

STUDIES OF THE GYPONINAE
 1. THE GENUS *MARGANANA* DELONG*
 (HOMOPTERA: CICADELLIDAE)

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The genus *Marganana* was described by DeLong in 1942 under the name *Margana*. This generic name had been previously used by Walker (1865), as a result the genus was renamed *Marganana* in 1948.

Superficially the species of this genus resemble those of *Hamana* but the genus is probably more closely related to *Rugosana* than to any other group. This is based upon the similar type of head, the sutures of the face, and the similar type of aedeagus.

The known species of this genus are found from the southwestern part of the United States, through Central America, to the northern part of South America.

The genus contains large robust leafhoppers. Head nearly as broad as pronotum; anterior margin thickened and carinate; face short and broad; crown sloping forward and broad, surface with transverse striae; ocelli slightly closer to median line than to eyes. Pronotum broad and transversely striate. Forewings with appendix developed, venation normal to reticulate, with veins wide and strongly represented. Hind tibia without outer secondary setae. Male with aedeagus simple, without basal processes, gonopore terminal.

Two subgenera are recognized which can be separated by the following key:

1. Pronotum short, less than 3 times as long as crown; aedeagus of male broad with a pair of long lateral processes. *Marganana*
- 1' Pronotum long, over 3 times as long as crown; aedeagus of male long, narrow, with a pair of very short lateral processes. *Declivana*

Subgenus *Marganana* DeLong

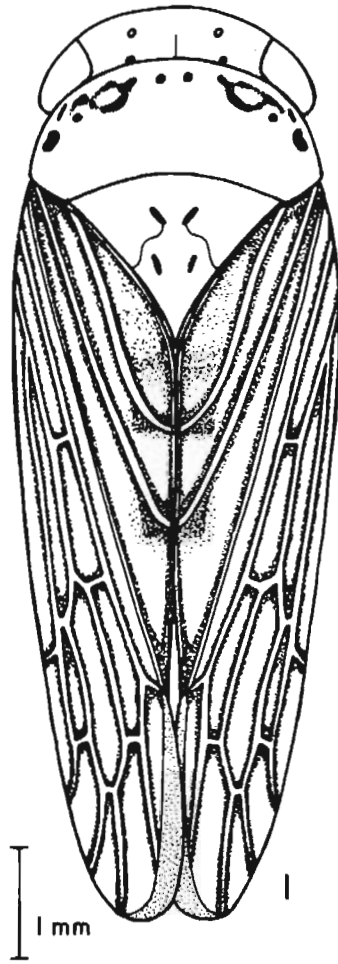
Pronotum less than 3 times as long as crown. Male plate elongate and thickened, with an excavation on the inner margin. Styles truncate and short. Aedeagus broad with a pair of long lateral processes arising not far from the apex. Pygofer linear with a dorsal terminal expansion.

Type: *Ponana marginifrons* var. *suilla* Ball, 1935.

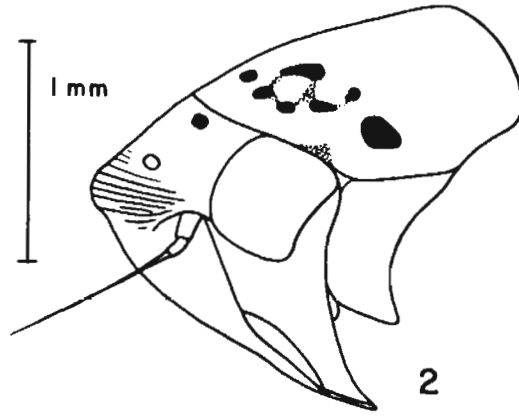
EXPLANATION OF PLATE I

- FIGURE 1. *Marganana (Marganana) suilla* (Ball), dorsal view of male.
 FIGURE 2. *Marganana (M.) suilla*, lateral view of head and pronotum.
 FIGURE 3. *Marganana (M.) suilla*, face.
 FIGURE 4. *Marganana (M.) mexicana* sp. n., dorsal view of head and pronotum.
 FIGURE 5. *Marganana (Declivata) equata* sp. n., dorsal view of head and pronotum.

