back proximal to basal half, narrowed, tapered to slender, pointed apex. Pygofer with apex narrow, blunt, rounded.

Types: Holotype male labeled "Rio de Janeiro, Floresta da Tijuca, GB, Brazil IV-1966, Alvarerna, Coll." in the Museu de Zoologia da Universidade de São Paulo, Brazil.

***Gypona laxa* n. sp.**

(Figs. 6-10)

Length of male 9 mm; female 10 mm. Crown strongly produced, rounded, more than two-thirds as long at middle as basal width between eyes. Color dull yellow, without definite markings.

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Male genitalia with plates almost four times as long as broad; apices narrow, rounded. Style with blade narrowed on apical two-thirds, curved dorsally, pointed at apex. Aedeagal shaft narrow, with elongate apical portion consisting of two oppressed hair-like processes.

Female genitalia with seventh sternum without produced lateral angles. Posterior margin truncate.

Types: Holotype male labeled "Chapada, Brazil. June, C. F. Baker". Allotype female same as holotype. Paratypes 2 ♂ 1 ♀ same as holotype; 1 ♂ 4 ♀'s same except July; 1 ♀ same except April; 1 ♀ same except October; 1 ♂, 1 ♀ same except May. Holotype, allotype, and paratypes in the U. S. National Museum; paratype in the DeLong Collection.

***Gypona cerina* n. sp.**

(Figs. 11-15)

Length of male 10 mm; female unknown. Crown broadly roundedly produced, almost twice as wide between eyes at base as median length. Color yellow, tinged with orange. Crown with dark-brown anterior margin. Pronotum yellow, with disc and basal half orange. Scutellum yellow. Forewings yellow subhyaline; veins orange-yellow.

Male genitalia with plates almost three times as long as broad; apices narrow, rounded. Style with blade long, gradually tapered to narrow, pointed apex; ventral margin serrate near base of blade. Aedeagal shaft short, narrow, and blunt at apex, with pair of recurved subapical processes more than one-half length of shaft extending laterally, with apices recurved caudad, then basad. Pygofer with narrow, curved apex.

Types: Holotype male labeled "Igarapé Belém Rio Solimões. A.M. Brazil 7-30-IV 1966 Malkin Coll." in the Museu de Zoologia da Universidade de São Paulo, Brazil.

***Gypona nigricara* n. sp.**

(Figs. 16-20)

Length of male 8.5 mm., female unknown. Crown broadly rounded, twice as wide between eyes at base as median length. Color, crown black, ocelli and spots around ocelli, yellow; yellow spot at base each side posterior to ocellus. Pronotum black, median line and series of three spots each side, yellow. Line of spots beginning near basal spot of crown, extending, curved in arrangement, to median portion of lateral margin. Scutellum black with yellow spot in each basal angle, and at apex. Forewings yellow, subhyaline, costal margin bright yellow. Veins on disc and clavus black, spot on costal margin at first apical vein.

Male genitalia with plates two and one-half times as long as broad, apices rounded. Style with blade gradually broadened from base to two-thirds its length where ventral margin angles dorsally forming bluntly pointed apex on dorsal margin. Aedeagal shaft slender, apex slightly concavely rounded; two pairs of subapical, proximal, parallel lateral processes extend laterad and caudad; outer pair more than half length of shaft, inner (more basad pair) about two-thirds as long as outer pair. Pygofer with narrow, rounded protruding process at apex, just dorsad to tuft of long, thick spines.

Types: Holotype male Torentoy Canyon (base Machu Picchu) 2000-2200 m, Peru VI-VII-1964, Malkin Coll. in Museu de Zoologia da Universidade de São Paulo, Brazil.

