

Psyllidæ of South America

BY D. L. CRAWFORD, UNIVERSITY OF HAWAII, HONOLULU, T. H.

By the kindness of Professor J. S. Tavares I am enabled to examine a number of very interesting South American gall-forming species of Psyllidæ (Homoptera). This collection brings to light several species described several years ago but not reported since, such as Scott's *Neolithus fasciatus*, Rubsaamen's *Bactericera olei* (really a *Trioza*) and *Ceropsylla johnsoni* Crawford (previously reported from Central America). Also, there is an interesting case of an Asiatic species appearing in Brazil with no appreciable structural differences between the representative specimens of India and of Brazil. This is *Dynopsylla grandis* Crawford.

For convenience, a partial list of other species of Psyllidæ known to occur in South America is added here.

SOUTH AMERICAN SPECIES

CARSIDARINÆ

Freysuila ernstii Schwarz. — Venezuela.
(U. S. Nat. Mus. Bul. 85, p. 55, 1914)

Epicarsa corniculata Crawford. — Brazil (Pará).
(U. S. Nat. Mus. Bul. 85, p. 56, 1914)

APHALARINÆ

Syncoptozus maculipennis Enderlein. — Brazil.
(Zool. Anzeiger. Bd. 49, p. 343, 1918).

CERIACREMINÆ

Panispelma quadrigibiceps Enderlein. — Argentina.
(Zool. Anzeiger Bd. 36, p. 280, 1910.
(Same, Bd. 49, p. 350, 1918).

PSYLLINÆ

Psylla duvauae Scott. — Argentina.
(Trans. London Ent. Soc., 1882, p. 443).

This was erroneously referred to Triozinæ in the new genus *Holotrioza* Brethes (Aspiraciones, Año II, May, 1920, p. 133). Scott's species is not of the Triozinæ although I am not sure that it should remain in the genus *Psylla*. A species of *Trioza* is recorded as forming galls on *Duvaua dependens* in South America, but this is not Scott's species of 1882.

Psylla torrida Crawford. — Brazil.
(U. S. Nat. Mus. Bul. 85, p. 158, 1914).

Psylla fuscinodulus Enderlein. — Bolivia.
(Zool. Anzeiger, Bd. 49, p. 349, 1918).

Labieria barbata Enderlein. — Brazil.
(Zool. Anzeiger, Bd. 49, p. 347, (1918).

Auchmerina limbipennis Enderlein. — Bolivia.
Zool. Anzeiger, Bd. 49, p. 346, (1918).

TRIOZINÆ

Trioza limbata Enderlein. — Bolivia.
(Zool. Anzeiger, Bd. 49, p. 350, 1918).

This appears to be a species of *Ceropsylla*, and perhaps identical with *C. johnsonii* mentioned below as occurring in Brazil.

Synozia cornutiventris Enderlein. — Peru.
(Zool. Jahrb., Bd. 41, p. 479, 1918).

This is very suggestive of *Neolithus* Scott described below, and appears to be closely related.

Rhegmoza tinctoria Enderlein. — Paraguay.
(Zool. Jahrb., Bd. 41, p. 480, 1918).

Cecidotrioza mendocina Kieffer. — Argentina.
(Centrbl. f. Bakt., Bd. 27, p. 372, 1910).

Bactericera solani Ruebsaamen. — Brazil.
(Marcellia, Vol. VII, p. 59, 1908).

Trioza gallifex Kieffer. — Argentina.
(Centrbl. f. Bakt., Bd. 27, p. 362, 1910).

Of Doubtful Position

In 1852 Blanchard ⁽¹⁾ named and briefly described several Psyllid species in Chile. Four species were referred to the genus *Psylla*:

- Psylla luteipennis* Blanch.
- » *areolata* Blanch.
- » *stigmaticalis* Blanch.
- » *signatipennis* Blanch.

