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¹ Dedicated to Dr. George W. Byers on his 60th birthday.

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New Species and a New Record of Agalliinae from South and Central America (Homoptera: Cicadellidae)

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ABSTRACT: The following new agalliines are described: *Agalliopsis imparsumma*, n. sp. (Bolivia), *A. dirhachis*, n. sp. (Panama), *A. decis*, n. sp. (Mexico), *Agallia pina*, n. sp. (Bolivia), *A. harpis*, n. sp. (Bolivia), *A. cornuta*, n. sp. (Bolivia), *Euragallia calibera*, n. sp. (Bolivia). *Agalliopsis vicosa* Oman is recorded from Bolivia for the first time and genitalic variation is discussed.

The first major comprehensive treatment of the South American agalliines was by Oman (1938). The Central American fauna was examined earlier by Oman (1934). Kramer (1964, 1976) updated the literature for the group in the form of a species checklist for the New World. Dutra (1970, 1971, 1972) described three species of *Agallia* from Brazil. Linnavuori and DeLong (1977) reviewed the agalliines from Chile describing one new genus and seven new species. Linnavuori and DeLong (1979a) described five species from Central America and described 15 species from South America (1979b). Viraktamath (1980) described four species of *Agallia* from the islands of Juan Fernandez (Chile).

This paper describes seven species of agalliines from Bolivia, Panama and Mexico. All types are deposited in the DeLong Collection, Department of Entomology, The Ohio State University.

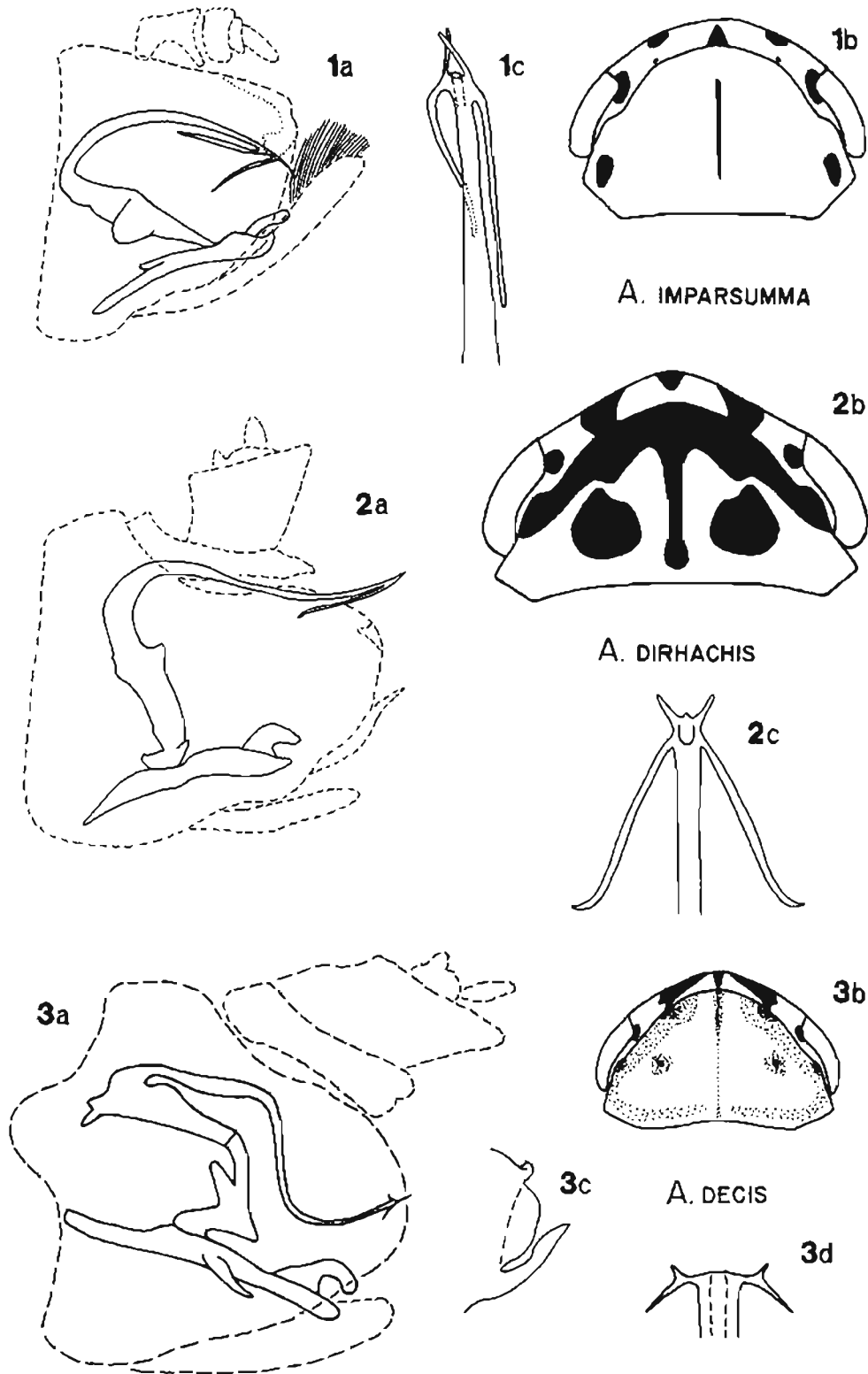
Agalliopsis imparsumma Cwikla and DeLong, new species (Fig. 1)