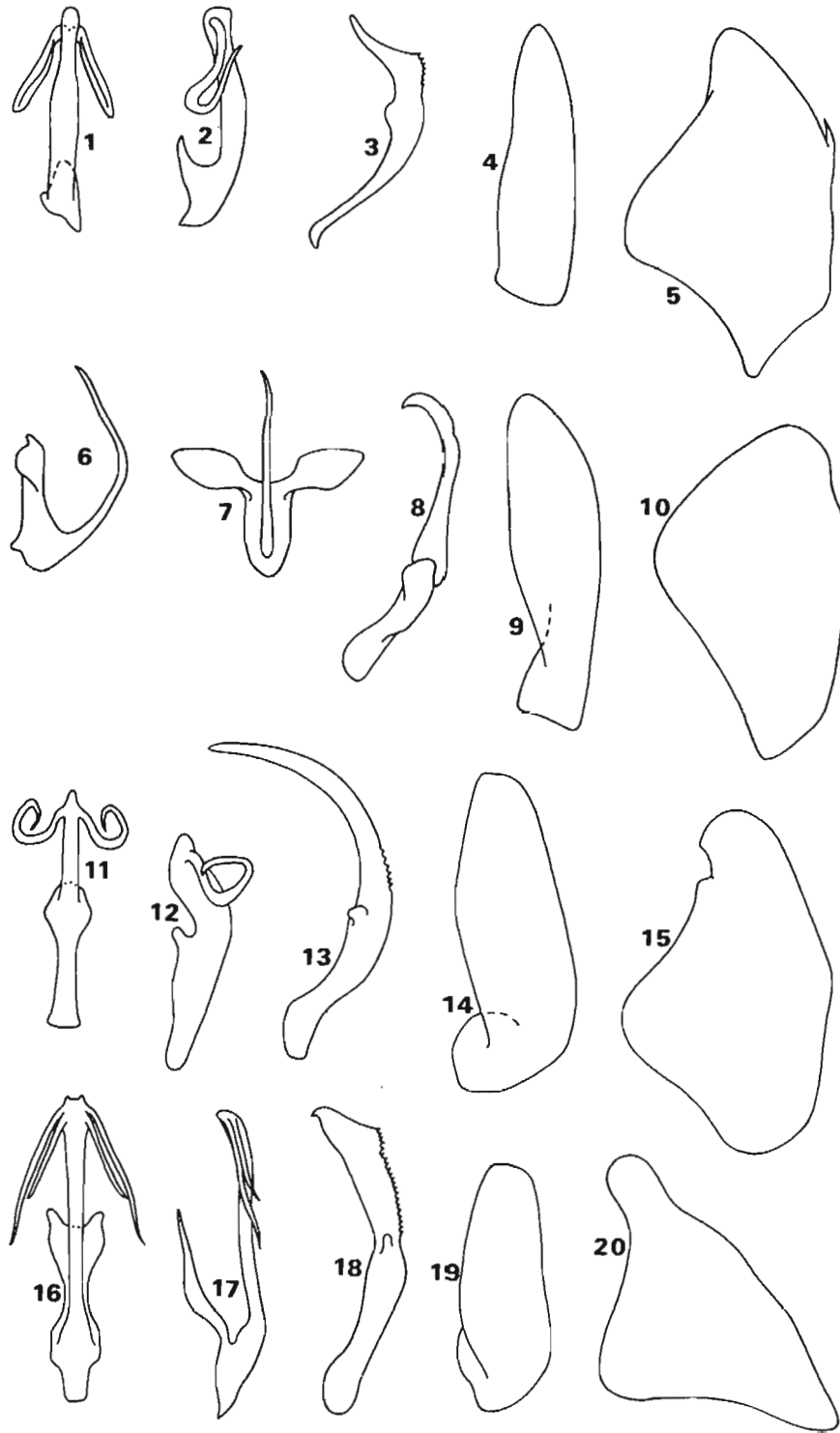
***Gypona medica* n. sp.**

(Figs. 21-25)

Length of male 7 mm; female 8 mm. Crown broadly rounded, more than half as long at middle as basal width between eyes. Color of male golden yellow; posterior portion of pro-

EXPLANATION OF PLATE

FIGURES 1-5. *Gypona gilba* n. sp. 1. aedeagus, ventral view; 2. aedeagus, lateral view; 3. style, lateral view; 4. plate; 5. pygofer, lateral view. FIGURES 6-10. *Gypona laxa* n. sp. 6. aedeagus, lateral view; 7. aedeagus, ventral view; 8. style, lateral view; 9. plate; 10. pygofer, lateral view. FIGS. 11-15. *Gypona cerina* n. sp. 11. aedeagus, ventral view; 12. aedeagus, lateral view; 12. style, lateral view; 14. plate; 15. pygofer, lateral view. FIGURES 16-20. *Gypona nigricara* n. sp. 16. aedeagus, ventral view; 17. aedeagus, lateral view; 18. style, lateral view; 19. plate; 20. pygofer, lateral view.



notum, scutellum, and fore-wings shaded with brown; apical cells infuscated. Female green, tinted with yellow.

