

NEW TROPICAL XESTOCEPHALUS (HOMOPTERA:
CICADELLIDAE) AND ILLUSTRATIONS
OF LITTLE KNOWN SPECIES

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Abstract.—Six new tropical species of *Xestocephalus*, *X. bifidus* n. sp. (Mexico), *X. spicatus* n. sp. (Mexico), *X. curtus* n. sp. (Panama), *X. mexicanus* n. sp. (Mexico), *X. hambletoni* n. sp. (Brazil), and *X. ramulus* n. sp. (Puerto Rico) are described and four species previously described *X. balli* V.D. (Jamaica), *X. bipunctatus* V.D. (Jamaica), *X. ornatus* V.D. (Jamaica) and *X. maculatus* Osb. (Cuba) are illustrated from the type specimens.

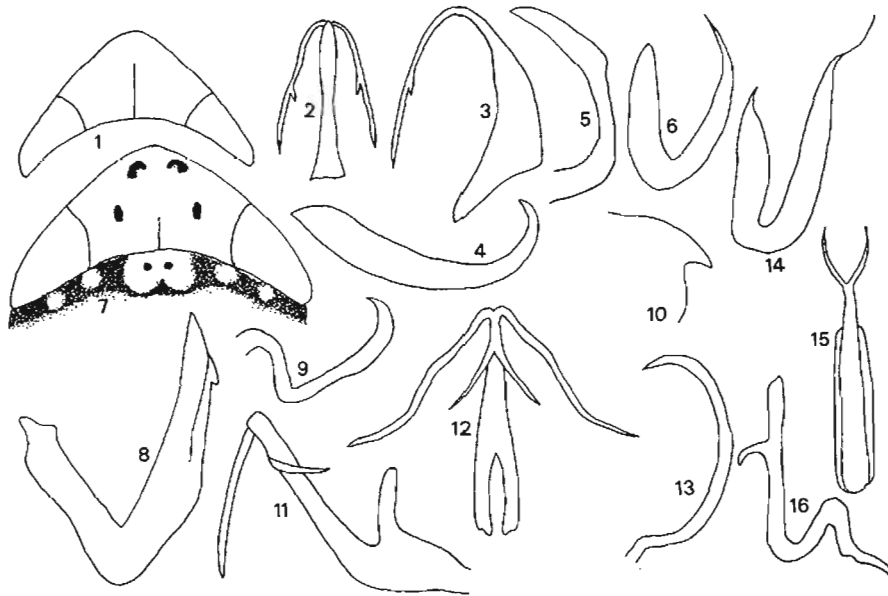
Species of tropical *Xestocephalus* have previously been described by Van Duzee (1907), Osborn (1926), Caldwell (1952) and Linnavuori (1959). The Van Duzee and Osborn types have not previously been studied sufficiently to determine the male genital characters. While attempting to identify a large number of Mexican, Honduras, Panama and South American specimens it has seemed advisable to study all available types. The species having male holotypes or allotypes have been illustrated. Two species *X. irroratus* Osb. and *X. brunneus* V.D. were described from female specimens only and the males have not been properly determined. Five new species *X. bifidus* n. sp., *X. spicatus* n. sp., *X. curtus* n. sp., *X. mexicanus* n. sp., *X. hambletoni* n. sp., and *X. ramulus* n. sp. are described. Four species previously described, *X. balli* V.D., *X. bipunctatus* V.D., *X. ornatus* V.D., and *X. maculatus* Osborn have been illustrated.

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Xestocephalus bifidus n. sp.
(Figs. 1-4)

Length of male 3 mm, female 3.6 mm. Crown bluntly angled, one-fourth wider at base between eyes than median length. Color, crown, pronotum and scutellum pale brown, a few irregular darker brown spots along anterior margin of pronotum; dark brown spots in basal angles of scutellum pale brown, a few irregular darker brown spots along anterior margin of pronotum; dark brown spots in basal angles of scutellum. Forewings yellowish heavily mottled with dark brown spots and areas.

Female seventh sternum with posterior margin almost truncate, slightly notched at middle.



