

STUDIES OF THE GYPONINAE WITH SIX NEW SPECIES OF
POLANA (HOMOPTERA: CICADELLIDAE)

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Abstract.—Six new species of *Polana* are described. Four new species, *helvola*, *sana*, *melalbida*, and *melella* are placed in the subgenus *Polanana*. One new species, *putara*, is placed in *Bohemanella*; and one new species, *solida*, is placed in *Polanella*.

The genus *Polana* was described by DeLong (1942). A synopsis of *Polana* treating 87 species was published by DeLong and Freytag (1972). Six new species are described in this paper.

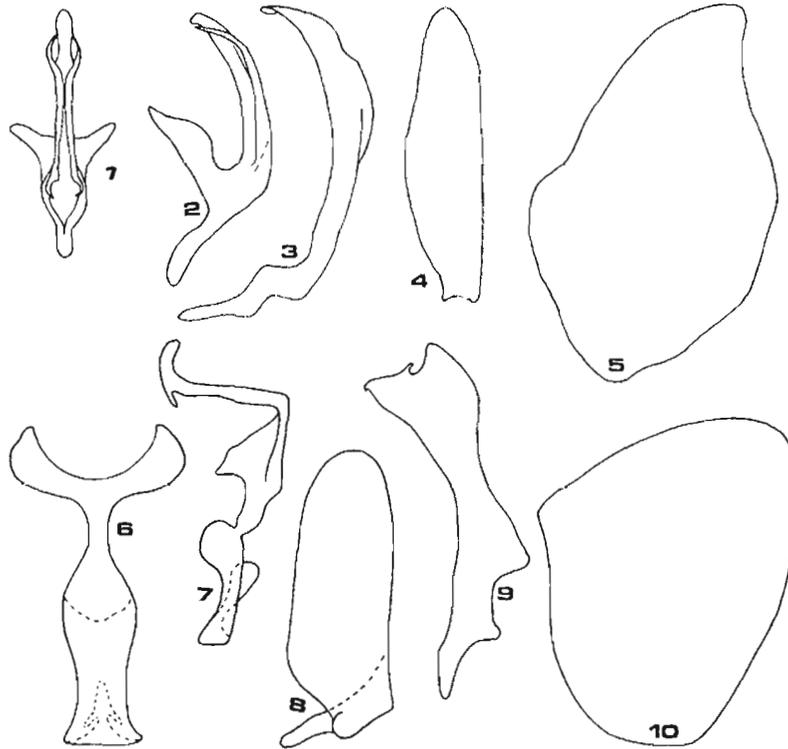
Polana putara DeLong, NEW SPECIES
Figs. 21-25

Length of male 7.5 mm, female unknown. Crown broadly rounded, more than 2× as wide at base between eyes as median length. Ocelli about equidistant between eyes and median line. Conspicuous striae on and just above margin. Color, crown pronotum and scutellum pale brown, irregularly tinged with dark brown. Forewings dark brown with 2 black elongate spots on 1st and 2nd claval veins at commissure.

Male genitalia with plates 2½× as long as median width, apex rounded. Style with blade convexly curved on ventral margin, apical tip spinelike extending dorsally. Aedeagal shaft in ventral view appearing narrow, parameres a little broader, each side; in lateral view the aedeagal shaft is long and slender, curving ventrally. Parameres curve dorsally with a constriction just before transversely broadened apex, rounded on apical margin and sharp pointed dorsally and ventrally. The parameres are two-thirds as long as shaft and reach to apex of shaft. Pygofer tapering to bluntly pointed apex.

Holotype ♂, Bolivia, Dept. Beni, Rio Manore at mouth of Rio Ibare, VIII-18-20, 1965. J. K. Bouseman coll., in the American Museum of Natural History.

Polana putara is placed in the subgenus *Bohemanella* and is nearest *chifama*.



