

NOTES ON HAPLAXIUS FOWLER WITH DESCRIPTIONS OF
NEW SPECIES

(Homoptera, Cixiidae)

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The genus *Haplaxius* Fowler, with *laevis* Fowler herewith designated genotype, will contain the North American forms that have been formerly included in *Myndus* Stål. The genotype of *Myndus*, *musivus* (Germar), has a transverse carina, at the center of the vertex in addition to the apical carina, frons narrow and not expanded apically, mesonotum transversally angulate with the lateral compartments sharply descending from the median tablet, elytra relatively short and broad as in *Cixius*, and aedeagus of different form and pattern than in *Haplaxius*. *Myndus* is probably not represented in the Western Hemisphere.

Haplaxius, as based on *laevis*, has a single apical carina on the vertex, frons greatly expanded apically, mesonotum very broadly transversally convex, elytra long and narrow, and aedeagus of same general form and pattern as illustrated by the new forms in this paper. Since the North American forms are congeneric with *laevis* the new combinations are: *beameri* (Ball), *catalinus* (Ball), *cocois* (Fennah), *crudis* (Van D.), *delicatus* (Van D.), *enotatus* (Van D.), *fulvus* (Osb.), *impiger* (Ball), *lunatus* (Van D.), *mojavensis* (Ball), *nigrifrons* (Ball), *nolinus* (Ball), *occidentalis* (Van D.), *ovatus* (Ball), *pictifrons* (Stål), *pusillus* (Van D.), *radicis* (Osb.), *rubidus* (Ball), *slossoni* (Ball), *sordidipennis* (Stål), *truncatus* (Metc.), *viridicatus* (Ball), *viridis* (Ball), and *yuccandus* (Ball).

I have seen only the Ball, Metcalf, and Osborn types. My interpretation of the Van Duzee and Stål material has been largely taken from specimens identified by the late Dr. E. D. Ball and by Professor Herbert Osborn. *Auratus* (Ball) is a synonym of *viridis* (Ball) (new synonymy). Specimens of *musivus* (Germar) have been examined through the courtesy of Dr. Paul W. Oman and the interpretation of *laevis* Fowler is based on topotypic specimens identified from the description and figures in the "Biologia." I have examined specimens of *Paramyndus cocois* Fenn. through the courtesy of Ronald G. Fennah and can not concur that they are generically distinct from *Haplaxius*. *Catalinus* (Ball) and *rubidus* (Ball) strain the generic limitations of *Haplaxius* much more than *cocois* (Fenn.) and seem to grade toward other undescribed forms that are a stepping stone toward *Nymphocixia* or *Diastrocixius*.

All types of the new forms in this paper are in the writer's collection.

Haplaxius pallidus, new species (Pl. 29, Figs. 1, 1A)

Length, male 4.5 mm., female 4.8 mm. Dull yellow over all, (probably green in life), female darker than male. Elytra clear except for small black tubercles on veins.

Vertex transversally flat, longitudinally convex; lateral margins little elevated, almost parallel apically, divergent toward base. Elytra approximately four times as long as broad. Pygofer in male broadly produced posteriorly on either posterior margin. Anal segment straight, with small mediobasal projection. Forceps enlarged and flattened apically, pipe-shaped in lateral aspect. Aedeagus with two apical processes; left process short, curved; right process elongate, hooked apically.

Male holotype, female allotype, and one male and one female paratype from Miami, Florida, 2-2-34, (Caldwell).

Superficially resembling *viridis* (Ball) but more slender in form and with different genitalia.

Haplaxius serratus, new species (Pl. 29, Figs. 2, 2A)

Length, male 4.8 mm., female 5. mm. General color of male yellow, mesonotum brownish-yellow with yellow carinae. Female brownish-yellow, lateral compartments of mesonotum brown. Elytra in either sex clear, veins yellow to light brown, stigma clear, commissural margin brown.

