

**STUDIES OF THE GYPONINAE, THE GENUS *DRAGONANA*
BALL AND REEVES¹**

(HOMOPTERA: CICADELLIDAE)

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The genus *Dragonana* was described by Ball and Reeves in 1927. At that time and up to the present only one species, *dracontea* (Gibson), was known. The present study is an attempt to bring up to date our knowledge of the species of this genus.

Dragonana contains small, dark leafhoppers. Head, pronotum, scutellum, and forewings pitted, each pit usually bearing a fine seta. Head narrower than pronotum; anterior margin foliaceous; crown with surface obscurely striate. Pronotum broad, transversely striate. Forewings with appendix small, venation weak with irregular reticulations on apical portion. Hind tibia without outer secondary setae. Male aedeagus simple, without basal processes.

The species of this genus are known only from Mexico and the Southwestern part of the United States.

KEY TO SPECIES

1. Female seventh sternum with a slightly produced posterior margin (fig. 41).
Male styles broadened near apex, then deeply notched, forming a long diagonally produced apical spur (fig. 26)..... *chelata*, sp. n.
Female seventh sternum with posterior margin excavated bearing a median sunken tooth (in all following species). Male styles not notched near apex 2
2. Male pygofer simple, without an apical extension, spines near apex (fig. 34).
Aedeagus a simple shaft without apical processes. Male plate without spines on surface but clothed with fine hairs (fig. 28).....
..... *dracontea* (Gibson)
Male pygofer with apical extension, at the base of which is a transverse ridge set with a row of spines (fig. 35). Male plates bearing spines on at least the apical half of surface (fig. 29)..... 3
3. Male aedeagus a simple shaft without terminal processes (fig. 7).....
..... *comata*, sp. n.
Male aedeagus with terminal processes 4
4. Male plates with surface entirely covered with short spines (fig. 31). Male aedeagus short, broad, widened at apex (ventral view) with a curved spine arising at apex, on each side, curved basad and inwardly to aedeagal shaft, extending one-third the distance to base (fig. 10)..... *cillia*, sp. n.
Male plates with short spines on apical half only. Male aedeagus long, not widened at apex, or with shorter terminal processes..... 5
5. Terminal processes of male aedeagus very short, less than one-eighth the length of shaft (fig. 12). Male styles broad at base (fig. 25).....
..... *crinita*, sp. n.

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Terminal processes of male aedeagus longer, about one-fourth the length of shaft (fig. 8). Male styles narrowed and pointed at base (fig. 21).....
 *horrida*, sp. n.

***Dragonana dracontea* (Gibson)**

(Figs. 1-5, 16, 17, 28, 34, 40)

Gypona dracontea Gibson, 1919, p. 100.

Dragonana dracontea Ball and Reeves, 1927, p. 489.

A small, short headed species tawny to brown in color. Length: male 6 mm., female 6.5 mm.

Crown rather broadly, roundedly produced, more than twice as wide between eyes at base than median length.

Color: Head with face tawny, heavily irrorate with red; crown pale, heavily marked with reddish punctate spots. Pronotum yellow to tawny, anterior margin often appearing reddish. Scutellum pale, basal angles darker, central portion marked with many reddish punctate spots. Forewings heavily punctate, white with reddish coloration on basal two-thirds, claval area mostly white.

Genitalia: Female seventh sternum with strongly produced lateral angles between which posterior margin convexly emarginate either side forming a small notch on each side of a broad, slightly produced, median tooth which is slightly notched at center (fig. 40). Male plates about three times as long as median width (fig. 28). Styles, in lateral view, broadened at middle, narrowed at both ends, apex slender and curved dorsally forming a long, sharply pointed apical terminal process (fig. 17). Aedeagus rather short, simple, apical half cleft forming two sharp tips (fig. 4). Pygofer tapered to a bluntly pointed apex (fig. 34).

This species is known only from Arizona.

***Dragonana comata*, sp. n.**

(Figs. 6, 7, 18, 19, 29, 35)

In form and general appearance resembling *dracontea* but larger and with distinct male genitalia. Length: male 7 mm., female 7.5 mm.

Crown short, broadly rounded, depressed, more than twice as wide between eyes as median length.

Color: Crown, face, pronotum, and scutellum tawny, rather thickly covered with minute red punctate spots. Forewings dark brown, veins conspicuous.

Genitalia: Female seventh sternum with posterior margin almost straight, notched either side of a median sunken tooth which reaches to the length of the posterior margin. Male plates about four times as long as broad, apex rounded (fig. 29). Styles elongate, with apical fourth tapered, forming a slender apical portion which curves dorsally caudad about one-fifth length of style (fig. 19). Aedeagus short, simple, tubular, with a long V-shaped opening on apical half (fig. 6). Pygofer with a large caudal portion (fig. 35), as in some *Gypona* spp.