Length of male 3.4 mm, female unknown.

COLORATION: Face ground color light yellow, two fuscous spots laterad to ocellus; crown marked with median fuscous triangular patch, large and small spots laterad to the median line, and fuscous patch next to each eye. Pronotum ochraceous with narrow median line, and lateral margins with dark patches. Scutellum yellow, anterior angles fuscous, with two small dark spots on disc. Forewings pale yellow. Remainder of thorax and legs ochraceous.

MALE GENITALIA: Pygofer with a pair of club-like processes on dorsoposterior margins, apical dorsal margin of plates covered with long, thin setae. Aedeagal shaft long and slender, apex with two pairs of unbranched processes, apical pair crossing each other in dorsal aspect, subapical processes asymmetrical, left subapical process paralleling shaft, right subapical process curved laterad then ventrad.

TYPE: Holotype male—Bolivia, Santa Cruz, 11-VII-1980, D. Foster.



Figs. 1-3. 1. *Agalliopsis imparsumma*, n. sp. a. Male genital capsule, lateral aspect. b. Head and pronotum, dorsal aspect. c. Aedeagal apex, dorsal aspect. 2. *A. dirhachis*, n. sp. a. Male genital capsule, lateral aspect. b. Head and pronotum, dorsal aspect. c. Aedeagal apex, dorsal aspect. 3. *A. decis*, n. sp. a. Male genital capsule, lateral aspect. b. Head and pronotum, dorsal aspect. c. Apex of pygofer, caudal aspect. d. Aedeagal apex, ventral aspect.

DIAGNOSIS: This species is related to *A. virgator* Linnavuori and DeLong. It can be separated by the apical aedeagal processes which are crossed in dorsal aspect and the asymmetrical subapical aedeagal process.

Agalliopsis dirhachis Cwikla and DeLong, new species

(Fig. 2)

Length of male 4.6 mm, female unknown.

COLORATION: Face pale yellow and heavily marked with black, median of face with black line which connects to transverse black band located under ocelli, ocelli surrounded by black spots, clypellus and ventral portion of clypeus black, portions of gena black; four black spots and median patch on crown. Pronotum pale yellow, anterior margin black, median line black, two black spots near disc. Scutellum black except for pale yellow on posterolateral margins. Forewings fuscous, veins pale yellow, light brown spot on costal margin. Hind legs brown, rest ochraceous.