Male genitalia with plates two and one-half times as long as broad; apices broad, rounded. Style with blade curved dorsally; basal two-thirds serrate on ventral margin, apical half narrowed, apex bluntly pointed. Aedeagal shaft with narrow, rounded apex, a pair of subapical lateral processes, more than one-third length of shaft, extending basad.

Female genitalia with seventh sternum without prominent lateral angles. Posterior margin almost truncate, slightly notched at middle.

Types: Holotype male labeled Guatemala, Peten, Tikal 15 May 1956, (#272) T. H. Hubbell, allotype female same except 14 May (#270), both in University of Michigan Collection.

***Gypona plaga* n. sp.**

(Figs. 26-30)

Length of male 8.5 mm; female unknown. Crown broadly rounded, twice as wide between eyes at base as median length. Color, crown, pronotum, and scutellum golden yellow; margin of crown dark brown. Forewings yellow, with clavus, disc, and posterior (inner) half of wing dark brown, forming brown stripe from scutellum to apex of wing.

Male genitalia with plates two and one-half times as long as broad; apices broad, rounded. Style with blade curved at middle, narrowed; apical half bent dorsally, apex slightly enlarged, rounded; ventral margin just basad to curved portion serrate. Aedeagal shaft slender; apex narrow, blunt; two apical processes half length of shaft arising laterally and extending basad.

Types: Holotype male labeled "Ter. Amapá, Serra de Navio, Brazil IX-59, J. Lane Coll." in the Museu de Zoologia da Universidade de São Paulo, Brazil.

***Gypona patula* n. sp.**

(Figs. 31-35)

Length of male 9 mm; female unknown. Crown broadly rounded, almost twice as broad between eyes at base as median length. Color of crown, pronotum, and scutellum yellow tinged with green. Pronotum with small round black spot each side behind eye, located at half the length of pronotum. Scutellum tinged with orange. Forewings yellow, subhyaline; veins green.

Male genitalia with plates two and one-half times as long as broad; apices narrow, truncate. Style with blade narrow at base, broadened at middle, narrowed just before bifid apex. Apex consisting of dorsally protruding, short, curved process and longer ventrally protruding process; ventral margin serrate. Aedeagal shaft narrow, rounded at apex, with pair of subapical processes more than one-third length of shaft extruding basad. Pygofer with narrow, rounded apex; with narrow, rounded, protruding dorsal portion; serrate on dorsal margin just basad of rounded apex.

Types: Holotype male labeled "Ter. Amapá Rio Anicohi, Brazil 23-VI-57, J. Lane Coll." in the Museu de Zoologia da Universidade de São Paulo, Brazil.