Holotype male: Mexico City, D. F., S in Canyon, 10-20-45, DeLong. Allotype female: Mexico City, D. F., 5-5-44, Plummer. Paratypes: 2 males, 1 female, Mexico City, D. F., 5-5-44; 2 males, Puebla Rd., Mexico City, 5-13-38, W. E. Stone; 1 male, 2 females, Real de Arriba, Temescaltepec, Mexico, 7-13-33, Hinton and Usinger. Holotype and

allotype in the DeLong Collection. Paratypes in the DeLong Collection and the California Academy of Science Collection.

***Dragonana horrida*, sp. n.**

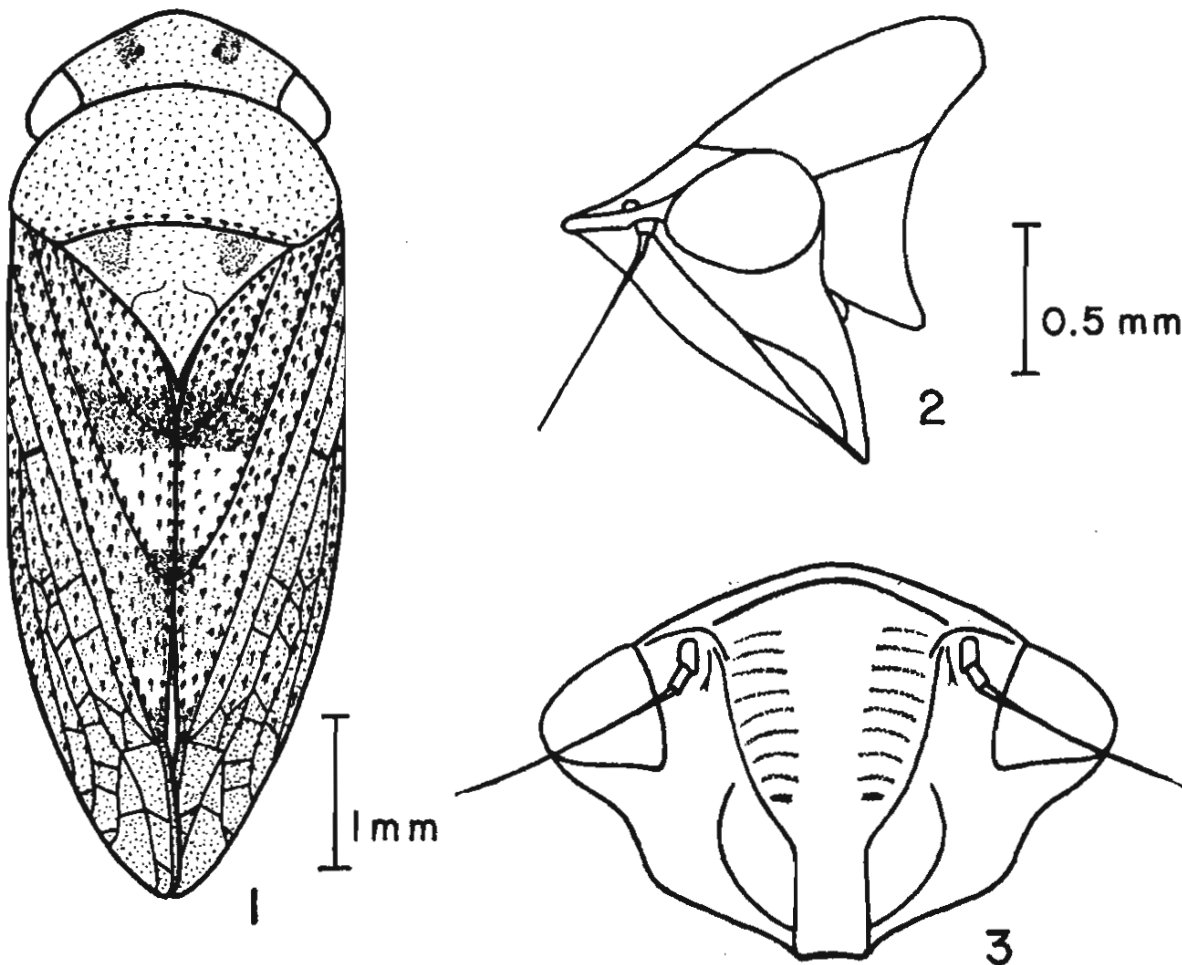
(Figs. 8, 9, 20, 21, 30, 36)

In form and general appearance resembling *dracontea* but with head a little longer and with distinct male genital structures. Length: male 6.5 mm., female 7 mm.

Crown broadly rounded, about twice as broad between eyes at base as median length.

Color: Face dark brown; crown, pronotum, and scutellum tawny, thickly covered with minute red speckled spots. Forewings dark brown, darker on basal half.