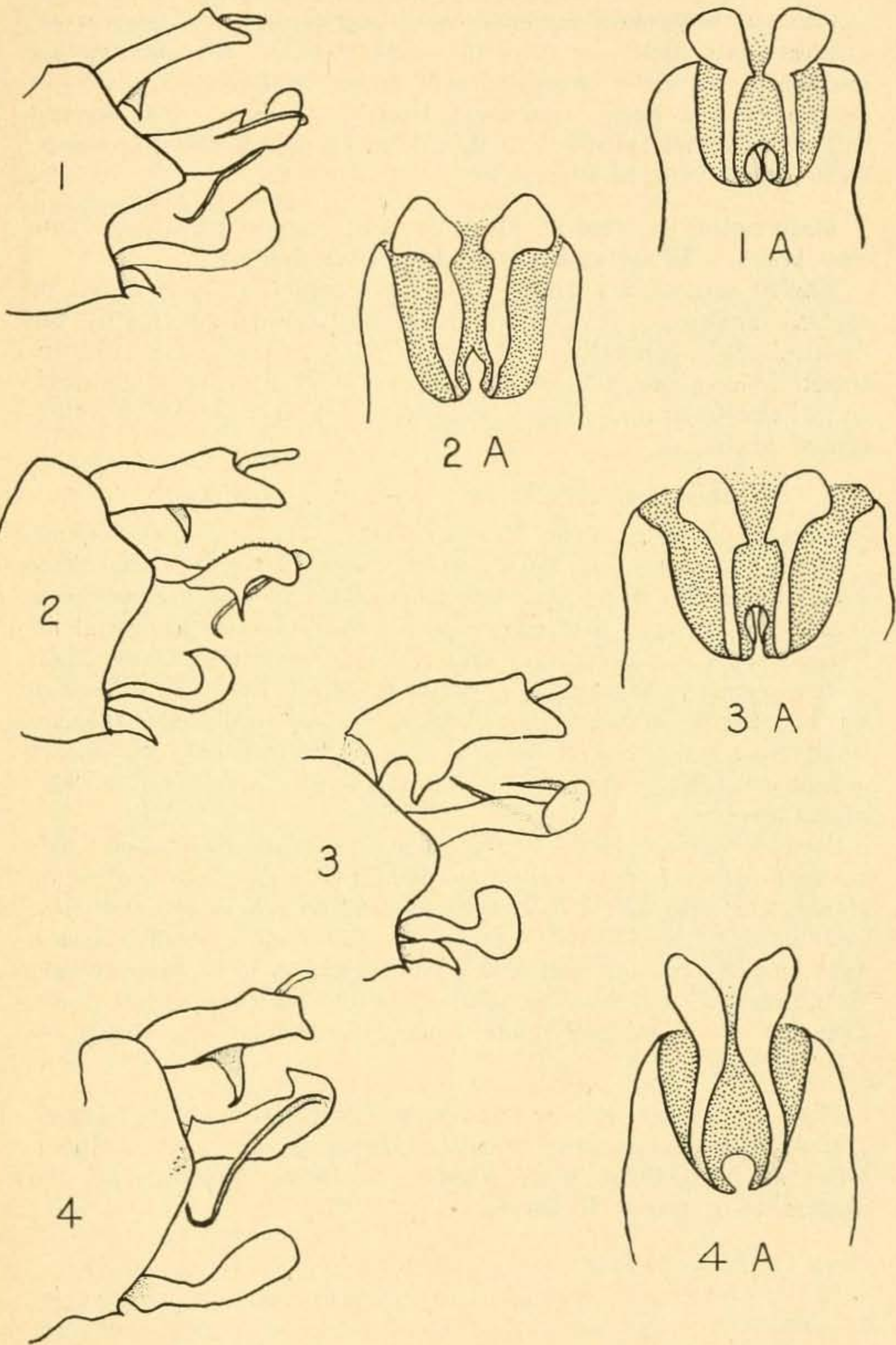
Robust in form. Vertex longitudinally convex, lateral margins little elevated, almost parallel apically, divergent toward base. Carinae of mesonotum very distinct. Elytra less than four times as long as broad; tubercles on veins dense, prominent. Medioventral process of male pygofer narrow basally, broadly expanded apically. Anal segment straight; either ventral margin near base folded inward thence produced ventrad into ventrally projecting tooth. Forceps slender basally, broadly clavate apically in ventral aspect. Aedeagus with apical process on right side; periandrium or theca finely serrate dorsally, with a spine-like projection ventrally near apex.

Male holotype, female allotype, and female paratype from Orizaba, Veracruz, Mexico, 10-8-41, and one female paratype from Fortin, Veracruz, 10-9-41, (DeLong, Good, Caldwell, and Plummer).

Resembling *laevis* Fowler in form but with a shorter, broader vertex and different genitalia.

Haplaxius simplicatus, new species (Pl. 29, Figs. 3, 3A)

Length, male 4.7 mm., female 4.8 mm. General color of male greenish-yellow, female yellow, (both sexes probably green in life). Elytra clear; veins yellow, tubercles light brown.



Lateral and ventral views, respectively, of abdominal apex of male. Fig. 1, 1A, *H. pallidus*, n. sp.; Fig. 2, 2A, *H. serratus*, n. sp.; Fig. 3, 3A, *H. simplicatus*, n. sp.; Fig. 4, 4A, *H. rubidus* (Ball.).

Vertex transversally flat, longitudinally convex; lateral margins little elevated, rather evenly narrowed from base to apex. Frons narrow, greatest width little over twice the width at base. Mesonotal carinae prominent. Tubercles on veins small, dense. Medioventral process of male pygofer elongate, compressed laterally at base. Anal segment with a pair of ventral spurs. Aedeagus with a pair of apical processes; right process twice as long as left.

Male holotype, female allotype, and female paratype from San Miguel, El Salvador, 3-19-42, (Plummer).

Easily confused with any of the forms that lack facial or elytral marking but differing from any known species by the distinct male genitalia. The female can probably be differentiated from other nondescript species only by direct comparison of the form and proportions of vertex and face with determined material.

Haplaxius rubidus (Ball) (Pl. 29, Figs. 4, 4A)

Myndus rubidus Ball. Jour. Wash Acad. Sci. 23:483, 1933 (Holotype).

Length, male 4.6 mm. Vertex white; lateral margins black. Face white; frons with large, rectangular, orange-red spot on median carina extending from apex half way to base. Pronotum white; lateral extensions below and behind eyes light brown. Mesonotum yellow-orange; median compartment white with yellow stripe on either side of median carina. Elytra whitish-hyaline clouded apically with light fuscous; longitudinal veins white; cross veins broadly fuscous; heavy black mark present on posterior extremity of M_3 extending on cross strut to Cula; stigma black.

Form elongate, slender. Vertex trough-like, narrowed to almost half its basal width at apex; lateral margins greatly elevated. Elytra approximately three and a half times as long as broad; setae on veins long, slender. Medioventral process of male pygofer small, rounded. Anal segment with very long ventrally projecting spine at center of right ventral margin. Forceps long, slender in either lateral or ventral aspect. Aedeagus with single long, slender apical process on left side shaped like a button hook.

Male allotype, and 19 paratypes from Brownsville, Texas, 2-22-46; paratypes same locality March 20-22, 1946. Specimens of both sexes were present in large numbers on the underside of palmetto leaves.