Figs. 1-4. *Xestocephalus bifidus* n. sp. 1. crown dorsally; 2. aedeagus ventrally; 3. aedeagus laterally; 4. style laterally. Figs. 5-6. *X. spicatus* n. sp. 5. style laterally; 6. aedeagus laterally. Figs. 7-10. *X. curtus* n. sp. 7. crown dorsally; 8. aedeagus laterally; 9. style laterally; 10. apex of aedeagus laterally. Figs. 11-13. *X. mexicanus* n. sp. 11. aedeagus laterally; 12. aedeagus ventrally; 13. style laterally. Figs. 14-16. *X. hambletoni* n. sp., 14. aedeagus laterally; 15. aedeagus ventrally; 16. style laterally.

Male with style with apical half slender, apex pointed. Aedeagus with two filamentous processes arising at apex of shaft, curving toward base and bifid at about half their length, producing a short spur at each junction.

Holotype male, Vergel, Chiap. Mexico 31-V-35, A. Dampf, Coll. (MF 4358). Allotype female, Aguacate, Gro. Mexico 24-IX-35, J. Parra coll (MF 1794).

This species is minute and has a pointed crown.

Xestocephalus spicatus n. sp.
(Figs. 5-6)

Length of male 3.5-4.0 mm, female 4.3 mm. Crown bluntly pointed, three-fourths as long as middle as width at base between eyes. Color, crown yellowish with brown mottling, more concentrated just above apex and between compound eyes. Pronotum dark brown along anterior margin, wider behind eyes. Scutellum with basal angles dark brown. Veins alternating brown and white, especially on clavus.

Female seventh sternum almost truncate, slightly notched at middle.

Male genitalia with apical third of style enlarged, apex bluntly pointed. Aedeagal shaft with apical third slender tapered to a thin pointed apex.

Holotype male Barr. Honda Chiap. Mexico 24-II-31 (MF 2067) J. Parra coll. Female allotype Finca Vergel, Chiap. 13-V-35 A. Dampf coll. Paratypes: 1♂ same as holotype; 7♂ same as allotype except 16 May 1928, 1 June; 4♂ Aguacate Gro. Mexico 24-IX-30 J. Parra, coll.; 1♂ Mont. Grande Chiap. 23-III-31, J. Parra coll.

Xestocephalus curtus n. sp.

(Figs. 7-10)

Length of male 3 mm, female unknown. Crown blunt, produced and rounded at apex, two-thirds as long at middle as width at base between eyes. Color pale yellow with a pair of proximal dark brown spots at apex. Pronotum pale yellow with a pair of proximal dark brown spots at middle of anterior margin and four larger semicircular dark brown spots each side along anterior margin. Scutellum pale yellow with basal angles dark brown and two round dark brown proximal spots anterior to middle. Forewings pale yellow with three dark brown L-shaped areas on costa, a little mottling at base and a large diagonal dark brown area at middle of clavus.

Male with style pointed at apex, blade slightly broadened on apical third. Aedeagus V-shaped with shaft short and slightly notched on ventral margin near apex. Pygofer with a conspicuous spine each side, bent inwardly, on dorsoapical margin.

Holotype male, Santa Fe, Darien Prov., Panama 29-V-67 Triplehorn & DeLong colls. Paratype male, Las Cumbres, Panama 8-IV-73 Henk Wolda coll.