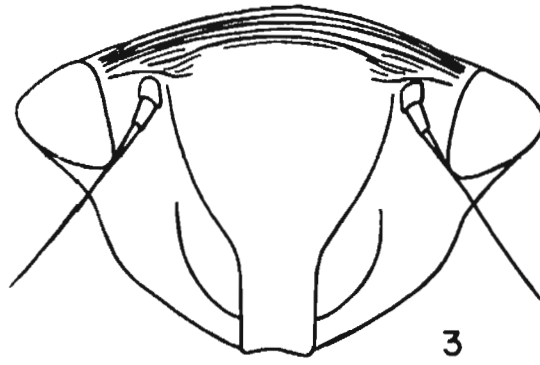
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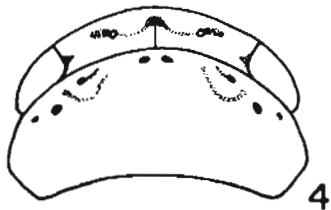
SUILLA



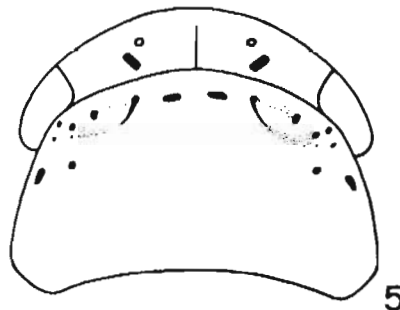
SUILLA



SUILLA



MEXICANA



EQUATA

Marganana (Marganana) suilla (Ball)

Ponana marginifrons var. *suilla* Ball, 1935, p. 503.

Margana suilla (Ball) DeLong, 1942, p. 110.

Marganana suilla (Ball) DeLong, 1948, p. 101.

A broad, robust, brown species with black spots on pronotum and wing veins margined with brown. Length: male 8 mm, female 9 mm.

Crown short and broadly rounded, more than twice as wide between eyes at base than median length. Pronotum and crown sloping to a thick carinated margin.

Color: Brown tinged with orange, a round black spot on each side of crown behind eye; anterior half of pronotum often mottled with dark brown.

Genitalia: Female seventh sternum with lateral angles rounded to posterior margin which is slightly excavated either side of a broad produced median lobe which slopes to a bluntly pointed apex and is produced almost the length of the segment beyond the lateral margins. Male plates about four times as long as wide with a bluntly pointed apex. Style, in lateral view, broadened at middle on ventral side; apex narrowed and blunt. Aedeagus with a pair of long, slender processes arising from a broadened shaft just before apex and extending basally to base of shaft; apex narrowed to a slender process. Pygofer, in lateral view, almost parallel sided.

This species was described from specimens collected in Arizona. In addition to the Arizona records two Mexican records from the California Academy Collection are at hand. One specimen is labeled "5 ml. W. Matachic, Chihuahua, Mex., August 19, 1950, Ray F. Smith". The other specimen is labeled "San Jose Babicora, Chih., Mex., 7100 ft., July 5, 1947, D. Rockefeller Exp. Gertsch."

Marganana (Marganana) mexicana sp. n.

In form and general appearance resembling *suilla* but larger and with different male and female genital structures. Length: male 9 mm, female 10 mm.

Crown short and broad; more than twice as wide between eyes at base than median length, broadly rounded between eyes. Margin thick and transversely carinate.

Color: Pale brown with dark brown or black markings, pattern similar to that of *suilla*. Crown with a dark spot behind each ocellus near eye at base. Pronotum brownish with dark vermiculate spotting on anterior half. A round black spot posterior to each eye on pronotum.

Genitalia: Female seventh sternum with the posterior margin trilobate; median lobe about one-third the length of the segment and about as long as basal width, pointed at apex; lateral lobes on either side shorter, about twice as wide as long with a blunt apex; lateral angles of sternite slightly produced and rounded. Male plates about four times as long as median width, with a rather blunt, broadly rounded tip. Styles slender and elongate, about five times as long as median width, apex bluntly pointed. Aedeagus with a slender tapered shaft from which a pair of long, slender processes arise; processes extending to base of shaft, apex tapered

EXPLANATION OF PLATE II

Marganana (Marganana) mexicana sp. n., male genitalia.

FIGURE 6. Ventral view of aedeagus.

FIGURE 7. Lateral view of aedeagus.

FIGURE 8. Lateral view of style.