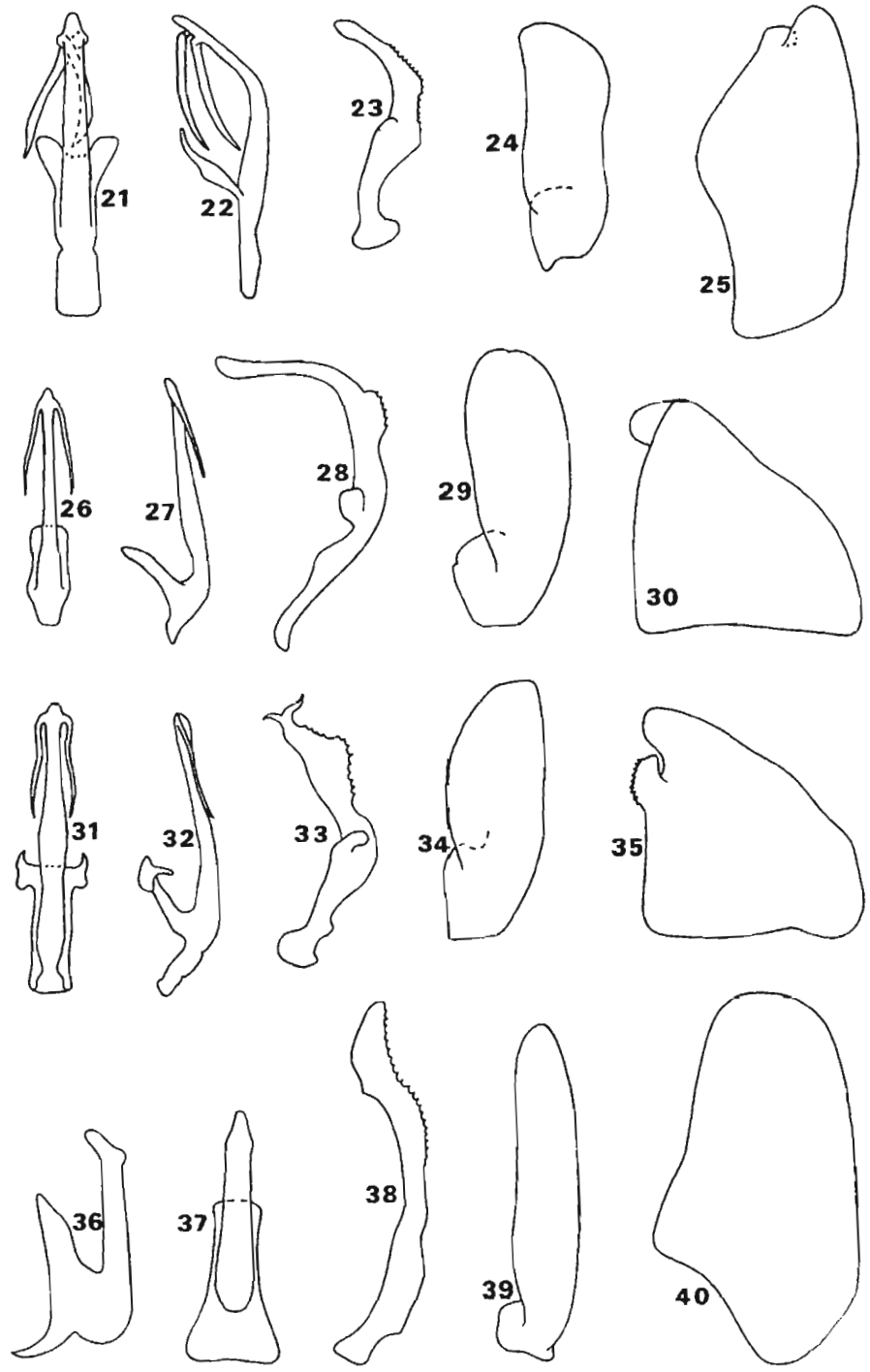
***Gypona pallida* n. sp.**

(Figs. 36-40)

Length of male 9.5 mm; female unknown. Crown broadly rounded, almost two and one-half times as broad between eyes at base as median length. Color, crown, pronotum, and scutellum pale green; forewings appearing white with green veins, with small black spot at base of each forewing.

EXPLANATION OF PLATE

FIGURES 21-25. *Gypona medica* n. sp. 21. aedeagus, ventral view; 22. aedeagus, lateral view; 23. style, lateral view; 24. plate; 25. pygofer, lateral view. FIGURES 26-30. *Gypona plaga* n. sp. 26. aedeagus, ventral view; 27. aedeagus, lateral view; 28. style, lateral view; 29. plate; 30. pygofer, lateral view. FIGURES 31-35. *Gypona patula* n. sp. 31. aedeagus, ventral view; 32. aedeagus, lateral view; 33. style, lateral view; 34. plate; 35. pygofer, lateral view. FIGURES 36-40. *Gypona pallida* n. sp. 36. aedeagus, lateral view; 37. aedeagus, ventral view; 38. style, lateral view; 39. plate; 40. pygofer, lateral view.



