

## NEW SPECIES OF BOLIVIAN GYPONINAE (HOMOPTERA: CICADELLIDAE)<sup>1</sup>

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ABSTRACT: Six new species of Bolivian Gyponinae, *Hecalapona villaria* n.sp., *Gypona saavedra* n.sp., *Gyponia tunaria* n.sp., *Folicana boliviana* n.sp., *Curtara audacitara* n.sp., and *Polana santana* n.sp. are described.

The genus *Hecalapona* and 38 new species were described by DeLong and Freytag (1975). A revisional study of the genus *Gypona* was published by DeLong & Freytag (1964). The genus *Folicana* was described by the same authors (1972). The genus *Curtara* was also described by the same authors, and 76 species and 6 subgenera were treated (DeLong and Freytag 1976). The same authors (1972) treated the genus *Polana* and placed 87 species, 73 described as new, in 10 subgenera. A species of *Hecalapona*, 2 species of *Gypona*, and a species each of *Folicana*, *Curtara* and *Polana* are described in this paper. All types are from Bolivia and are in the DeLong collection at the Ohio State University.

### *Hecalapona villaria* n.sp.

(Figs. 1-5)

Length of male 9 mm, female unknown. Crown broadly rounded, more than 4/5 as long at middle as wide at base between eyes. Ocelli nearer eyes than median line and at 5/8 length of crown. Color yellowish green with a black spot on wing margin at apex of each claval vein.

Male genital plates 3 times as long as wide at middle, apices narrowed, rounded. Style with foot-like apex. The "heel" portion is ventral and rounded, the "toe" extends dorsally and is rounded at apex. Shaft of aedeagus rather broad laterally, bearing 5 apical processes; the median process curved basad on ventral side of shaft; the 2 lateral processes extend laterally and the 2 median processes extend caudally. Pygofer rounded apically.

Holotype male, Bolivia, Villa Tunari, 21-II-1981, Donald R. Foster coll.

*H. villaria* is related to *H. dellella* DeLong & Freytag but with the foot-like apical portion of style shorter and the toe-like portion broader.

### *Gypona saavedra* n.sp.

(Figs. 6-10)

Length of male 9 mm, female 10.5 mm. Crown a little more than half as long as wide between eyes at base. Ocelli closer to median line than to eyes, closer to basal than to apical margin. Color brownish green scutellum more greenish. A faint, small, black spot behind each eye on pronotum at half length of pronotum. Forewings with apical portion more brownish.

Female 7th sternum broadly angularly excavated from lateral angles almost to base of segment, apex of median notch with a brown sclerotized plate.

Male genital plates twice as long as wide at middle, apices broadly rounded. Style with blade broad dorsoventrally, apical portion foot-shaped, with a broad rounded ventral "heel"

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and a dorsal "toe" which is pointed, with a filamentous apex. Aedeagal shaft rather broad, bearing 2 apical, laterally directed processes, almost half as long as shaft, and 2 very short subapical processes, 1/4 length of apical processes. Pygofer narrowed and rounded apically.

Holotype male, Bolivia, Saavedra, 9-VIII-80, Donald R. Foster coll. Paratype female same data except 7-V-80.

*G. saavedra* is placed in the subgenus *Gypona* and is related to *G. lingua* DeLong and Freytag from which it can be separated by the shorter subapical aedeagal spines and the longer, narrower apical portion of the style.

***Gypona tunaria* n.sp.**

(Figs. 11-15)

Length of male 9 mm, female 10.5 mm. Crown produced and broadly rounded, slightly more than half as long at middle, as wide between eyes at base. Ocelli closer to median line than to eyes. Color: crown green, ocelli red, pronotum green with a minute round black spot, each side, behind eyes, not quite half the length of pronotum, scutellum green, forewings pale greenish subhyaline with black areas at base of wing, along scutellum, and across basal portion of apical cells.

Female 7th sternum with a median, broadly rounded lobe which bears a squarish excavation at middle 1/9 width of segment and 1/4 distance to base, with a slight median notch.

Male genital plates 2 1/2 times as long as wide at middle, apex broadly rounded. Style long, slender, slightly curved ventrally, near middle, tapered to a long, slender, pointed apex. Aedeagus short, shaft bent dorsally at 3/4 its length, apex bluntly pointed. Pygofer with a finger-like process, each side, on inner dorsal margin.

