

Two New Genera, *Brevisana* and *Minimana*, and Four New Species of Gyponinae (Homoptera: Cicadellidae)¹

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ABSTRACT. The new genera *Brevisana* and *Minimana* are described and include three species: *B. rugosa*, n. sp., *M. montana*, n. sp., and *M. unistriata*, n. sp. All are from elevations above 2800 m in Venezuela. *Ponanella trispina*, n. sp., is described from French Guiana. The genus *Carnoseta* DeLong, new status is compared with the genus *Minimana*.

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INTRODUCTION

Two new genera and four new species of Gyponinae from French Guiana and Venezuela are described. These genera and three of the new species were collected from the very tops (Páramo) of the Sierra Nevada range of the Andes Mountains, a cool area dominated by espeletia and grasses. However, the host plants of these species are unknown.

Previously, *Ponanella* contained 11 species (DeLong and Freytag 1969, DeLong and Bush 1971, DeLong 1976). An additional species is added at this time.

DESCRIPTIONS

Brevisana, new genus

Crown short, broad, without definite margin, rounded to front; ocelli small, close to anterior margin; striae transverse. Hind tibia with outer row of setae consisting only of large setae. Forewings with raised, rugose veins, especially on corium, and a small appendix.

Type Species: *Brevisana rugosa*, n. sp.

This genus is represented by a single species which is very small and oval. Closely related to *Ponanella*, it shares similar male genitalia. It is easily distinguished by the rugose venation. Also, this genus lives in high mountain areas where *Ponanella* has not been found.

Brevisana will key out to *Chillella* in the key to the Gyponinae by DeLong and Freytag (1972). It can be separated from this genus by the absence of any small setae between the larger upper row of setae on the hind tibia and by the presence of an appendix on the forewing. *Brevisana rugosa* new species (1, 3, 5 in Fig. 1; 7-12 in Fig. 2)

Resembling species of *Ponanella* or *Acuponana*, but with rugose venation. Lengths of males range from 4.5 to 4.7 mm; females are 4.8 to 5.1 mm.

Crown short, nearly parallel margined, three and one-half times as wide as median length, with transverse striae. Margin of crown indistinct, rounded to front. Pronotum wider than head, over twice as long as crown. Forewings rounded, venation rugose, with a small appendix.

Color: Generally green orange, fading to yellow.

Male genitalia: Aedeagus with a simple tubular shaft, which is somewhat flattened ventrally, with two pair of

subapical processes. Most distal pair extend ventrally along each side of shaft; one-half length of shaft with bifurcate apices. Basal pair more spine-like, shorter and directed laterally at apex. Style short, thickened in lateral view, foot-shaped on apical half with a sharply pointed apex directed dorsad. Genital plate short and bluntly rounded at apex. Pygofer broadly rounded with a posteriorly projecting process on dorsal margin; process extending just beyond posterior margin and sharply pointed.

Female genitalia: Seventh sternum with posterior margin sloping concavely to a broad median tooth, which is produced slightly beyond lateral margins.

Types: Holotype male, Ortiz, Pico Paramito, 2800 m, Dtto Bocono, Trujillo, Venezuela, 14 June 1986, P. H. Freytag and M. A. Gaiani. Allotype female

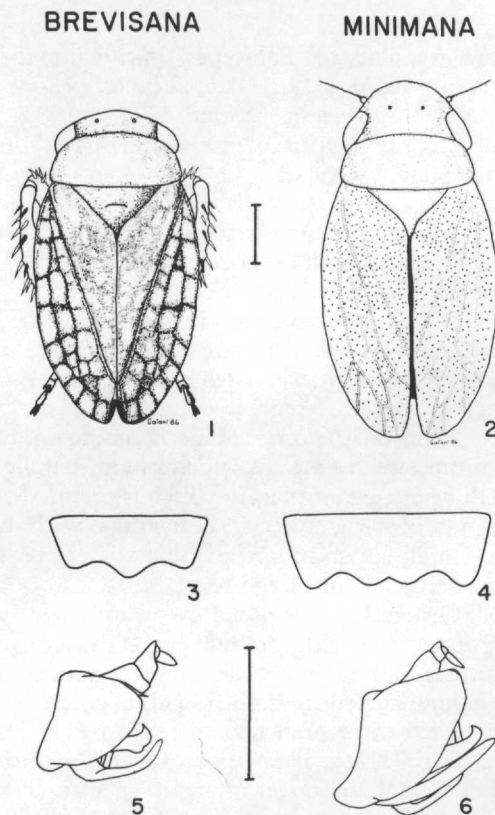


FIGURE 1. External features of two new genera (*Brevisana* and *Minimana*) of Gyponinae. 1, 2: dorsal aspect, drawn to same scale (line = 1 mm). 3, 4: female seventh sternum. 5, 6: lateral view of male terminal segments. Note that 3-6 are drawn to same scale (line = 1 mm).