Male genitalia with plates more than five times as long as broad; apices blunt, rounded. Style with blade serrate on apical two-thirds of ventral margin; dorsal margin with tooth projecting at two-thirds length of shaft, beyond which dorsal margin is convexly curved to bluntly pointed apex. Aedeagal shaft short with short, blunt, rounded apical portion protruding dorsad and caudad. Pygofer rounded to apex.

Types: Holotype male from Piracicaba, São Paulo, Brazil 11-8-65. C. A. Triplehorn Coll. Paratypes: 1 ♂ same as holotype; 1 ♂ same except 8-3-66; 1 ♂ labeled "Tijuco Presto, Esp Santo Brazil". Holotype and paratypes in the DeLong Collection, paratype in the British Museum of Natural History Collection.

***Gypona pallidula* n. sp.**

(Figs. 41-45)

Length of male 8 mm; female unknown. Crown broadly rounded, more than half as long at middle as basal width between eyes. Color of crown pale yellow; pronotum pale green, with a black spot behind each eye, located at half the length of pronotum. Scutellum pale green. Forewings pale green, subhyaline; veins green.

Male genitalia with plates more than three times as long as broad; apices rounded. Style with blade slightly broadened just before narrow, dorsally curved, pointed apex. Aedeagal shaft narrowed at two-thirds its length; apical third tapered, slender; apex pointed, a slender pointed process, one-third length of shaft, arising on dorsal margin at base.

Types: Holotype male labeled "S. Paulo, S. Miguel Brazil III-54, J. Lane. Coll." in the Museu de Zoologia da Universidade de São Paulo.

***Gypona fumida* n. sp.**

(Figs. 46, 52-56)

Length of male 8 mm; female 10 mm. Crown broadly rounded, twice as wide between eyes at base as median length. Color of crown, pronotum, and scutellum dull yellow. Forewings yellow, portion covering abdomen appearing pale orange-brown; apical cells and portion of antecapical cells dark brown.

Male genitalia with plates more than three times as long as wide, narrowed, rounded at apex. Style with blade curved dorsally, with finger-like process on ventral margin at half length of blade; apex narrow, curved basad. Aedeagal shaft narrowed, blunt at apex, with two pairs of subapical processes; caudad pair, about one third length of shaft and extending laterad and basad; basad pair arising proximal to caudad pair and extending basad along shaft one-fourth distance to base. Pygofer with small plate-like processes on dorsocaudal margin, one on each side.

Female genitalia with lateral angles of seventh sternum broadly curved to posterior margin, which gradually slopes cephalad to narrow, median, rounded lobe. Lobe about one-fourth width of segment and produced to length of lateral angles. Posterior margin slightly notched at each side of median lobe.

Types: Holotype male labeled "Ranche Grande nr. Maracay Ven. II-IV 1946" (Gift of New York Zoo. Soc. Dept. Tropical Research, William Beebe, Dir.). Allotype same data as ♂. Paratypes 3 ♂ and 22 ♀ same data as holotype; four ♂ and 5 ♀ same data except V-7-1964; 1 ♂ same data except V-8-1964. Holotype, allotype, and paratypes in the American Museum of Natural History Collection. Paratypes in the U.S. National Museum, the Stockholm Museum, and the DeLong Collections.