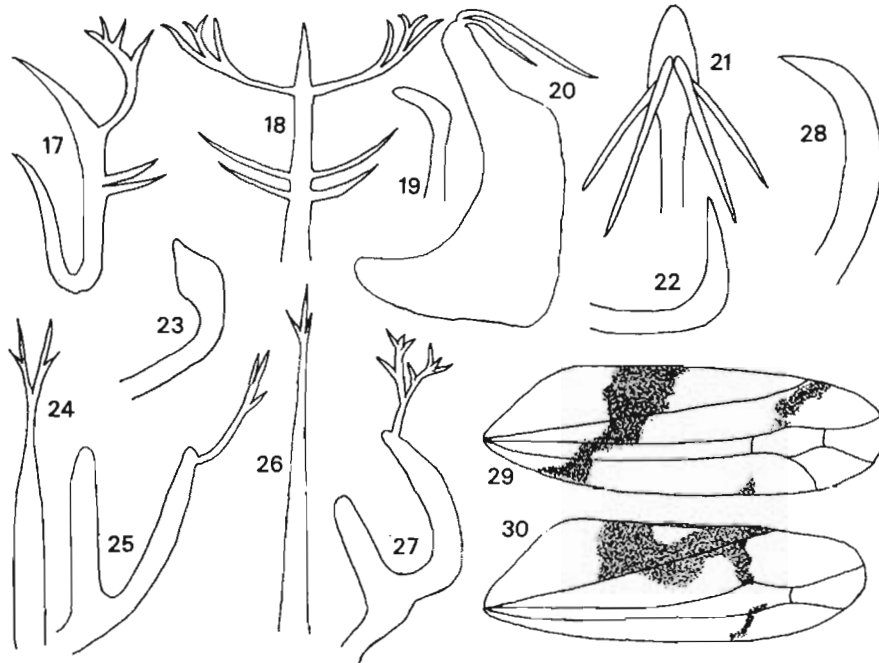
Xestocephalus mexicanus n. sp.

(Figs. 11-13)

Length of male 3 mm, female 3.7 mm. Crown bluntly pointed, a little broader at base between eyes than median length. Color, crown dull yellow unmarked. Pronotum dull yellow, a small brown spot on each side near posterior margin. Scutellum yellow, basal angles brown. Forewings pale brown with dark brown spots; a spot on clavus at apex of scutellum, one at middle of clavus along commissure and a spot just beyond apex of clavus. Three dark brown spots along costa, one near base, another near middle and a third near apex of costa.

Female seventh sternum truncate, slightly notched at middle.

Male with style slender, curved, with a slight blunt tooth on ventral margin near apex. Aedeagus with apical portion slender, produced, bearing a pair of long, slender, apical processes extending more than two-thirds distance to base. A pair of shorter processes arises on ventral margin of shaft



Figs. 17-19. *X. ramulus* n. sp. 17. aedeagus laterally; 18. aedeagus ventrally; 19. style laterally; Figs. 20-22. *X. maculatus* Osb. 20. aedeagus laterally; 21. aedeagus ventrally; 22. style laterally. Figs. 23-25, 30. *X. ornatus* V.D., 23. style laterally; 24. aedeagus ventrally; 25. aedeagus laterally; 30. forewing. Figs. 26-28. *X. punctatus* V.D. 26. aedeagus ventrally; 27. aedeagus laterally; 28. style laterally; Fig. 29. *X. balli* V.D. forewing.

at two-thirds its length and extend ventrocephally, curving around the shaft.

Holotype male Esmeralda, Chiap. Mexico 18-XI-1930, A. Dampf coll. Paratypes: 1♂ and 2♀ same data as holotype; 2♀ same except 13-XI-1930; 1♀ Br. Hond. 16-X-1925 (MF 725—virgin forest).

Xestocephalus hambletoni n. sp.

(Figs. 14-16)

Length of male 3 mm, female 3.6 mm. Crown blunt, broadly rounded, two and one-half times as broad at base as median length. Color, crown, pronotum and scutellum pale brown with numerous small white dotted stippling, appearing pale brown in color. Forewings pale to dark brown with minute white spot stippling, usually merging into white areas, without large areas of brown. First and second claval veins white for a short distance next commissure, the only specific color markings.

Female seventh sternite with posterior margin truncate.

Male genitalia with style blade straight, slender, with blunt apex, bearing a lateral spur on ventral margin, curved basad at apex, at more than half its length. Aedeagus narrowly U-shaped, the caudal portion with two slender diverging processes, one-third length of caudal portion of aedeagus, extending caudally.

Holotype male Viscosa, Brazil 18-IX-29, Edson Hambleton Coll. Paratypes: 3♂ same as holotype; 3♂ same except 27-IX-29; 2♂, 3♀ same except 14-X-29. All types in the DeLong Collection.