MALE GENITALIA: Posterior margin of the pygofer in lateral aspect rounded with pair of short processes directed medially on dorsoposterior margin and pair of blade-like processes directed dorsally on ventroposterior margin; plates short, only slightly longer than pygofer. Aedeagal shaft long and slender, one pair of apical processes directed posteriorly in dorsal aspect, subapical processes directed anteriorly then turning laterally in dorsal aspect.

TYPE: Holotype male—Panama, Chiriqui, 7 mi W El Volcan, 4800', 8-VII-1974, C. W. O'Brien, L. B. O'Brien, and G. B. Marshall.

DIAGNOSIS: This species will key to *A. gracilis* in Oman's (1934) key to the Mexican and Central American species of *Agalliopsis*. It can be separated from other *Agalliopsis* by the two pairs of aedeagal processes.

Agalliopsis decis Cwikla and DeLong, new species

(Fig. 3)

Length of male 4.6 mm, female unknown.

COLORATION: Ground color of face light brown, median black band originating at crown and connecting with transverse black band located under ocelli, small dark patch next to each ocellus, lateral margins of clypellus and clypeus black, portions of lorum black, gena next to clypeus black, ground color of crown light yellow with four fuscous patches and median line. Pronotum light yellow, margins and median line brown, disc with two brown spots. Scutellum light brown, except for black anterior angles. Forewings brown. Rest of thorax brown.

MALE GENITALIA: Anterior margin of pygofer in lateral aspect with median lobe, posterior margin with two processes in caudal aspect, dorsal process club-like, ventral process directed dorsally, apex of pygofer directed medially (Fig. 3c). Plates short, broadly triangular in ventral aspect. Styles with sharp blade-like process near middle, in dorsal aspect. Aedeagal shaft slender, elongate, curved mesally in lateral aspect, terminating in a pair of processes, processes branched in dorsal aspect.

TYPE: Holotype male—Mexico, Chiapas, 4700', Laguna Montebello, 5-VI-1974, UV trap, L. B. O'Brien.

DIAGNOSIS: This species is related to *A. neocervina* Kramer, it can be distinguished by the apical bifurcate aedeagal processes.

Agallia pina Cwikla and DeLong, new species

(Fig. 4)