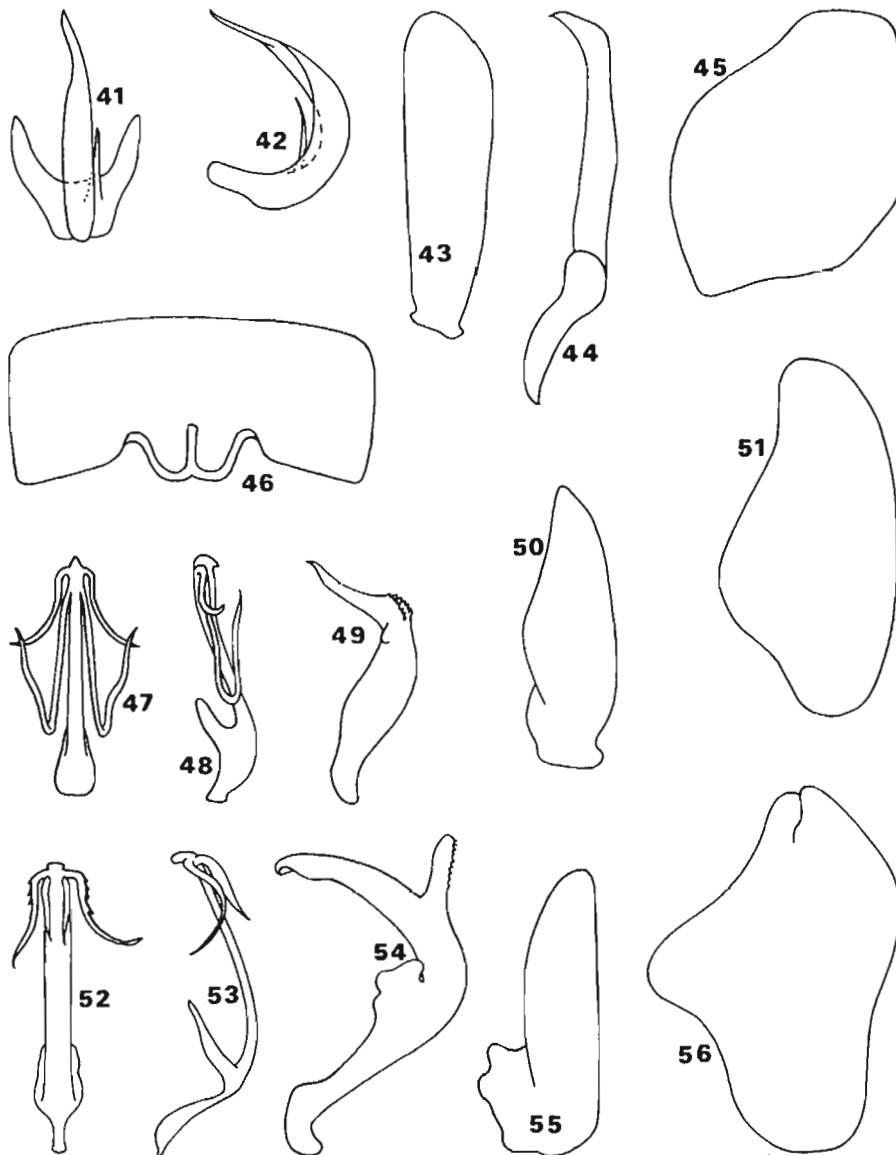
***Gypona reversa* n. sp.**

(Figs. 47-51)

Length of male 7 mm; female unknown. Crown broadly rounded, more than twice as wide between eyes at base as median length. Color of crown, pronotum and scutellum dull yellow. Pronotum with round black spot behind each eye, located at half length of pronotum. Forewing orange-yellow.

Male genitalia with plates more than two and one-half times as long as broad; apex bluntly pointed. Style broadened at one-third length of blade, narrowed at two-thirds its length,

bent dorsally and tapered to slender, pointed apex. Aedeagal shaft pointed at apex (ventral view), with two pairs of subapical lateral processes; caudad pair extending almost one-half length of shaft, extruding laterad and basad; basal pair extending basad more than two-thirds length of shaft, then bent back upon themselves and extending caudad about two-thirds distance to apex. Pygofer narrow, rounded at apex.



FIGURES 41-45. *Gypona pallidula* n. sp. FIGURE 41. aedeagus, ventral view; 42. aedeagus, lateral view; 43. plate; 44. style, lateral view; 45. pygofer, lateral view. FIGURES 46, 52-56. *Gypona fumida* n. sp. 46. female, seventh sternum. 52. aedeagus, ventral view; 53. aedeagus, lateral view; 54. style, lateral view; 55. plate; 56. pygofer, lateral view. FIGURES 47-51. *Gypona reversa* n. sp. 47. aedeagus, ventral view; 48. aedeagus, lateral view; 49. style, lateral view; 50. plate; 51. pygofer, lateral view.