Eight species were placed in a new genus, *Calinda*,

(1) GAY'S — *Historia física y política de Chile*, p. 308-315.

which appears to be very similar to *Trioza* (described by Forster four years earlier). These are:

- Calinda pallidula* Blanch.
- » *melonis* Blanch.
- » *testacea* Blanch.
- » *longipennis* Blanch.
- » *multosoma* Blanch.
- » *nigromaculata* Blanch.
- » *lineata* Blanch.
- » *rubra* Blanch.

Delina was another new genus, characterized by the branching of the radius, erected for five species:

- Delina perelegans* Blanch.
- » *tingidoides* Blanch.
- » *modesta* Blanch.
- » *liturata* Blanch.
- » *fulvescens* Blanch.

Sphinia crocea Blanch, is peculiar in having the cubitus trifurcate.

Myeromystes niveus Fabr. — Guiana.
(Hemiptera Fabriciana).

Tainarys schini Brethes. — Argentina.
(Aspiraciones, May, 1920, p. 133).

The Tavares Collection

The following species are represented in the collection submitted by Prof. Tavares.

Metaphalara new genus.

Head not much deflexed; vertex broader than long, turned down in front between antennal bases; genal cones wanting; frons visible from beneath as a long, narrow sclerite between genae, with anterior ocellus at its front end; clypeus elongate, piriform. Eyes more or less hemispherical. Antennae moderately long, about twice as long as width of head or longer, rather stout.

Thorax not much arched. Hind tibiae with several small spines at apex and basal tarsus with two black claws. Forewings membranous, more or less hyaline, broadly rounded at apex, with a pterostigma (Plate V, *E*).

Male anal valve produced caudad into two finger-like, processes as in *Aphalara*.

Type: — *Metaphalara cannella*, n. sp.

To this genus must be referred two other species: — *Paurocephala ilicis* (Ashmead) ⁽¹⁾ and *Paurocephala spegazziniana* (Lizer), both of which are different from other species of *Paurocephala* and very closely similar to this South American species in all the essentials.

Metaphalara appears to be more or less midway between Aphalarinae and Pauropsyllinae in its relationship to other genera.

⁽¹⁾ See *Monograph of Psyllidae*, U. S. Nat. Mus. Bul. 85, p. 43, 1914.

Metaphalara cannella n. sp.

Length of body 2.2 mm.; forewing 2.8 mm.; length of insect to tip of folded wings 3.3 mm. General color light to dark brown, thorax and abdomen usually dusted with grayish pulverulence; thoracic dorsum with a pale median streak and a darker stripe on each side; antennae black at apex of each segment, terminal 2 or 3 segments all black; eyes black.

Head not as broad as thorax, scarcely deflexed; vertex about half as long as broad, elevated at posterior ocelli, somewhat emarginate in front between antennae, extending downward in front; front ocellus visible from in front; frons a narrow, elongate sclerite between genae. Genae somewhat swollen beneath, with a ridge diverging on each side from frons. Clypeus elongate, piriform, projecting vertically downward. Antennae a little more than twice as long as width of head, rather stout, segment 3 twice as long as 4; 4-8 subequal in length.

Thorax not strongly arched, suggestive of *Aphalara*; metascutellum produced into two small epiphyses dorsad, metacoxal spinniform processes short and blunt; hind tibiae with several small black spines at apex. Forewings hyaline, broadly rounded at apex (Plate V, *E*), veins black or brown, with a prominent pterostigma. Hind wings $\frac{3}{4}$ as long as forewings.

Male genitalia suggestive of *Aphalara*, the anal valve having a pair of long finger-like processes caudad; forceps shorter than anal valve, bifid at apex. Female genital segment as long as rest of abdomen, acutely pointed, dorsal valve longer than ventral.

BRAZIL. — Nova Friburgo, Estado do Rio de Janeiro, February, 1911, 6 specimens, both sexes, taken in February but said to be present in all stages more or less throughout the year (Tavares) ⁽¹⁾.

⁽¹⁾ See *Brotéria*, Série Zool., v. xv, 1917, p. 43, n.º 30, Est. III, fig. 7-8.

