

STUDIES OF THE GYPONINAE: ADDITIONS TO THE GENUS CHILENANA^{1,2}

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ABSTRACT

The genus *Chilenana* is brought up to date with the description of three new subgenera, **Chilenana**, **Penaia** and **Rugosella**. One new species is added, *C. (R.) obrienorum*, and the females of *C. (C.) proxima*, *C. (C.) exilis*, and *C. (P.) flexa* are described.

Several additions can be made to the genus *Chilenana*, which was described by DeLong and Freytag in 1967. One new species and the females of three of the known species can now be described. On the basis of the material now at hand, the genus can be divided into three subgenera.

Genus *Chilenana* DeLong and Freytag

Chilenana DeLong and Freytag, 1967: 106. Type species: *Chilenana chilena* DeLong and Freytag.

Key to Subgenera (males)

- | | |
|---|------------------|
| 1. Aedeagus asymmetrical, apodeme bifurcate | <i>Chilenana</i> |
| Aedeagus symmetrical, apodeme not bifurcate | 2 |
| 2. Aedeagus with apical processes | <i>Rugosella</i> |
| Aedeagus with processes arising from base | <i>Penaia</i> |

Subgenus **Chilenana** n. subgen.

With characteristics of the genus. In addition, venation of forewing normal with a few extra crossveins near apex causing the apex to appear reticulate. Color sexually dimorphic: females uniformly green or yellowish green, males green or yellowish green on head and pronotum with forewings darker green, orange tinted, apex smoky. Male genitalia with asymmetrical aedeagus, gonopore lateral and apodeme divided to base; pygofer processes large and foot-shaped. Female genitalia with posterior margin of seventh sternum produced at middle.

Type species: *Chilenana chilena* DeLong and Freytag.

The five species included in this subgenus, *similara*, *chilena*, *proxima*, *diverta*, and *exilis*, were described by DeLong and Freytag in 1967.

¹ Homoptera: Cicadellidae.

² This work was supported by the National Science Foundation (Grant NSF GB 5659X). Accepted for publication April 17, 1971.

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These were described from male specimens predominantly and females of only *chilena* and *diverta* were known at that time. The females of two more species can now be described.

Chilenana (Chilenana) proxima DeLong and Freytag
(Fig. 9)

Length of female 8.5–9.0 mm. Color green. Female seventh sternum with posterior margin medially and broadly produced.

The female of *proxima* is similar to that of *chilena* but in general is larger, and the seventh sternum is not so abruptly or sharply produced as in *chilena*. The seventh sternum of *chilena* (Fig. 8) is included for comparison.

Allotype female, Chile, 18 km, NW Antillanca, 1,800 ft., Osorno P., II-9-1968 (L. B. and C. W. O'Brien), in the DeLong Collection (O.S.U.).

The allotype is described from a series of two males and five females from the same locality. This record extends the known range of the species from Chiloe to Osorno Province.

Chilenana (Chilenana) exilis DeLong and Freytag
(Fig. 10)

Length of female 6.5–7.0 mm. Color uniformly green. Female seventh sternum with posterior margin concavely sloping from lateral angles to a broad, median, produced tooth, tooth more than half width of segment and blunt at apex.

Allotype female, Chile, Parqu. N Nahuelbuta, 38 km W Angol, 4,300 ft., II-12-1968 (L. B. and C. W. O'Brien), in the DeLong Collection (O.S.U.).

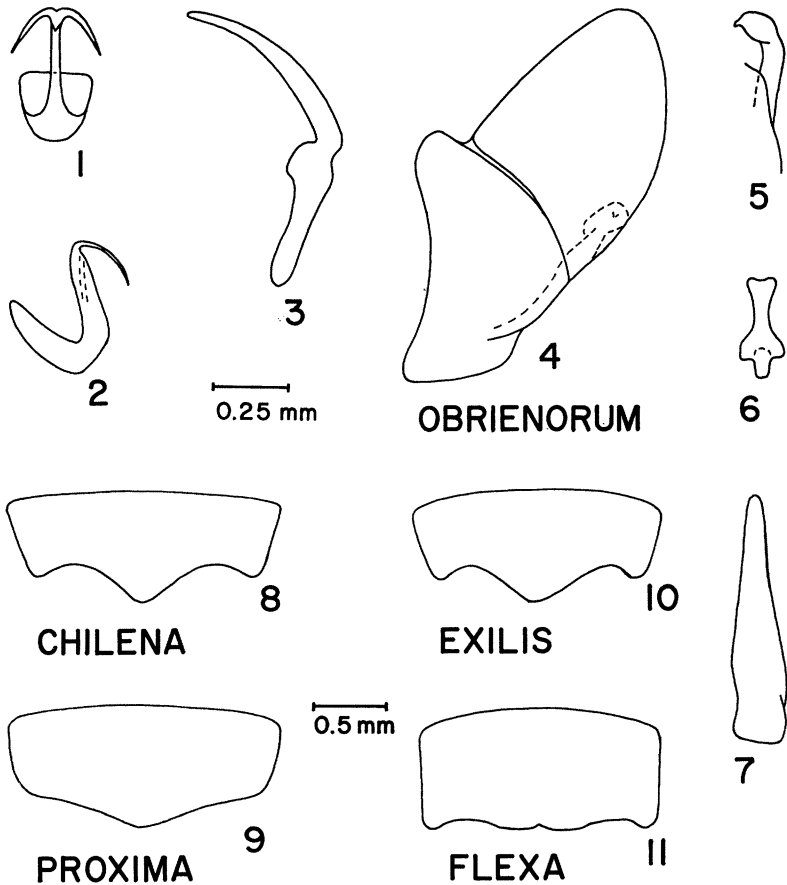
The allotype is described from a series of four males and three females from the same locality. This record extends the known range of the species to both Arauco and Malleco provinces.