X. hambletoni is similar to *irroratus* Osborn in coloration and general appearance but is narrower with a more produced head and *irroratus* lacks the distinctive white coloration of the clavus.

Xestocephalus ramulus n. sp.
(Figs. 17-19)

Length of male 4 mm, female unknown. Crown short, rounded, width at base between eyes almost twice median length. Color, pale yellowish-brown without color markings.

Male genitalia with apical portion of style enlarged, foot-like, with "heel" on ventral margin of blade. Aedeagus with shaft slender, bearing three pairs of processes. Two near middle of shaft are proximal, straight, parallel and extend laterally. The apical pair arises at about two-thirds the length of shaft, extend laterocaudally and are divided twice near apices of processes forming four short terminal portions. Apex of shaft slender, pointed.

Holotype male Puerto Rico, Mariloa, 29-I-67, L. & C. W. O'Brien colls.

Xestocephalus maculatus Osborn
(Figs. 20-22)

Length of male 3 mm, female 5 mm. Crown rounded, not quite two-thirds as long at middle as width at base between eyes. Color, crown yellow with a pale brown spot, with yellow center, each side between eyes. Pronotum yellow mottled with pale and dark brown areas. Scutellum pale brown, basal angles dark brown. Forewings pale yellow, anterior third and apical third heavily mottled with brown.

Female seventh sternum with posterior margin truncate.

Male style with blade strongly curved, broadened between apical fourth and basal half. Aedeagus with apical third of shaft abruptly narrowed, bearing four apical processes, two about as long and two slightly longer than the narrowed portion of shaft.

This species was described from a series of 11 female and 1 male: specimens from Cuba. One male and two female specimens are at hand from Puerto Rico Mayaguez (8 miles east) 9-II-1969, L. & C. W. O'Brien colls.

The male type specimen was used for illustrations.

Xestocephalus ornatus Van Duzee
(Figs. 23-25, 30)

X. ornatus is cream tinted with a median brown spot on anterior margin of pronotum, a transverse brown band on posterior margin of pronotum and anterior margin of scutellum, and an elongate quadrate area covering most of caudal half of clavus and a portion of corium. Male genitalia with style which is roundly enlarged just before pointed apex. The aedeagus is U-shaped, the caudal portion bearing a process near its apex extending ventrocaudally, which is bifid near its origin. Each bifid portion bears a conspicuous spur at about one-third its length.

The aedeagus is similar to that of *bipunctatus* but the styles are different as illustrated. The apical portion of *ornatus* style is enlarged. The apical portion of *bipunctatus* style is slender.

Xestocephalus bipunctatus Van Duzee
(Figs. 26-28)

White in color with a small brown spot on each forewing, along commissure, at two-thirds length of calvus. Male genitalia with styles rather uniform in width and tapered at apex to pointed tips. Aedeagus U-shaped with the apical portion bearing a slender process, directed dorsocaudally, near its apex; the aedeagal process divided near base, each branch of which bears a long spur not far from junction, then bears a spur each side just before its short blunt apex.

The narrow apex of the style will separate it from closely related *ornatus* V.D. as stated under *ornatus*.

Xestocephalus balli Van Duzee
(Fig. 29)

As stated in the original description, this insect resembles, superficially, a specimen of *Norvellina seminuda* Say. The white ground color with the brown pattern is shown in accompanying illustration. The insect is mostly white or pale cream colored with slightly smoky areas on crown and pronotum. It was described from a female specimen and the abdomen is missing on the type which I have had for study. The color pattern should distinguish this from other related species until male specimens are available for study and dissection.

The forewing color pattern is illustrated.

Xestocephalus irroratus Osborn

Length 35 mm. Known from four ♀ specimens from Bolivia. In general form it resembles small female specimens of *tesseletus*. The crown is

broad, and similarly marked with fine brown punctate dots. The pronotum is marked with small brown dots and lacks the yellow usually found in *tesseletus*. The forewings have similar markings as the crown and pronotum. There is no white or dark brown marking as in *tesseletus*. No male of this species is known.

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