Gall: — Leaves of an undetermined tree (the common name of which is «cannela amarella») are attacked by the nymphs of this psyllid, the margins being curled as a result, and overlap to form a cartridge-like leaf-gall within which the nymphs live. The nymphs secrete a cottony mass about themselves, filling the interior of the gall. After emergence of the adults the leaf-galls turn black and drop off.

Dynopsylla grandis Crawford

This species (Plate V, A) was described recently ⁽¹⁾ from several specimens collected in India from galls on *Ficus nervosa*. Four specimens (both sexes) of this species are in the Tavares collection from Brazil but no data accompanies them, either as to locality or host plant. Presumably they were collected in Brazil ⁽²⁾, although their exact similarity to the Indian specimens might indicate otherwise. Two other species of this genus are known, *D. cornuta* Crawford in the Philippine Islands and *D. pinnatifida* Enderlein in Formosa. These are the first representatives of this genus outside of Asia.

Euphalerus ostreoides n. sp.

Length of body 3 mm.; forewing 3.4 mm.; length of insect to tip of folded wings 4.7 mm. General color chocolate brown, vertex and thorax mottled with small black spots; mesonotum with a paler median streak; legs and antennae brown; forewings mottled with small brown spots on both membrane and veins (Plate V, H).

Head somewhat deflexed, as broad as pronotum, narrower than thorax. Vertex a little more than half as long as broad, nearly flat with a shallow foveal depression on each

⁽¹⁾ In a paper to be published in *Records of Indian Museum*.

⁽²⁾ It is certain that they were collected in Brazil, but no data accompanies them either as to locality or host plant, because the manuscript note was sadly lost by Prof. J. Tavares. *Red. N.*

side of median line; genal cones porrect, continuing plane of vertex, about $\frac{3}{4}$ as long as vertex, broadly rounded at apex, pubescent, mottled with brown spots. Antennae long and slender, about three times as long as width of head. Eyes large, not recessive.

Thorax broad, robust, reticulately marked, mottled with black spots. Legs robust, hairy. Forewings rather large, hyaline, broadly rounded at apex, veins with numerous black spots and membrane mottled with lighter brown spots.

Male anal valve triangular in lateral aspect, broad at base and converging to a subacute apex; forceps leaf-shaped with a very short petiole and apex narrowly rounded, a median rib visible in basal half. Female genital segment as long as rest of abdomen, dorsal valve longer than ventral, both acutely pointed.

BRAZIL. — Itu (São Paulo), Rio de Janeiro, Bahia, Nova Friburgo (Tavares), 2 males and 1 female; making very peculiar galls on leaves of an undetermined species of Leguminosae. The specific name was suggested by the close resemblance of the gall to a bi-valve molluscan shell ⁽¹⁾.

This species is closely related to *Euphalerus nidifex* Schwarz both in body structure and gall structure. These two are somewhat distinct from the other species of *Euphalerus*.

Psylla itaparica n. sp.

Length of body 2.4 mm.; forewing 2.1 mm.; length of insect to tip of folded wings 2.5 mm. General color light brown to pale greenish; surface of body pulverulent; mesonotum with brown streaks dorsad; antennae black at apex of segments.

Head nearly or quite as broad as thorax. Vertex about

⁽¹⁾ See *Brotéria*, Série Zool., vol. xviii, 1920, p. 124, n.º 64, and vol. xx, 1922, Tabula XIX, fig. 3-5.

half as long as broad, elevated at posterior ocelli, with a fossal depression on each side of median suture; genal coxae a little more than half as long as vertex; somewhat divergent, pubescent distad. Eyes somewhat recessive. Antennae about three times as long as width of head, very slender.

Thorax arched. Legs rather small; hind tibia with a small spur at base. Forewings hyaline, relatively short, broadly rounded, with four black or brown spots on posterior margin (Plate V, *G*), costa briefly pubescent.

Male anal valve with a pair of broad, short processes caudad; an the terminal portion cylindrical, short; forceps about half as long as anal valve, broadest subapically, a little longer than broad, with a black-tooth at apex within. Female genital segment as long as rest of abdomen, dorsal valve longer than ventral, both acute.