Chilenana (Chilenana) chilena DeLong and Freytag

Specimens of this species have been examined from two additional areas, the Island of Chiloe and Malleco Province. This species appears to have a wide range of distribution and is now known to occur from the Province of Santiago down to the Island of Chiloe.

Subgenus **Penaia** n. subgen.

With characteristics of the genus, except venation of forewing entirely reticulate. Color uniformly green, fading to yellowish green in pinned specimens. Males with aedeagus symmetrical, lateral processes arising at base, gonopore apical, apodeme entire. Pygofer of male with a small, hooked process. Female with seventh sternum emarginate at middle of posterior margin.



FIGS. 1-11. Fig. 1-7. Male genitalia of *Chilenana (R.) obrienorum* n. sp., all drawn to same scale. 1, ventral view of aedeagus; 2, Lateral view of aedeagus; 3, lateroventral view of style; 4, lateral view of pygofer; 5, ventral view of pygofer process; 6, ventral view of connective; 7, ventral view of plate. FIGS. 8-11. Female seventh sterna, all drawn to same scale. 8, *Chilenana (C.) chilena* DeLong and Freytag; 9, *Chilenana (C.) proxima* DeLong and Freytag; 10, *Chilenana (C.) exilis* DeLong and Freytag; 11, *Chilenana (P.) flexa* DeLong and Freytag.

Type species: *Chilenana flexa* DeLong and Freytag.

The two species included in this genus are *flexa* and *singularia*. When these species were described no females were known. The female of *flexa* is now available for study.

Chilenana (Penaia) flexa DeLong and Freytag
(Fig. 11)

Length of female 8.0–8.5 mm. Color uniformly dark green. Female seventh sternum with posterior margin concavely sloping from lateral margins to a broadly, slightly produced median lobe, lobe slightly notched at middle.

Allotype female, Chile, Chiloe Is., 32 km N Quellon, II-6-1968 (L. B. and C. W. O'Brien), in the DeLong Collection (O.S.U.).

The allotype is described from a series of one male and eight females from the same locality. Many specimens of this species have now been observed with a range from the provinces of Arauco and Malleco down to the Province of Chiloe and the Island of Chiloe.

Subgenus **Rugosella** n. subgen.

With characteristics of the genus, except venation of forewing rugose throughout. Color uniformly dark green. Male with aedeagus symmetrical, processes arising from apex of shaft, gonopore subapical, apodeme solid. Male pygofer process large, somewhat hook-shaped. Female unknown.

Type species: *Chilena (Rugosella) obrienorum* n. sp.

Chilenana (Rugosella) obrienorum n. sp.
(Figs. 1–7)

Resembling *flexa* in general size and shape, but with heavy rugose veins on forewing, and male aedeagus with apical hornlike processes. Length of male 7.5 mm.

Crown short, broad, and broadly rounded, about two and one-half times as wide between eyes as median length. Forewings with veins and crossveins rugose.

Color: head and pronotum uniformly dark green. Forewings dark green with greenish brown veins.

Male genitalia with plates elongate, narrow, tapered to a slender apex. Style narrow, bladellike, narrowing gradually to bluntly pointed apex. Connective moderately long. Aedeagus with shaft short, laterally flattened but tubular, with a pair of sharply pointed apical processes curving ventrally about a third length of shaft, gonopore subapical on ventral side at base of processes, apodeme large and platelike. Pygofer with apical part broadly rounded with a ventral process, process bulbous and somewhat pointed at apex.

Holotype, male, Chile, 9 km N Castro, Chiloe Is., II-7-1968 (L. B. and C. W. O'Brien), in the DeLong Collection (O.S.U.).

This species is named for the collectors Drs. Charles W. and Lois B. O'Brien.

LITERATURE CITED

- DeLong, D. M., and P. H. Freytag. 1967. Studies of the Gyponinae: Two new genera, *Chilenana* and *Chilella*. Ohio J. Sci. 67(2) 105–112, 47 figs.