Types: Holotype male labeled "Vicosá, Min. Ger., Brazil V-'31 EJJH, grass and weeds". Paratype male labeled "Mex VC 1950, Jalapa V. NLH Krauss". Holotype and paratype in the U. S. National Museum.

Gypona aurantica n. sp.

(Figs. 57-61)

Length of male 10 mm; female unknown. Crown strongly produced, rounded, more than two-thirds as long as basal width between eyes. Color of crown, pronotum, and scutellum orange; ocelli red. Forewings yellow, opaque, with brown spot on each forewing at apex of clavus.

Male genitalia with plates almost four times as long as broad; apices rounded. Style with blade serrate on middle portion of ventral margin, with ventral tooth at caudal margin of serration; ventral margin beyond tooth curved dorsally, forming pointed apex. Aedeagal shaft with pair of lateral processes arising just before broadened apex, each process extending basad, bifid near point of attachment; outer branch of each process short; inner branch of each long, curved, extending almost to base of shaft, armed with two or more hair-like spines.

Types: Holotype male labeled "Nor. Yungas, Caranavi, Bolivia 4-VI-1931," P. Denier Coll. in the Museo La Plata, La Plata, Argentina.

Gypona infuscara n. sp.

(Figs. 62-66)

Length of male 9 mm; female unknown. Crown broadly rounded, two thirds as long as middle as basal width between eyes. Color of crown yellow, anterior margin black. Pronotum yellow, disc and basal portion black, except for a median, longitudinal, yellow stripe. Scutellum yellow, with two median black spots. Forewings yellow; base of clavus, claval veins, veins on disc, and apical veins black or dark brown.

Male genitalia with plates two and one-half times as long as wide; apices broad, rounded. Style with blade curved dorsally at one third its length; apical two-thirds narrow, apex bluntly pointed; ventral margin, just basad to curved portion, serrate. Aedeagal shaft slender, apex blunt; pair of apical processes, one-third length of shaft, arising laterally, curving basad and laterad; pair of proximal, longer, subapical processes, more than half length of shaft, arising basad to apical processes and curving basad. Pygofer narrowed, rounded at apex; short, blunt, serrate-margined process near dorso-caudal margin extending dorsad and curving inwardly.

Types: Holotype male labeled "Canindé Rio Gurupi, Brazil Pa IV. 1963. Malkin and Pinheiros Coll." in the Museu de Zoologia da Universidade de São Paulo, Brazil.

Gypona viridaus n. sp.