FIGURE 9. Ventral view of style.

FIGURE 10. Ventral view of plate.

Marganana (Marganana) suilla (Ball), male genitalia.

FIGURE 12. Ventral view of aedeagus.

FIGURE 13. Lateral view of aedeagus.

FIGURE 14. Lateral view of style.

FIGURE 15. Ventral view of style.

FIGURE 16. Ventral view of plate.

FIGURE 17. Lateral view of pygofer.

Marganana (Declivata) equata sp. n., male genitalia.

FIGURE 18. Ventral view of aedeagus.

FIGURE 19. Lateral view of aedeagus.

FIGURE 20. Lateral view of style.

FIGURE 21. Ventral view of style.

FIGURE 22. Ventral view of plate.

FIGURE 23. Lateral view of pygofer.

Male structures all drawn to the same scale

FIGURE 24. *Marganana (M.) mexicana* sp. n., female seventh sternum.

FIGURE 25. *Marganana (M.) suilla* (Ball), female seventh sternum.

FIGURE 26. *Marganana (D.) equata* sp. n., female seventh sternum.

Female seventh sterna drawn to the same scale.

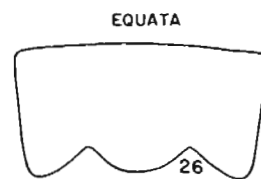
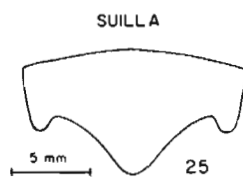
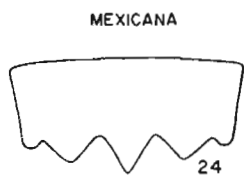
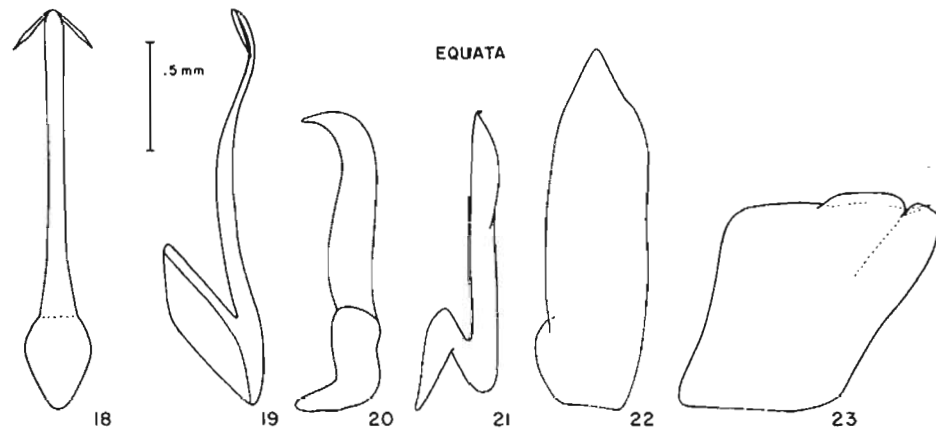
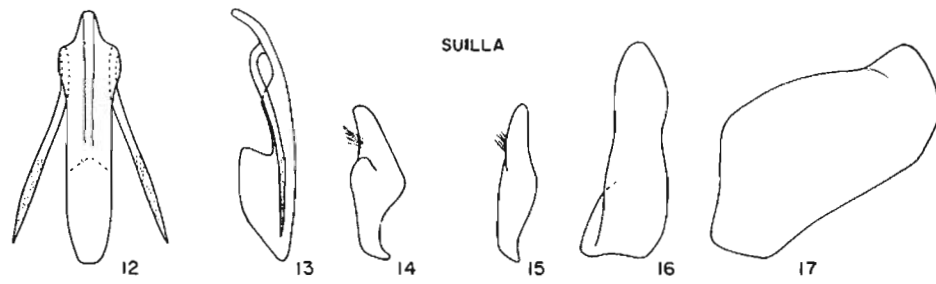
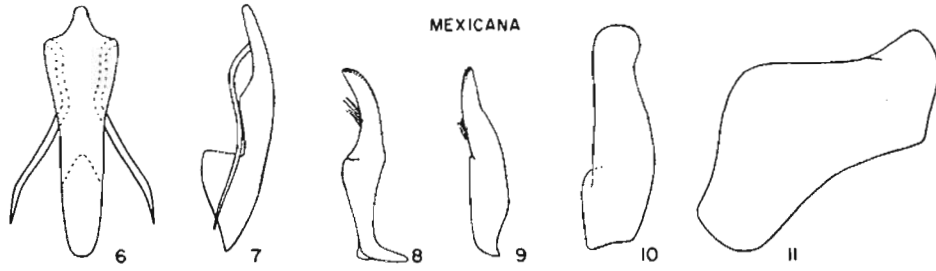