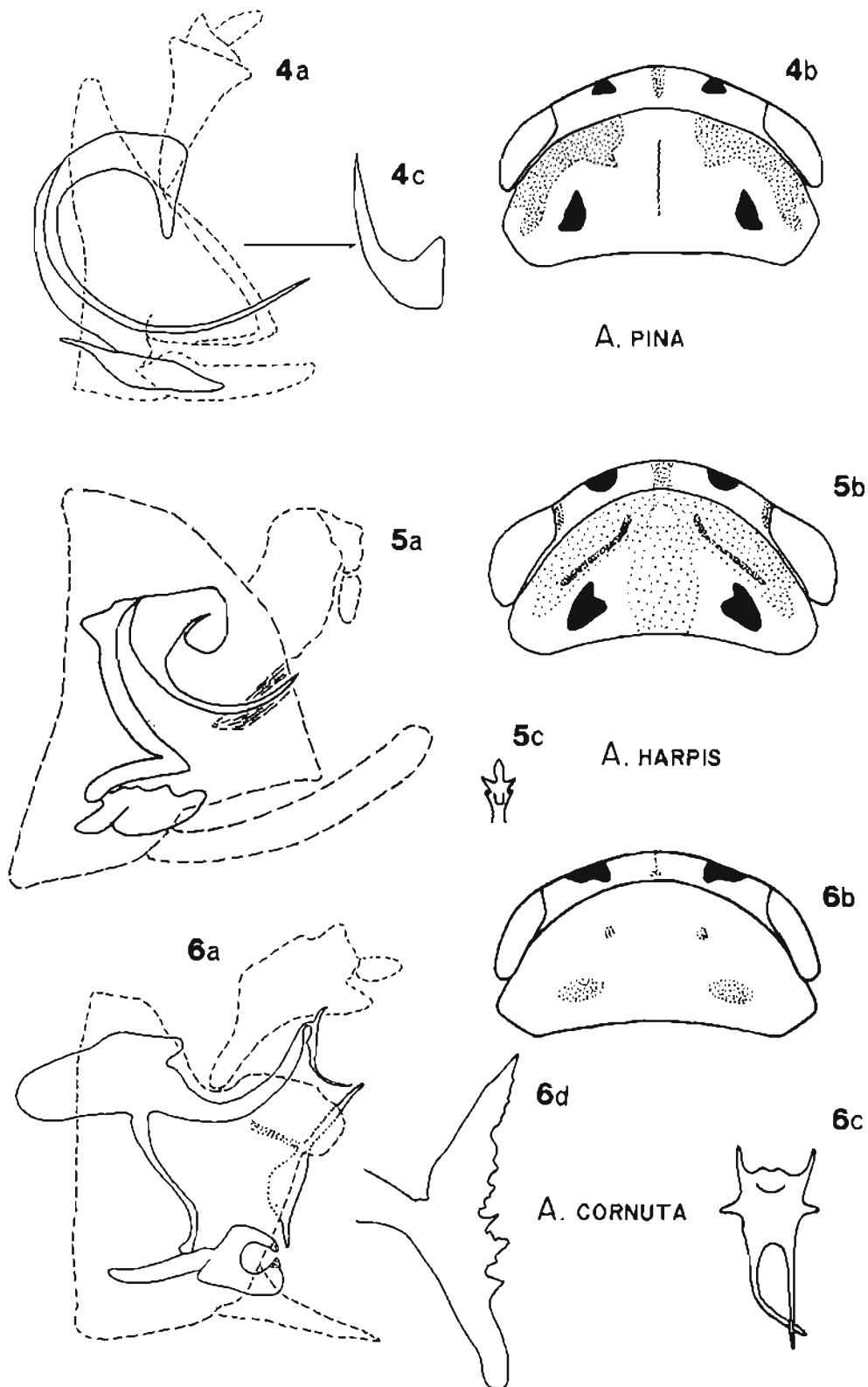
Length of male 4.2 mm, female unknown.

COLORATION: Face pale yellow, clypeus lightly marked with brown; crown ground color pale yellow, median line brown, two black patches laterad to median line. Pronotum yellow, portion of anterior margin light brown, two black patches near disc, median stripe light brown. Scutellum yellow except for dark anterior angles. Forewings light brown, veins white. Rest of thorax and legs pale yellow.