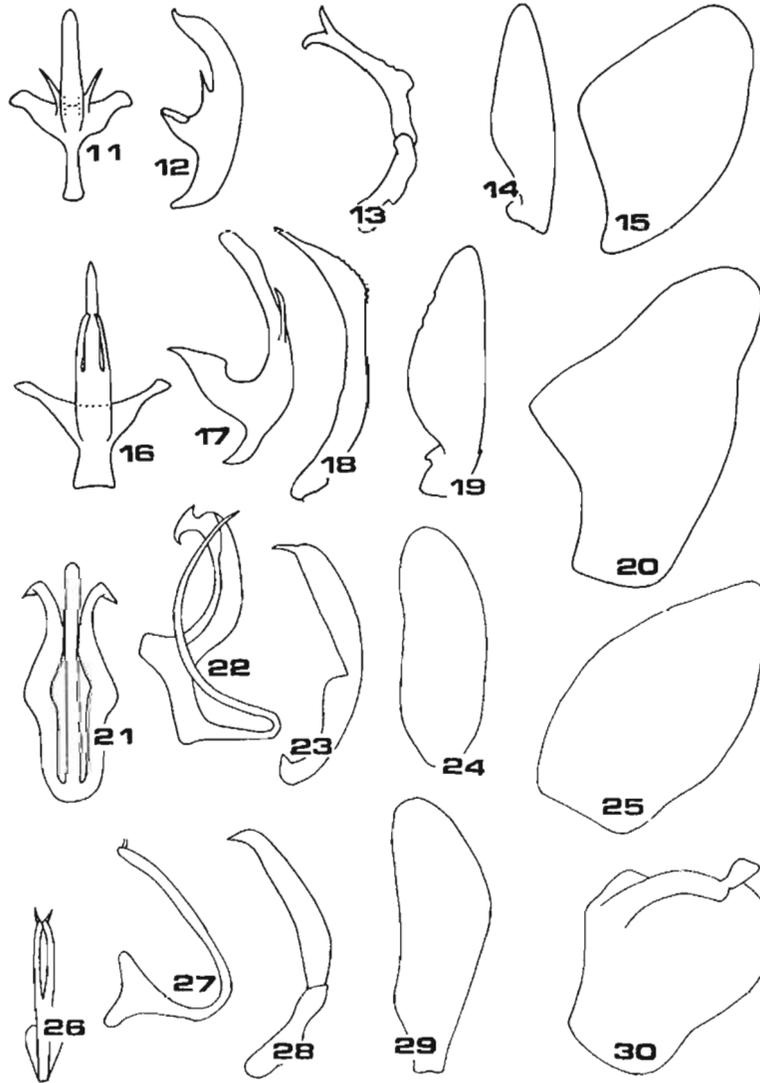
Figs. 1-5. *Polana helvola*. 1. Aedeagus ventrally. 2. Aedeagus laterally. 3. Style laterally. 4. Plate ventrally. 5. Pygofer laterally. Figs. 6-10. *P. sana*. 6. Aedeagus ventrally. 7. Aedeagus laterally. 8. Plate ventrally. 9. Style laterally. 10. Pygofer laterally.

Polana sana DeLong, NEW SPECIES

Figs. 6-10

Length of male 8.5 mm, female unknown. Crown broadly rounded, not quite $\frac{1}{2}$ as long at middle as basal width between eyes; ocelli about equidistant between eyes and median line. Color brown, scutellum with basal angles darker brown. Forewings brown, subhyaline, claval vein reddish brown; Veins anterior to claval vein dark brown, cross veins on disc dark brown, apex smoky.

Male genitalia with plates more than $2\times$ as long as median width, apices rounded. Style with blade broad, narrowed at middle, apical $\frac{1}{3}$ broad almost truncate, a small rounded notch near middle of apex. Aedeagal shaft in ventral view vaselike, forming a narrow "neck" at two-thirds its length then with two "arms" extending laterally, between which the central apical



Figs. 11-15. *Polana melalbida*. 11, Aedeagus ventrally. 12, Aedeagus laterally. 13, Style laterally. 14, Plate ventrally. 15, Pygofer laterally. Figs. 16-20. *P. meylla*. 16, Aedeagus ventrally. 17, Aedeagus laterally. 18, Style ventrally. 19, Plate laterally. 20, Pygofer laterally. Figs. 21-25. *P. putara*. 21, Aedeagus ventrally. 22, Aedeagus laterally. 23, Style laterally. 24, Plate ventrally. 25, Pygofer laterally. Figs. 26-30. *P. solida*. 26, Aedeagus ventrally. 27, Aedeagus laterally. 28, Style laterally. 29, Plate ventrally. 30, Pygofer laterally.

portion is broadly concave. In lateral view the shaft appears long and narrow with an inverted "foot" apically. Pygofer broadly rounded apically.

Holotype ♂, Tingo Maria, Peru, VIII-12-1960. D. A. Young coll. in the North Carolina University Collection.

Polana sana is placed in the subgenus *Polanana* and is nearest to *quadrilabes*.

Polana melalbida DeLong, NEW SPECIES

Figs. 11-15

Length of male 7.5 mm, female unknown. Crown broadly rounded, almost parallel margined, two-thirds as long at middle as basal width between eyes; ocelli much closer to proximal eye than median line. Head rounded to front, clypeus inflated. Color, face white tinged with yellow, crown pale yellow. Pronotum pale yellow with a smoky area behind each eye and a round black spot behind each eye at one-third length of pronotum. Scutellum yellow, a small black spot in each basal angle. Forewing white with numerous brown irregular spots; a large spot on anterior portion of disc, a small round spot on clavus each side near apex of scutellum and a spot about middle of clavus near commissure; a series of small spots are on anterior side of claval vein.