PLATE II

and blunt. Pygofer broadly, concavely rounded on ventral side, appearing narrowed at about two-thirds its length.

Holotype male: Necaxa, Pue., Mexico, 10-27-45, DeLong, Stone, Hershberger, Elliott. Allotype female: Mexico City, D.F., Mexico, 9-1-39, DeLong and Plummer. Paratypes, 6 males, 2 females, same data as allotype; 2 males, 2 females, Mexico City, Toluca Rd., 9-26-46, DeLong; 1 male, 2 females, Zacapu, Mich., Mexico, 10-4-41, DeLong, Good, Caldwell and Plummer; 1 male, 1 female, Mexico City, D.F., 5-5-44; 1 female, Desierto de Los Leones, D.F., 10-9-43; 1 male, Carapan, Mich., 9-30-41, DeLong, Good, Caldwell and Plummer; 3 males and 3 females, Carapan, Mich., Mexico, 10-2-41, DeLong, Good, Caldwell and Plummer; 1 female, Uruapan, Mich., Mexico, 10-1-41, DeLong, Good, Caldwell and Plummer; 1 female, Saltillo, Coah., 9-23-41, by the same collectors; all in the DeLong collection. Three females, Mexico City, Mexico, 7-19-33, Hinton and Usinger, in the California Academy of Science collection.

This species is common in the high altitude area of Mexico. It can be distinguished from *suilla* by the difference of the female seventh sternum and the male genitalia.

Subgenus *Declivana* subgen. n.

Pronotum and crown steeply sloping to thick margin. Pronotum over 3 times as long as crown. Male plate elongate and flattened. Styles long and thick. Aedeagus long and narrow with a pair of very short terminal processes. Pygofer short, robust with a dorsal terminal spine-like process.

Marganana (Declivana) equata sp. n.

Type: *Marganana (Declivana) equata* sp. n.

In form and general appearance resembling *suilla* but with a more sharply deflexed pronotum and crown and an entirely different type of male genital structures. Length: male 11 mm, female 12 mm.

Crown short and broad, more than twice as wide between eyes at base as median length, broadly rounded between eyes. Anterior margin of head thick and transversely grooved. Forewings with an appendix.

Color: Pale brown with dark brown or black markings, pattern similar to that of *suilla*. A dark spot at base of crown behind each ocellus. Pronotum brownish with dark vermiculate spotting on anterior half. Forewings not heavily dark margined.

Genitalia: Female seventh sternum with posterior margin sloping from lateral angles to form a broad V-shaped excavation either side of a broad, rounded, median lobe which is about half the width of the segment. Male plates long, sloping to a pointed apex, more than three times as long as broad. Styles elongate and narrow; in lateral view, with a curved, narrowed, pointed apex. Aedeagus long, narrow with a pair of very short, slender, apical processes. Pygofers short, broad, almost blunt at apex.

Holotype male: Shudihar R., British Guiana, 1-1-38, W. G. Hassler, Acc. 36159. Allotype female: Same data as holotype except date collected, which is 12-29-37. Holotype and allotype in the American Museum Collection.

REFERENCES CITED

- Ball, E. D. 1935. Some new Gyponas with notes on others. J. Wash. Acad. Sci. 25: 503.
 DeLong, D. M. 1942. The North American species of the subfamily Gyponinae (Homoptera: Cicadellidae). The Ohio State University Graduate School Studies—Contributions in Zoology and Entomology No. 5: 109-110.
 ———. 1948. A proposed new genus name *Marganana* and the allotype description of *Prairiana hirsuta* DeLong, Gyponinae. Ohio J. Sci. 48: 101.
 Walker, F. 1865. List specimens lep. Ins. British Museum 34: 1520.