Holotype male, Bolivia, Villa Tunari, 21-II-1981, D.R. Foster coll. Paratypes: 1 male, females same data as holotype; 1 male Chapiro, Bol. 26-V-1980.

*G. tunaria* is related to *G. tubulata* DeLong & Freytag and is placed in the subgenus *Gypona*. It can be separated from *tubulata* by the longer, tapered style and by the apically curved and tapered aedeagus.

***Folicana boliviana* n.sp.**

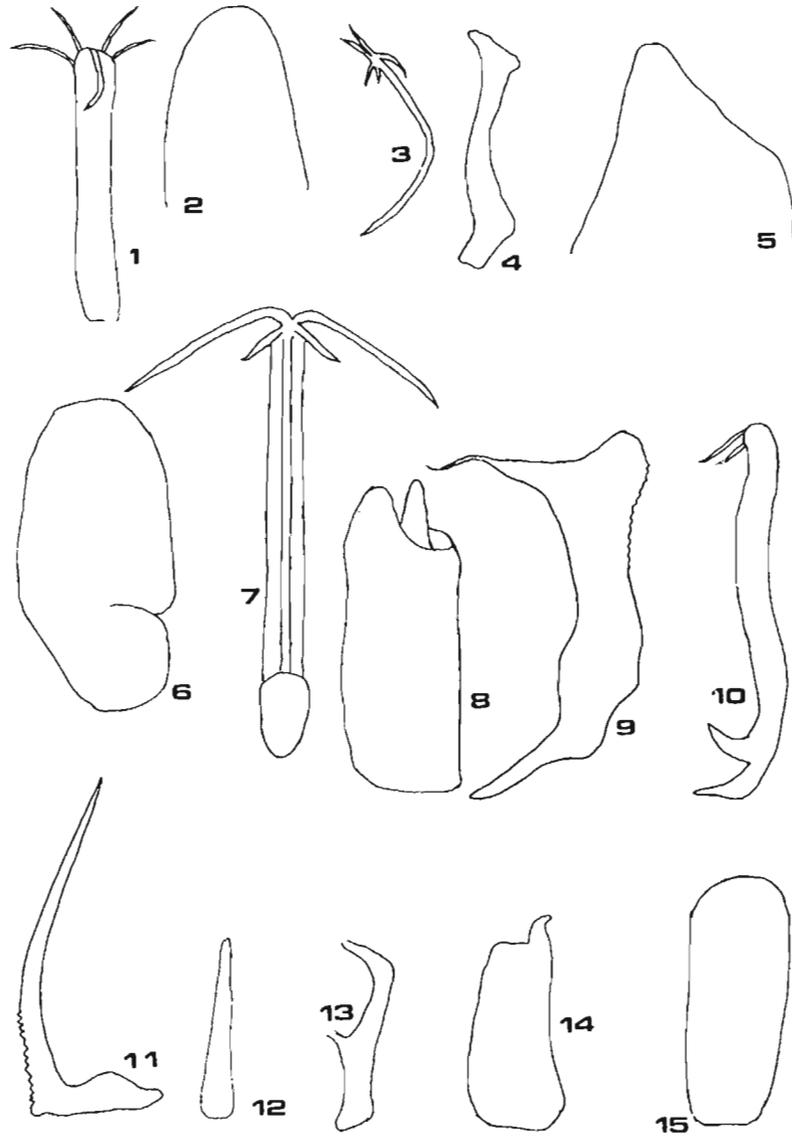
(Figs. 16-20)

Length of male 10 mm, female unknown. Crown broadly rounded, about twice as wide between eyes at base as long at middle. Ocelli much closer to posterior than to anterior margin, closer to median line than to eyes. Color, crown pale brownish. Pronotum with median longitudinal half dark greenish brown. Each lateral portion, behind eyes, pale grayish green. Scutellum brownish yellow, apical angles brown. The outer margin of the darker coloration on pronotum appears as a darker brownish longitudinal stripe which terminates on the basal angles of scutellum.