BRAZIL. — Island of Itaparica, Bahia (Tavares), 3 males and 3 females; forming galls on an undetermined species of Papilionaceae⁽¹⁾.

This species is very close to *Psylla torrida* Crawford, the life history of which is unknown. The chief differences are in the male genitalia, venation and coloration of wings, and the pulverulence of the body surface.

Ceropsylla johnsenii Crawford

This species was described⁽²⁾ from a single male taken at Belize, British Honduras. A single female taken in Brazil shows such a close resemblance to the Belize specimen that it is referred to the same species in spite of a few minor differences which may be sexual. These differences are as follows: — Radius of forewing without the slight bend midway; medial cell about half as long as medial vein be-

fore its terminal fork (about $\frac{3}{5}$ as long in the Honduras type). Vertex with posterior angles less elevated; antennae a little more slender.

BRAZIL. — Itu (São Paulo) (Tavares), May 1911⁽¹⁾ — one female, on an undetermined Myrtaceous plant.

Enderlein's *Trioza limbata* seems to be close to this species.

Genus *Neolithus* Scott

Head small, much narrower than the large thorax; vertex hirsute, concave between posterior ocelli; frons visible between genae as a narrow sclerite bearing front ocellus at base; genae swollen beneath vertex but not conical, scarcely produced beyond insertion of antennae. Antennae about twice as long as width of head, slender. Thorax very broad, robust, highly arched; legs stout; hind tibiae without basal spur. Forewings hyaline, apical margin broadly rounded, triozone in venation (Plate V, *B*). Gall forming insects.

Type: — *Neolithus fasciatus* Scott.

Neolithus fasciatus Scott⁽²⁾

Length of body 2.2 mm.; forewing 3.8 mm.; length of body to tip of folded wings 4.4 mm. General color light brown to dark chocolate brown, in the lighter forms with mesonotum somewhat longitudinally striped; darker forms more or less uniformly colored, except legs a little lighter shade of brown. Forewings clear with a basal brown macula and a transverse fascia at point of furcation of basal vein.

Head small, much narrower than thorax, scarcely wider than prothorax, somewhat deflexed. Vertex nearly twice as broad as long, emarginate in front at median suture,

⁽¹⁾ *Brotéria*, Série Zool., vol. xviii, 1920, p. 121, n.º 55.

⁽²⁾ U. S. Nat. Mus. Bul. 85, p. 103, 1914.

⁽¹⁾ *Brotéria*, Série Zool., vol. xix, 1921, p. 95, n.º 15.

⁽²⁾ Trans. Ent. Soc. London, 1382, p. 445-446.

hirsute; genæ swollen beneath antennal bases subspherically, not conical. Frons not wholly covered by genæ, a narrow sclerite visible around front ocellus. Antennæ rather thick, a little more than twice as long as width of head, including eyes.

Thorax very broad and strongly arched, sparsely hirsute; mesonotum twice as broad as head. Legs relatively stout; pubescent; hind tibiae unarmed. Forewings broad, hyaline, apical margin broadly rounded, black at base and fasciated basad of middle; media united with radius for a short distance at base, making it appear that the cubitus and media do not fork from same point but cubitus emerges first (Plate V, B).

Abdomen — Male forceps broad, nearly as broad as long, apex blunt. Anal valve longer than forceps, bulging caudad midway, somewhat triangular in lateral aspect. Female genital segment about half as long as rest of abdomen, both valves acute, dorsal a little longer than ventral.

BRAZIL. — Nova Friburgo (Rio de Janeiro), 1911 (Tavares), 2 males and 1 female; in galls on a species of Euphorbiaceae (1).

Scott's type was reported as forming galls on *Sapium aucuparium* Jacq. var. *salicifolium* Kuth. (Euphorbiaceae) in Uruguay and Buenos Ayres. The color was stated by Scott to be pale brownish yellow, while the three Brazil specimens are dark brown.