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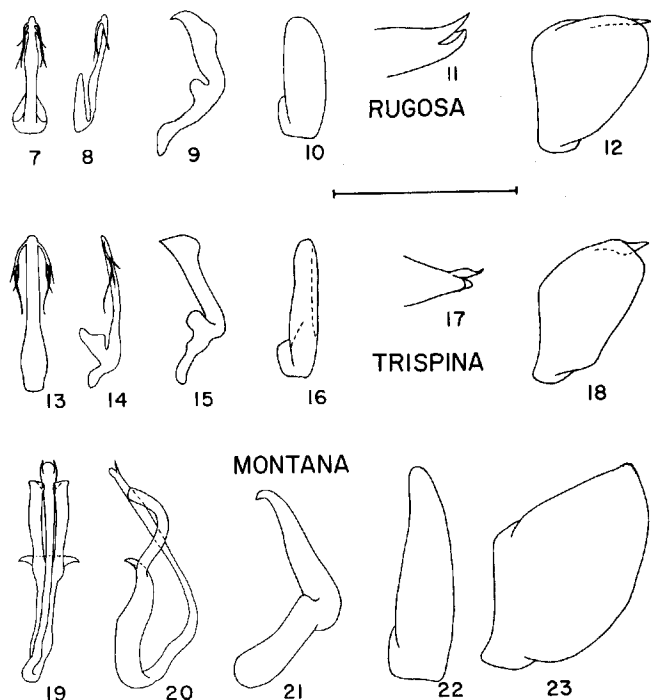


FIGURE 2. Male genitalia of three new species (*Brevisana rugosa*, *Ponanella trispina*, and *Minimana montana*) of Gyponinae. 7, 13, 19: ventral view of aedeagus. 8, 14, 20: lateral view of aedeagus. 9, 15, 21: lateral view of style. 10, 16, 22: ventral view of genital plate. 11, 17: dorsal view of left pygofer apex. 12, 18, 23: lateral view of pygofer. All are drawn to the same scale (line = 1 mm).

same data as holotype. Paratypes, one male, three females, five immatures, same data as holotype; one male, same data as holotype except date 22 May 1985. Holotype and allotype deposited in the DeLong Collection, The Ohio State University. One male and one female paratype deposited in the collection of The Institute De Zoologia Agricola, University of Central Venezuela, Maracay, Venezuela. All other paratypes deposited in the University of Kentucky collection.

Ponanella trispina, new species (13-18 in Fig. 2)

Resembling *P. ena* DeLong and Freytag, except smaller, overall color dark, with a dark spot at apex of claval veins, and different male genitalic structures. Length of male is 5.5 mm; female is unknown.

Crown more than twice as wide as long, parallel margin, ocelli near anterior margin which is rounded to face. Pronotum wider than head. Forewings with normal venation, small appendix. Hind tibia with outer row of setae consisting of only large setae.

Color: Generally brown yellow. Pronotum with a black spot on each side behind eye. Claval veins and claval sutures ending in a black spot, appendix smoky.

Male genitalia: Aedeagus with a pair of apical processes which are each three-branched (see 13 in Fig. 2). Style expanded into a spatulate apex. Genital plate long, slightly notched on outer margin at two-thirds its length, with a truncate apex. Pygofer thickened, truncate at apex with a dorsal process which extends beyond apex, slightly hooked at apex in dorsal view.

Type: Holotype male, labeled "Alicoto-Oyapock", Guyane 13 November 1969, Piège lumineux, Guyane Mission, Balachowsky-Gruner, October-November

1969, in the Museum National d'Histoire Naturelle, Paris.

This species is most similar to *P. ena* but the processes of the aedeagus are quite different, as illustrated. The styles are more like those found in *P. gelata* DeLong and Freytag.

Minimana, new genus

Crown roundedly produced, with a definite margin, ocelli small, striae indistinct. Antennae short and thickened. Hind tibia with upper row of setae consisting of large setae with several, small, hair-like setae between all large setae. Forewings with obscure venation and usually pitted throughout. Hind-wings vestigial.

Type Species: *Minimana montana*, n. sp.