Genitalia: Female seventh sternum with posterior margin appearing truncate, deeply notched either side of a median tooth which is produced to length of margin. Male plates parallel sided, about four times as long as wide (fig. 30). Styles long, curved, in lateral view, appearing almost equal in width throughout to apex which is abruptly narrowed forming a very narrow, long, hair-like process (fig. 21). Aedeagus simple, rather broad, bearing a pair of processes at apex



DRACONTEA

Dragonana dracontea (Gibson). Fig. 1, Dorsal view of male; Fig. 2, Lateral view of head and pronotum; Fig. 3, Face. (scale same as fig. 2).

which extend basally on each side almost one-third length of shaft (fig. 8). Pygofer with a rather large caudal portion which is tapered toward apex and bluntly pointed (fig. 36).

Holotype male: Guadalajara Rd., Mexico, Km-118, 6-20-43. Allotype female: same data as holotype. Paratypes: 4 females, same locality and date; 1 male, Zitacuaro, Michoacan, Mexico, Km-160, 9-29-41, DeLong, Good, Caldwell, and Plummer. All type material in the DeLong Collection.

***Dragonana cillcia*, sp. n.**

(Figs. 10, 11, 22, 23, 31, 37)

Resembling *comata* in form and appearance but with distinct male genital structures. Length: male 6.5 mm., female 7 mm.

Crown short and broadly rounded, more than twice as wide between eyes at base as median length. Forewings with short bristles.

Color: Face tawny marked with red. Crown, pronotum, and scutellum tawny, marked with reddish punctate spots. Forewings brown marked with reddish spots. Female more intensely marked with red than male.

Genitalia: Female seventh sternum with posterior margin almost straight, notched either side of a small, sunken median tooth which extends to length of posterior margin. Male plates long and narrow, about three and one-half times as long as broad at middle, entirely clothed with bristles (fig. 31). Styles, in lateral view, curved, then recurved near apex which is narrowed, forming a long, curved, slender, apical spur which is directed dorsally (fig. 23). Aedeagus tubular, apex broadened and appearing cleft in ventral view, a pair of lateral processes arising at apex and curving toward base extending about one-fourth length of shaft (fig. 10). Pygofer with apex tapered and bluntly pointed (fig. 37).

Holotype male: Jalapa Rd., Veracruz, Mexico, Km-241, 10-13-45, Shaw, DeLong, and Hershberger. Allotype female: same data as holotype. Both types are in the DeLong Collection.

***Dragonana crinita*, sp. n.**

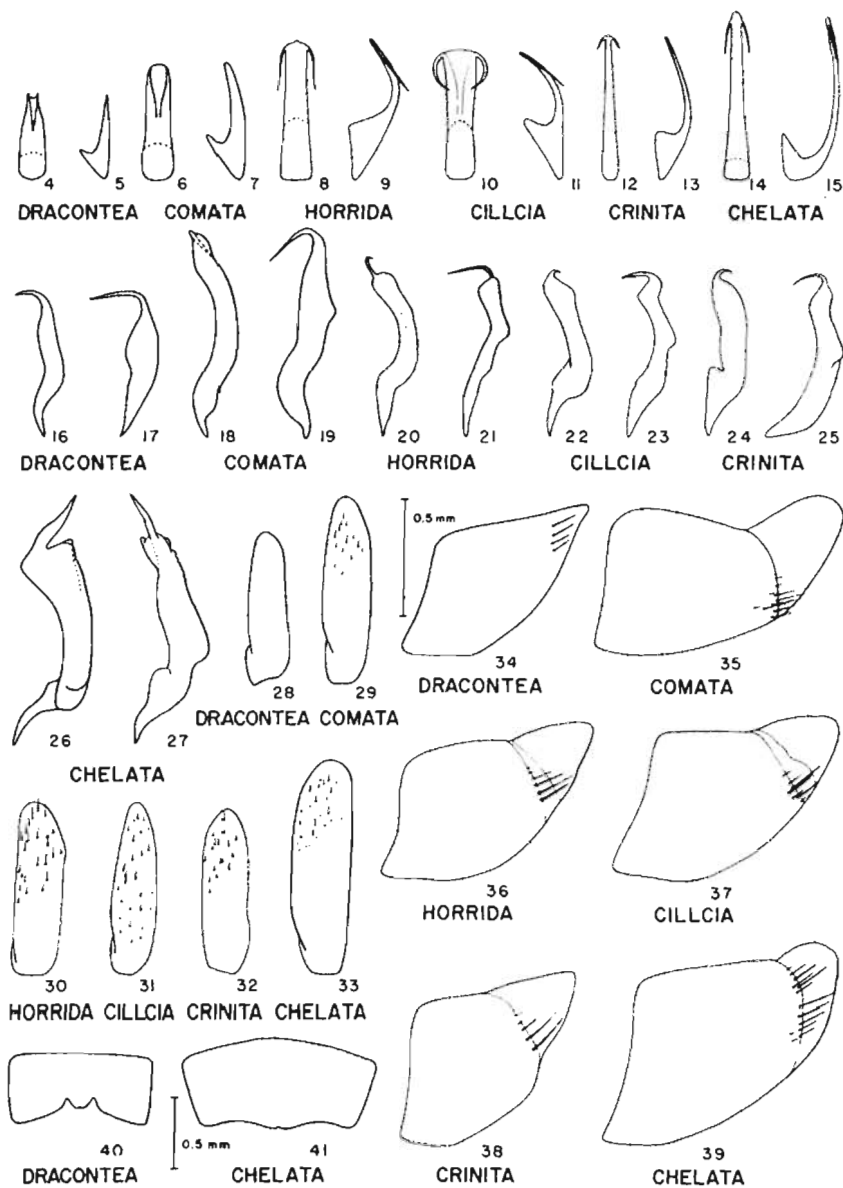
(Figs. 12, 13, 24, 25, 32, 38)