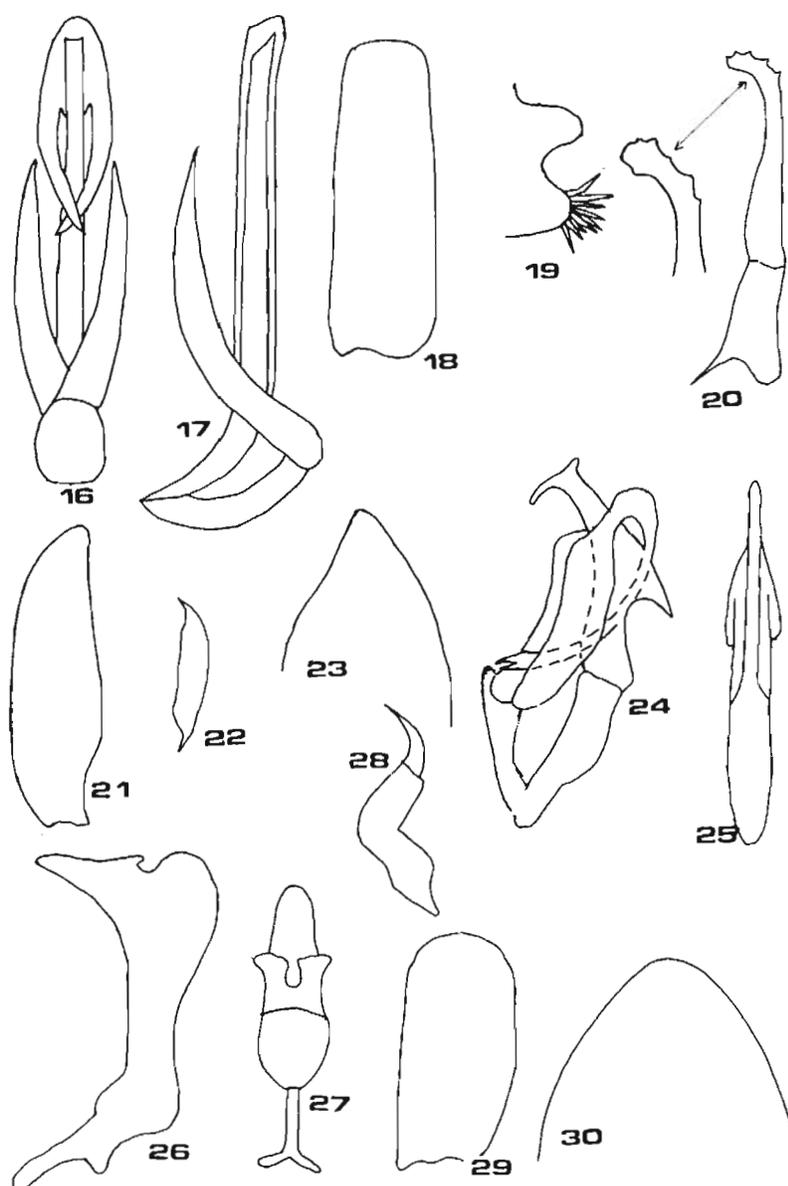
Male genital plates 3 times as long as wide at middle, apices broadly rounded. Style elongate, apical portion narrowed, apex curved dorsally, ventral margin of apical portion serrate. Aedeagus with paraphyses which extend more than 2/3 distance to apex and are pointed apically. Aedeagal shaft with apex angles and pointed at one side, apex enclosed by a slightly sclerotized sheath which extends about 1/3 distance to base, enclosing 2 apical processes.

Holotype male, Bolivia, Santa Cruz, 21-VII-1980, D.R. Foster coll.

*F. boliviana* is related to *F. acrita* DeLong & Freytag and can be separated from it by the angular apex of the aedeagal shaft, the slightly sclerotized apical capsule of the aedeagal shaft and the shorter, rounded



Figs. 1-5 *Hecalapona villaria* n.sp. 1. aedeagus ventrally, 2. plate ventrally, apical portion, 3. aedeagus laterally, 4. style laterally, 5. pygofer laterally, apical portion. Figs. 6-10 *Gypona saavedra* n.sp. 6. plate ventrally, 7. aedeagus ventrally, 8. pygofer laterally, 9. style laterally, 10. aedeagus laterally. Figs. 11-15 *Gypona tunaria* n.sp. 11. style laterally, 12. aedeagus ventrally, 13. aedeagus laterally, 14. pygofer laterally, 15. plate ventrally.