The gall, as described by Tavares, is round and plump, green or pink in color with the outer surface smooth and glossy; situated on the mid-rib of the leaf or elsewhere on the leaf, or galls may be formed from the fruits, in which case the seeds do not develop within and the pericarp takes on a somewhat unnatural appearance. The nymphs secrete a white cottony material within the gall chamber.

(1) *Brotéria*, Série Zool., vol. xv, 1917, p. 44, Estampa IV, fig. 10-14.

Neotrioza tavaresi, n. sp.

A moderately large species with body of female (not including wings) about 3 mm. long and male 2 to 2.3 mm.; forewings about 3 to 4 mm. long. General color light brown to brown, with forewings whitish; vertex and thoracic dorsum light brown; abdomen and venter of thorax reddish brown, darker than dorsum; antennæ light brown, with two apical segments black.

Head very small in comparison with thorax, much narrower than mesothorax; vertex (between eyes) twice as wide as long, hirsute, with ocelli conspicuously elevated. Frons visible (in frontal aspect) as a small sclerite bearing anterior ocellus. Genæ somewhat swollen beneath antennal bases, but not produced into genal cones. Rostrum moderately long. Antennæ more than twice as long as width of head, very slender, the last two segments a little thicker and bearing two long setae at end.

Thorax very large and robust, strongly arched; pronotum about as wide as head (including eyes). Legs moderately stout; hind tibiae with 5 to 8 black spines at tip in two groups of three each. Forewings large, hyaline, whitish in color, rounded at apex, with scarcely a fleck or spot visible on the entire surface; the three marginal areas of punctural dots present but concolorous with surrounding membrane; venation as shown in accompanying illustration (Plate V, D).

Abdomen large. Female genital segment short, not half as long as rest of abdomen, thick, bluntly acute. Male genital segment moderately small; anal valve broad (in lateral aspect), a little longer than broad and subacute at apex; forceps stout, about as long as anal valve.

Described from eight specimens (both sexes) collected at Camassary (Bahia), Brazil in November, 1913, by Prof. J. S. Tavares, for whom the species is named.

Gall:—This insect forms galls on a species of Malpighiaceæ, the galls, according to Tavares ⁽¹⁾, being round and at first hairy but later becoming glabrous, and more or less shagreened; usually attached on the lower surface of the leaves by a short pedicel or neck, which shows on the upper surface of the leaf as a small conical protuberance. The galls are about 5 to 7 mm. in diameter, with thin walls and a single cavity, and only one nymph to each gall. The mature galls split into four or five segments from the top and open out in a rosette.

This species is with some doubt referred to Kieffer's genus *Neotrioza* which was erected for a Bengal species forming galls on *Machilus* (Lauraceæ). Although differing very markedly in wing venation from *Neolithus* Scott, nevertheless there is considerable resemblance in the head and thorax of this species to that of *Neolithus fasciatus* Scott.

Leuronota leguminicola n. sp.

Length of body (male) 1.8 mm.; forewing 2.3 mm.; length of body to tip of folded wings 3 mm. General color reddish or chocolate brown; vertex with a narrow irregular black line around margin, and discal foveæ margined narrowly with black; antennæ light brown, apex of each segment black; pronotum with a black fovea near each lateral margin; legs light brown; forewings brown except a long, narrow, clear area over radial cell, a smaller one in cubital cell and a small one at tip of clavus.

Head horizontal, not deflexed, as broad as prothorax but a little narrower than mesothorax; vertex a little more than half as long as breadth between eyes, flat, with a narrow discal sulcus on each side of median suture; genal cones nearly porrect, a little below plane of vertex, about $\frac{2}{3}$

as long as vertex, only a little divergent, bluntly rounded at apex. Antennæ three times as long as width of head including eyes, very slender.

Prothorax about half as long as vertex, anterior median epiphysis not large, lateral margins straight; dorsum scarcely arched. Legs slender; hind tibiæ with a small spur at base. Forewings about four times as long as broad, subacute at apex; membrane transversely wrinkled, subhyaline, broadly maculated (Plate V, *F*). Hind wings nearly as long as forewings, narrower.