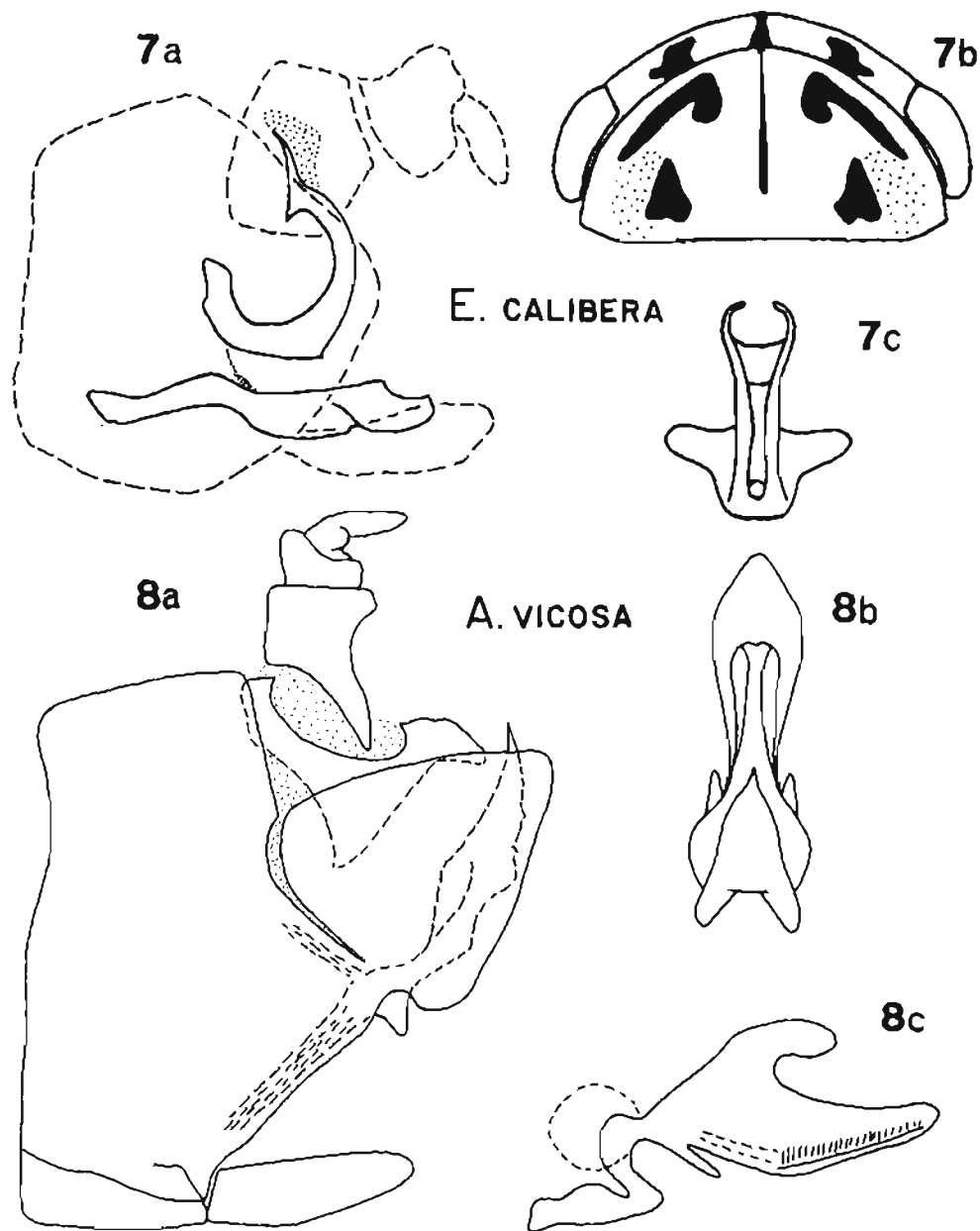
MALE GENITALIA: Pygofer lightly sclerotized, triangular in lateral aspect, dorsal margin thickened and directed medially (Fig. 4c); plates narrowly triangular. Aedeagus broadly U-shaped, base not bulbous, shaft tapering to a slender notched apex. Style not forked, apex ending in a blunt point.

TYPE: Holotype male—Bolivia, Santa Cruz, 21-VII-1980, D. Foster.

DIAGNOSIS: This species is closely related to *A. quadrata* Oman. It can be separated by the triangularly shaped pygofer in lateral aspect.



Figs. 4-6. 4. *Agallia pina*, n. sp. a. Male genital capsule, lateral aspect. b. Head and pronotum, dorsal aspect. c. Lateral edge of pygofer, caudal aspect. 5. *A. harpis*, n. sp. a. Male genital capsule, lateral aspect. b. Head and pronotum, dorsal aspect. c. Aedeagal apex, ventrocaudal aspect. 6. *A. cornuta*, n. sp. a. Male genital capsule, lateral aspect. b. Head and pronotum, dorsal aspect. c. Aedeagal apex, caudal aspect. d. Pygofer process, caudal aspect.



Figs. 7, 8. 7. *Euragallia calibera*, n. sp. a. Male genital capsule, lateral aspect. b. Head and pronotum, dorsal aspect. c. Aedeagus, caudal aspect. 8. *Agalliopsis vicosa* Oman. a. Pygofer and plates, lateral aspect. b. Aedeagus, dorsal aspect. c. Aedeagus, lateral aspect.