Resembling *dracontea* in form and appearance, but with distinct male genital characters. Length: male 6 mm., female 7 mm.

Crown short and broadly rounded, more than twice as wide between eyes at base as median length.

Color: Crown, pronotum, and scutellum tawny to pale brown marked with a few reddish punctate spots. Face pale brown. Forewings pale brown with reddish and dark brown punctate spots.

Genitalia: Female seventh sternum almost straight to median third which is notched either side of a sunken, median tooth which is produced to the posterior margin. Male plates about three times as long as broad, apical half clothed with short bristles (fig. 32). Styles, in lateral view, almost parallel margined to near apex which is constricted to form a narrow, elongate apical spur which curves dorsally (fig. 25). Aedeagus long, narrow, tapered to apex from which two very short processes arise, each about one-ninth the length of shaft (fig. 12). Pygofer with caudal portion tapered to form a bluntly pointed apex (fig. 38).



Figs. 4-15, Aedeagi. Figs. 16-27, Styles. Even numbers refer to ventral views, odd numbers to lateral views. Figs. 28-33, ventral views of plate. Figs. 34-39, lateral views of pygofer (male structures drawn to same scale). Figs. 40-41, female seventh sterna (both to same scale).

Holotype male: Carapan, Michoacan, Mexico, 10-2-41, Km 432, DeLong, Good, Caldwell, and Plummer. Allotype female: same data as holotype. Paratypes: 1 male, 3 females, same data as holotype. All type specimens in the DeLong Collection.

***Dragonana chelata*, sp. n.**

(Figs. 14, 15, 26, 27, 33, 39, 41)

Resembling *comata* in form and appearance, but paler in color and with different male genital structures. Length: male 7.5 mm., female 8 mm.

Crown short and broadly rounded, more than twice as wide between eyes at base as median length.

Color: Face pale yellow. Crown, pronotum, and scutellum tawny marked with reddish punctate spots; disc and posterior portion of pronotum darker. Forewings tawny subhyaline with reddish punctate spots.

Genitalia: Female seventh sternum almost truncate, slightly excavated either side of median third which is slightly produced and notched at middle (fig. 41). Male plates about three and one-half times as long as median width, apex broad and rounded, apical third clothed with stout bristles (fig. 33). Styles, in lateral view, broadened before apex, deeply notched on ventral side to form a long, tapered, apical fourth which is sharp pointed at apex, resembling a chela claw (fig. 26). Aedeagus long, slender, tapering to apex where a pair of very short, slender, lateral processes arise which are about one-fifth length of shaft and directed basally (fig. 14). Pygofer with apical portion comparatively short, narrowed, and blunt at apex (fig. 39).

Holotype male: Jalapa Rd., Veracruz, Mexico, Km-241, 10-13-45, Shaw, DeLong, and Hershberger. Allotype female: Rio Frio, D. F., Mexico, October 18, 1941, DeLong, Good, Caldwell, and Plummer. Both types are in the DeLong Collection.

REFERENCES

- Ball, E. D. and J. A. Reeves.** 1927 Further Studies of the genus *Gypona* and its allies (*Rhynchota-Homoptera*). Ann. Ent. Soc. America 20: 489.
- DeLong, D. M.** 1924. A monographic study of the North American Species of the subfamily *Gyponinae* (*Homoptera-Cicadellidae*) exclusive of *Xerophloea*. The Ohio State University Graduate School Studies, Contributions in Zoology and Entomology, 5:14.
- Gibson, E. H.** 1919. A review of the leafhoppers of the Genus *Gypona* north of Mexico. Proc. U. S. Nat. Mus. 56: 100.