Abdomen (male) very long and slender; genital segment small; forceps very small, slender; anal valve longer, tapering toward apex.

BRAZIL.—near Bahia, between the city and Vermelho River, 1 male, July 1912 (Tavares), making galls on leaves of and undetermined Leguminosæ ⁽¹⁾.

Trioza ulei (Rübsaamen)

Bactericera ulei (Rübsaamen) — Marcellia,
vol. VII, p. 19, 1908.

Length of body 4 mm.; forewings 5 to 6 mm.; length of body to tip of folded wings 6 to 8 mm. General color reddish brown to dark chocolate brown; in the dark forms the legs and abdominal venter are a little lighter brown. Thoracic dorsum, vertex and femora clothed sparsely with moderately long pubescence.

Head much narrower than thorax, only a little wider than prothorax, deflexed. Vertex broader than long, deeply and roundly concave, sloping down from posterior ocelli to median suture with a small V-shaped flat area medially behind; genal cones very short, much shorter than vertex, bluntly rounded descending from plane of vertex. Eyes

⁽¹⁾ *Brotéria*, Série Zool., vol. XVIII, 1920, p. 107, n.º 28, and vol. XX, 1922, Tabula XII, fig. 7.

⁽¹⁾ *Brotéria*, Série Zool., vol. XIX, 1921, p. 102, n.º 2, and vol. XX, 1922, Tabula XIII, fig. 1.

large. Antennæ a little more than three times as long as width of head including eyes, stout or thick, with a few scattered, long hairs.

Thorax large, broad, well arched, hirsute; pronotum descending to below posterior margin of head; mesonotum very large. Legs large, long, stout, hairy; hind tibiae with four black spines at apex, three close together and one alone. Forewings very large, broad, hyaline, apical margin broadly rounded (Plate V, C); costa and veins with long setæ; hind margin with the three usual areas of punctural dots.

Abdomen moderately long and large. Male forceps blades shaped, a short basal petiole and the rest leaf-like in lateral aspect, broadest midway and roundly tapering to subacute apex; anal valve longer than forceps, bulging caudad midway and somewhat triangular in shape. Female genital segment about as long as rest of abdomen, both valves acutely pointed, dorsal a little longer than ventral.

BRAZIL. — Nova Friburgo (Rio de Janeiro), 1911 (Tavares), making spherical or subspherical galls on leaves of *Nectandra*, sp. (Lauraceæ) ⁽¹⁾.

Both *Trioza magnoliæ* Ashmead and *T. toebelei* Kirkaldy form galls on lauraceous plants but these apparently are not closely related to the Brazil species here described, being different in wing shape primarily. *Petalolyma* Scott can scarcely embrace this species although Scott's South American genotype is a gall maker and has conspicuous pubescence. The wing shape and venation seem to separate this distinctly from *Petalolyma basalis*.

Bactericera Puton, to which genus Räsäsaamen erroneously referred this species, is a generic group quite distinct from this Brazil insect and cannot be made to embrace it. The rounded forewing, presence of genal cones, and filiform antennæ remove it from *Bactericera*.

⁽¹⁾ See *Broteria*, Série Zool., vol. XIX, 1921, p. 80, n.º 1, and vol. XX, 1922, Tabula XI, fig. 1-1.

The gall formed by this species is spherical or nearly so, green or pinkish in color, usually powdery on the surface, and may be over 20 mm. in diameter, though often it is smaller; situated usually on the lower surface of the leaf, with a tiny conical projection on the upper surface. The wall is thin, with a large spherical chamber within which harbors one or several nymphs. When the nymphs are mature, the gall bursts or splits, losing its spherical shape and turns dark ash-color. The galls may be found at all times throughout the year.

Described from one adult male taken at Nova Friburgo (Rio de Janeiro) in 1911 by Tavares, on *Nectandra* sp.

Trioza ulei tenuicornis n. var.