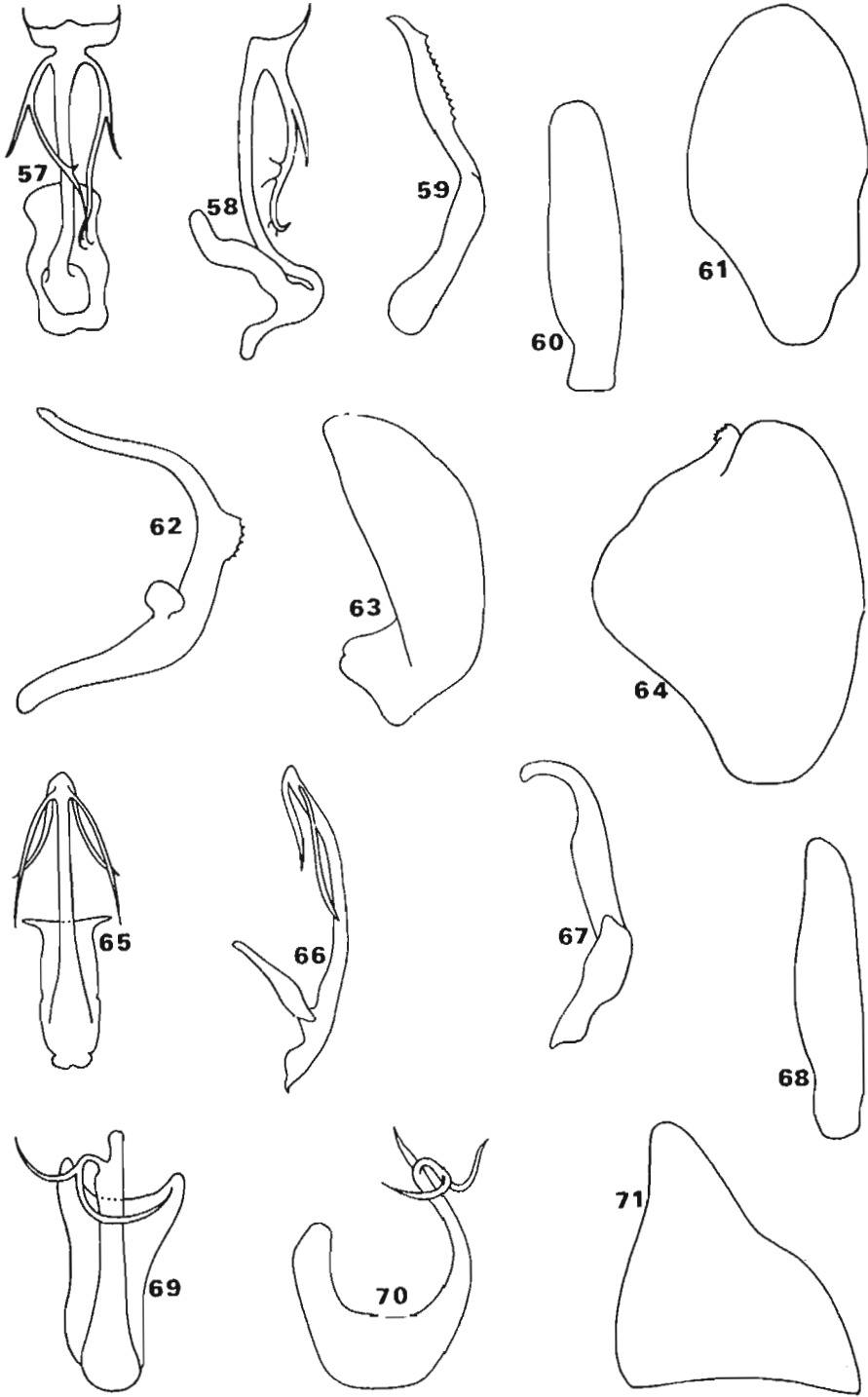
(Figs. 67-71)

Length of male 8.5 mm; female unknown. Crown produced, rounded, more than half as long as basal width between eyes. Color green, without distinct markings. Margin of crown and costal margin of forewings yellow.

Male genitalia with plates elongate, almost five times as long as broad; apices blunt, rounded. Style with blade narrowed at half its length. Apical fourth curved dorsally, apex blunt. Aedeagal shaft narrowed near apex, tip blunt; a lateral process arising where shaft

EXPLANATION OF PLATE

FIGURES 57-61. *Gypona aurantica* n. sp. 57. aedeagus, ventral view; 58. aedeagus, lateral view; 59. style, lateral view; 60. plate; 61. pygofer, lateral view. FIGURES 62-66. *Gypona infuscara* n. sp. 62. style, lateral view; 63. plate; 64. pygofer, lateral view; 65. aedeagus, ventral view; 66. pygofer, lateral view. FIGURES 67-71. *Gypona viridaus* n. sp. 67. style, lateral view; 68. plate; 69. aedeagus, ventral view; 70. aedeagus, lateral view; 71. pygofer, lateral view.



narrows, bifid near attachment to shaft, forming two curved narrow branches, one-fourth length of shaft, both of which curve laterally.

Types: Holotype male labeled "Brasilien, Nova Teutonia 27° 11' 8, 52° 23' 1, 19-7-1948, Fritz Plaumann" in the Museu de Zoologia da Universidade de São Paulo, Brazil.

LITERATURE CITED

- DeLong, Dwight M.**, and **Paul H. Freytag.** 1964. Four Genera of World Gyponinae: A Synopsis of the Genera *Gypona*, *Gyponana*, *Rugosana* and *Reticana*. Ohio Biol. Survey Bull. II (3). 227 p.