This genus is closely related to *Prairiana* Ball. The species placed here look externally much like *P. subta* (Ball). This genus differs from *Prairiana* by the unusual pitted forewings and the vestigial hindwings. Also, the outer row of setae on the hind tibia in *Prairiana* has small setae between the larger setae, whereas in *Minimana* these are hair-like. Species of this genus are found in the high mountain areas of South America, whereas *Prairiana* is mostly found in North and Central America.

Another closely related genus is *Carnoseta* DeLong, new status, which was originally described as a subgenus of *Gypona* Germar (DeLong 1981). *Carnoseta* was described from Colombia and appears to occur in the same type of habitat as *Minimana*. These genera possess very similar external morphologies. They are approximately the same size and color and have vestigial hindwings, somewhat pitted forewings, and small, hair-like setae between the larger setae on the hind tibia. They differ in the type of male genitalia, *Minimana* having a *Prairiana* type and *Carnoseta* a *Gypona* type. These are the only two gyponine genera known to have vestigial hindwings.

Minimana will key out to *Dragonana* Ball and Reeves in the key to genera (DeLong and Freytag 1972). It can be separated from this genus by the presence of paraphyses on the aedeagus.

Minimana montana, new species (2, 4, 6 in Fig. 1; 19-23 in Fig. 2)

Resembling *Prairiana subta*, but with pitted forewings and a thicker anterior margin of head. Lengths of males range from 4.9 to 5.3 mm; females are 5.2 to 6.5 mm.

Crown nearly as long as wide, with small ocelli near middle, margin distinct but thickened. Pronotum only slightly wider than head with a few pits near lateral margins (especially in males). Forewings with obscure venation, pitted throughout (from underside pits appear as black spots). Hind wings vestigial (short and knob-like), less than the length of the forewings.

Color: Generally green, fading to yellow green or yellow.

Male genitalia: Aedeagus with long, tubular shaft, bent at right angle in lateral view near base and somewhat asymmetrical, expanded slightly at apex in ventral view with a pair of short, lateral, apical processes. Paraphyses short, arising from dorsal end of aedeagal base, apex somewhat notched on inner margin and lying close to lateral subapical area of shaft. Style narrowing to dorsally curved, pointed apex. Genital plate slightly longer than style, narrowing to rounded apex. Pygofer truncate at apex with dorsal apical edge thickened and slightly pigmented.

Female genitalia: Seventh sternum with posterior margin sloping concavely to a broad median lobe which is emarginate in middle. Ovipositor extending beyond forewings in mature specimens.

Types: Holotype male, Ortiz, Pico Paramito, 2800 m, Dtto Bocono, Trujillo, Venezuela, 14 June 1986, P. H. Freytag and M. A. Gaiani. Allotype female, same data as holotype. Paratypes, two males, nine females, one immature, same data as holotype; one female, same data as holotype, except 22 May 1985; two males, two females, same data as holotype, except 22 May 1985, P. S. Cwikla. Holotype, allotype, and two male and two female paratypes deposited in the DeLong Collection, The Ohio State University. One male and one female paratype deposited in the collection of The Institute De Zoologia Agricola, University of Central Venezuela, Maracay, Venezuela. All other paratypes deposited in the University of Kentucky collection.

Minimana unistriata, new species

Resembling *M. montana* but smaller, with a black line on apical one-half of forewing and black inner margins of hind tibia. Lengths of males range from 4.7 to 4.8 mm; female is unknown.

Crown nearly as long as wide, with small ocelli near middle, margin distinct and thickened. Pronotum slightly wider than crown. Forewings with obscure venation and lightly pitted throughout. Hind wings vestigial and not extending over two-thirds length of forewings.

Color: Generally yellow green with a black line in middle of apical one-half of forewing. Antennae short, thickened, black. Hind tibia with inner margins black.

Male genitalia: Similar to *M. montana* except aedeagus with apical processes closer together in ventral view, paraphyses rounded at apex without the distinct notch as in *M. montana*.

Types: Holotype male, Trujillo side of Ortiz, Pico Paramito, 2800 m, Dtto Bocono, Trujillo, Venezuela, 14 June 1986, P. H. Freytag and M. A. Gaiani. Paratype male, same data as holotype. Holotype deposited in the DeLong Collection, The Ohio State University. Paratype deposited in the University of Kentucky Collection.

This species was collected on the same mountain as *M. montana*, but on the southern side. It can be easily separated from *montana* by its external color pattern and smaller size.

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