Agallia harpls Cwikla and DeLong, new species
(Fig. 5)

Length of male 4.1 mm, female unknown.

COLORATION: Face light brown, yellow marking on clypeus and gena, ground color of crown yellow, light brown markings on median and next to eyes, two black spots located above ocelli. Ground color of pronotum pale yellow, brown markings as in Fig. 5b. Scutellum light yellow except for dark anterior angles. Forewing light brown, veins white. Rest of thorax brown, legs pale yellow.

MALE GENITALIA: Pygofer with dorsal margin thickened, ventroposterior margin ending in a nipple-

like short projection in lateral aspect, plates elongate. Aedeagus broadly U-shaped, apical third surrounded by a membranous sheath, apex with five small processes (Fig. 5c).

TYPE: Holotype male—Bolivia, Chapera, 21-V-1980, D. M. DeLong.

DIAGNOSIS: This species is related to *A. albidula* Uhler, but can be distinguished by the elongated male plates and the aedeagal apex with five small processes.

Agallia cornuta Cwikla and DeLong, new species

(Fig. 6)

Length of male 3.4–3.6 mm, female 3.6–3.9 mm.

COLORATION: Head pale yellow, inverted Y-shaped brown band located between the ocelli, brown markings on the basal portion of the clypeus, lorum and clypellus, black spot above ocelli. Pronotum dull yellow, pair of brown spots near anterior margin and pair of brown spots near posterior margin. Scutellum yellow. Forewings brown subhyaline. Legs pale yellow.

MALE GENITALIA: Dorsal margin of pygofer undulated, pair of processes on dorsoposterior margin, processes directed medially, processes with two arms, one directed dorsally and the other projected ventrally, teeth on process as in Fig. 6d; plates triangular in dorsal aspect. Anterior portion of aedeagus broadly produced in lateral aspect, posterior half directed dorsally, apex in caudal aspect containing three pairs of processes, dorsal processes directed dorsally and slightly curved posteriorly in lateral aspect, middle pair of processes directed laterally in caudal aspect, ventral processes directed ventrally. Apex of style hooked in ventral aspect.

FEMALE STERNUM VII: With posterior margin slightly convex, lateral margins produced.

TYPE: Holotype male—Bolivia, Chapera, 21-V-1980, D. M. DeLong. Three male and 13 female paratypes, same data as holotype.

DIAGNOSIS: This species is related to *A. caudata* Oman, but can be separated by the aedeagal apex which has three pairs of processes.

Euragallia calibera Cwikla and DeLong, new species

(Fig. 7)

Length of male 4.7–4.9 mm, female unknown.

COLORATION: Face ground color pale yellow, light brown markings scattered on the clypeus; crown yellow with dark brown median line and two irregular black patches on posterior margin. Pronotum ground color yellow, median line brown, irregular patches near the anterior margin and posterior margin. Scutellum yellow except for brown anterior angles. Forewings brown, claval veins white.

MALE GENITALIA: Pygofer in lateral aspect with posterior margin bluntly angled, plates fused. Aedeagus U-shaped in lateral aspect, apex in caudal aspect directed medially, subapical processes directed ventrally in lateral aspect. Apex of style hooked-shaped in ventral aspect.

TYPE: Holotype male—Bolivia, Santa Cruz, 21-IX-1980, D. M. DeLong. Paratype male—Bolivia, Buena Vista, 14-V-1980, D. M. DeLong.

DIAGNOSIS: This species appears to be close to *E. machaera* Kramer. The apex of the aedeagus is unique.

Agalliopsis vicosa Oman

(Fig. 8)

This species is recorded from Bolivia. It was previously known only from Brazil (Oman, 1970). The genitalia differ slightly from what Oman (1970) illustrates as *A. vicosa* by having the aedeagal processes shorter, the apical half of the aedeagus thinner in dorsal aspect and the pygofer hook with fewer teeth.

SPECIMENS EXAMINED: Bolivia, Santa Cruz, 21-VII-1980, D. Foster.

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