Figs. 16-20 *Folicana boliviana* n.sp. 16. aedeagus ventrally, 17. aedeagus laterally, 18. plate ventrally, 19. pygofer spine, laterally, 20. style laterally, with enlarged apical portion. Figs. 21-25 *Curtara audacitara* n.sp. 21. plate ventrally, 22. style laterally, 23. pygofer laterally, apical portion, 24. aedeagus laterally, 25. aedeagus ventrally. Figs. 26-30 *Polana santana* n.sp. 26. style laterally, 27. aedeagus and connective ventrally, 28. aedeagus laterally, 29. plate ventrally, 30. pygofer laterally, apical portion.

apex of the style.

***Curtara audacitara* n.sp.**

(Figs. 21-25)

Length of male 8.5 mm, female unknown. Crown produced and rounded, 1/2 as long at middle as wide between eyes at base. Ocelli about equidistant between eyes and median line. Color pale gray with numerous black punctate spots. Pronotum yellowish gray on anterior portion with 2 reddish brown spots behind each eye, disc pale gray with numerous small black punctate spots. Scutellum dull yellowish, a small black spot each side at inner margin of basal angle, on anterior margin. Forewings pale gray, almost white, with black spots or dashes in linear arrangement along wing veins, most prominently along costal and claval veins. Veins of apical portion margined with pale brown.

Male genital plates 5 times as long as wide at middle, apex narrowed and rounded. Style narrow, curved ventrocaudally at apex, tip roundly pointed. Aedeagal shaft bearing a conspicuous pointed tooth on median ventral margin, apex foot-like with a ventral narrow, rounded "heel" and a dorsal narrow, rounded "toe". Paraphyses about equal width for entire length, median portion rod-shaped, terminating in spine-like processes. Pygofer narrow, bluntly pointed apically.

Holotype male, Bolivia, Puerto Villarael, 16-IV-'81, D.L. Foster Coll.

*C. audacitara* is placed in the subgenus *Curtara*. The aedeagal processes resemble those of *C. inflata* DeLong & Freytag from which it can be separated by the transverse apical portion of the aedeagal shaft and the almost uniform width of the paraphyses.

***Polana santana* n.sp.**

(Figs. 26-30)

Length of male 8 mm, female unknown. Crown broadly rounded, not quite half as long at middle as wide between eyes at base. Ocelli nearer apical than basal margin of crown and about equidistant between eyes and median line. Color, crown, pronotum and scutellum reddish brown, with irregular blackish brown areas, basal angles of scutellum, black. Forewings reddish brown, veins and cross veins darker brown or black.

Male genital plates more than twice as long as wide at middle. Style broad dorsoventrally, apical portion foot-like with a broadly rounded "heel" and a bluntly pointed dorsal "toe". Apical margin of "foot" notched near middle. Aedeagus broad basally in ventral view, in lateral view curved ventrally, broader ventrally than caudally, apical third narrowed and pointed apically. Pygofer narrowed, rounded apically, without pygofer spine.

Holotype male, Bolivia, Santa Cruz, 21-V-1980 D.R. Foster coll.

*P. santana* is placed in the subgenus *Polanana*. It is related to *P. obliqua* DeLong and Freytag and can be separated from it by the absence of a pygofer spine, and the absence of aedeagal processes.

LITERATURE CITED

- DeLong, D.M. and P.H. Freytag 1964. Four genera of world Gyponinae. A synopsis of the genera *Gypona*, *Gyponana*, *Rugosana* and *Reticana*. Ohio Biological Survey Bull. II(3): 227 pp.
- \_\_\_\_\_. 1972. Studies of the Gyponinae: The genus *Folicana* and nine new species. Jour. Kans. Entomol. Soc. 45: 282-295.
- \_\_\_\_\_. 1972. Studies of the world Gyponinae. (Homoptera: Cicadellidae); The genus *Polana*. Arquivos Zoologia, S. Paulo, 22(5): 239-324.
- \_\_\_\_\_. 1975. Studies of the Gyponinae. A new genus *Hecalapona* and 38 new species. Jour. Kans. Entomol. Soc. 48: 547-579.
- \_\_\_\_\_. 1976. Studies of the world Gyponinae, (Homoptera: Cicadellidae) A synopsis of the genus *Curtara*. Brenesia 7: 1-79.