Male genitalia with plates almost 3× as long as median width. Style with blade enlarged on ventral margin at more than one-third its length, apex bifid, each portion bluntly pointed. Aedeagal shaft short, 6× as long as broad, a long spine, one-third length of shaft, arising each side at base of shaft. In lateral view the shaft appears bluntly pointed at apex. Pygofer narrowed, broadly rounded apically.

Holotype ♂, Sante Fe, Darien Prov., Panama, V-29-67, DeLong and Triplehorn colls., in the DeLong Collection, the Ohio State University.

Polana melalbida is placed in the subgenus *Polanana* and is nearest *quadrilabes*.

Polana helvola DeLong, NEW SPECIES

Figs. 1-5

Length of male 8 mm, female unknown. Crown rounded appearing almost parallel margined, without a distinct margin. Color pale yellow, pronotum with a round black spot behind each eye at one-third length of pronotum. Forewings yellowish, subhyaline, veins yellow. 2 transverse rows of pale brown spots across clavus.

Male genitalia with plates more than 3× as long as median width, apices narrow, rounded. Style with blade slightly broadened on apical ½, apex curved dorsally, pointed. Aedeagal shaft slender, blunt at apex, a pair of processes arise each side at base, remain contiguous with shaft, extending almost to apex and curving dorsally around each side of shaft subapically.

Holotype ♂, Rurrenabamba, Beni, Bolivia, December 1921, Wm. M. Mann coll., Mulford Biol. Exped. 1921-1922, in the U.S. National Museum.

Polana helvola is placed in the subgenus *Polanana* and is nearest to *venosa*.

Polana melella DeLong, NEW SPECIES

Figs. 16-20

Length of male 7 mm, female unknown. Crown broadly rounded, almost parallel margined, $\frac{1}{2}$ as long at middle as width at base between eyes. Ocelli nearer eyes than median line. Color, crown yellow, ocelli red. Pronotum yellow, a round black spot behind each eye at one-third length of pronotum. Scutellum pale yellow. Forewings white, tinged with yellow, anterior $\frac{1}{2}$ of costa bright yellow. A broken brown band represented only by spots extends from middle of costa to middle of clavus, represented on clavus by brown spots at apices of claval veins.

Male genitalia with plates $3\times$ as long as median width, apices narrowed, rounded. Style with blade slightly enlarged on ventral margin and serrate at two-thirds its length, apical $\frac{1}{5}$ tapered and pointed. Aedeagal shaft blunt at apex; a process one-fourth length of shaft arising each side at one-third length of shaft. Pygofer narrowed and broadly rounded at apex.

Holotype ♂, Tingo Maria, Peru, VIII-12-60, O. Vargas coll., in the North Carolina State University collection.

This species is placed in the subgenus *Polanana* and is nearest *truncata*.

Polana solida DeLong, NEW SPECIES

Figs. 26-30

Length of male 8 mm, female unknown. Crown broadly rounded, more than $3\times$ as broad at base between eyes as median length. Ocelli closer to compound eyes than median line. Crown without distinct margin. Color dark brown. Forewings brown, subhyaline, a small brown spot at apex of each claval vein at commissure.

Male genitalia with plates $2\frac{1}{2}\times$ as long as median width, apices rounded. Style with blade almost uniform in length, apex pointed, curved dorsally. Aedeagal shaft bifid on apical $\frac{1}{2}$, contiguous at apex, each portion bearing a short spine. Pygofer with a process arising dorsally near middle, curving caudally to caudal margin of pygofer and with a slightly enlarged apex.

Holotype ♂, Mt. Duida, Venezuela, III-5-24, Ac. 29500 Tate No. 837, in the American Museum of Natural History.

This species is placed in the subgenus *Ponanella*. It is not closely related to any described species but nearest to *sereta*.

LITERATURE CITED

- DeLong, D. M. 1942. A Monographic Study of the North American Species of the Subfamily Gyponinae (Homoptera: Cicadellidae) exclusive of Xerophloea. Ohio State University, Graduate School Studies, Contrib. Zool., Entomol. No. 5. Biol. Series. 187 p.
- DeLong, D. M. and P. H. Freytag. 1972. Studies of the World Gyponinae (Homoptera: Cicadellidae) The Genus *Polana*. Arq. Zool. S. Paulo. 22:(5)239-324.