There appear to be two types of galls on *Nectandra* leaves formed by very closely similar psyllids, one apparently being merely a varietal form of the species described above. The variety differs from the species as follows:

Antennæ slender, not stout and thick as noted above, but of about the same length; general color of insect lighter brown. The genal cones are distinctly longer and larger, being nearly half as long as vertex. Wings are about the same in the two forms and the genitalia are similar, though smaller in the varietal form.

The gall differs somewhat from that of the species, being hairy on the outer surface and thick walled, with a larger conical projection on the upper surface of the leaf than is characteristic of the other form. The gall chamber, seems to harbor one nymph, while in the other form there may be several in one gall.

Described from nine specimens of both sexes from Nova Friburgo, Rio de Janeiro, collected in 1911 by Tavares ⁽¹⁾. On *Nectandra* sp.

⁽¹⁾ See *Broteria*, Série Zool., vol. XIX, 1921, p. 81, n.º 2, and vol. XX, 1922, Tabula XIX, fig. 1-2.

Adenda

Two additional South American species have been sent to me by Dr. Juan Brethes of the National University of La Plata.

Metaphalara spegazziniana (Lizer)

(*Gyropsylla ilicicola* Brethes, Univ. Nac. de La Plata, Revista de Agronomía y Veterinaria, xiv, No. 2, [p. 1-10], 1921) (*Paurocephala spegazziniana* Lizer).

A little smaller than its related species described above, *M. cannella*, but closely similar in many respects. Body (not including wings) about 1.5 mm. long; forewings about 2 to 2.5 mm. long, male and female about equal in size. General color reddish brown, abdomen much lighter in color than thorax; antennae pale in basal third, remainder brown; vertex light brown.

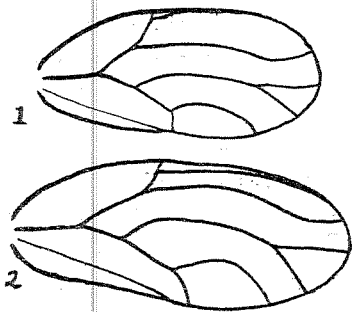


Fig. 1—*Metaphalara spegazziniana* (Lizer).

Fig. 2—*Trigonon erythrinae* (Lizer).

Head moderately broad; vertex about twice as broad as long, with a broad and shallow depression on each side of median line. Antennae barely twice as long as width of head (including eyes), moderately slender.

Thorax: Forewings membranous, hyaline, veins light brown, venation as shown in illustration; pterostigma very small.

Abdomen short. Female genital segment relatively long, acutely pointed. Male with anal valve produced into two long, slender, finger-like processes. Forceps slender, small.

Locality: Four specimens (both sexes) collected by Dr. Juan Brethes at Concepcion de la Sierra de Misiones, Argentine Republic, on *Ilex paraguariensis*. This was originally described by Brethes (1921) as *Gyropsylla ilicicola* but was later found to be identical with a species described by Prof. Lizer as *Paurocephala spegazziniana*. It is very closely similar to *M. cannella* (described above) and should surely be referred to the same genus. It differs from *M. cannella* in being somewhat smaller, and having a very small pterostigma in the forewing, and relatively shorter and more slender antennae.

Gall: This species causes the leaves of *Ilex paraguariensis* to become distorted and curled, the nymphs living within the enclosures.

Trigonon erythrinae (Lizer)

(*Psylla erythrinae* Lizer).

Length of body (male) 2 to 2.5 mm.; forewing about 3 mm. long; antennae 3 mm. long or more. General color reddish or chocolate brown, with a broad, median, longitudinal band of lighter color on thoracic dorsum; head light brown.

Head broad and relatively short, nearly as broad as thickest part of thorax; eyes large, hemispherical; vertex triangular in outline, twice as wide as length of median line; frons visible as a small sclerite in front, bearing anterior ocellus; genae swollen beneath vertex but not produced into genal cones or protruding lobes; clypeus large, spherical; antennae very long, thread-like, nearly as long as body to tip of folded wings.

Thorax not robust, glabrous. Forewings hyaline, transparent, broadly rounded, venation as shown in illustration. Abdomen of male moderately long, slender; genital seg-

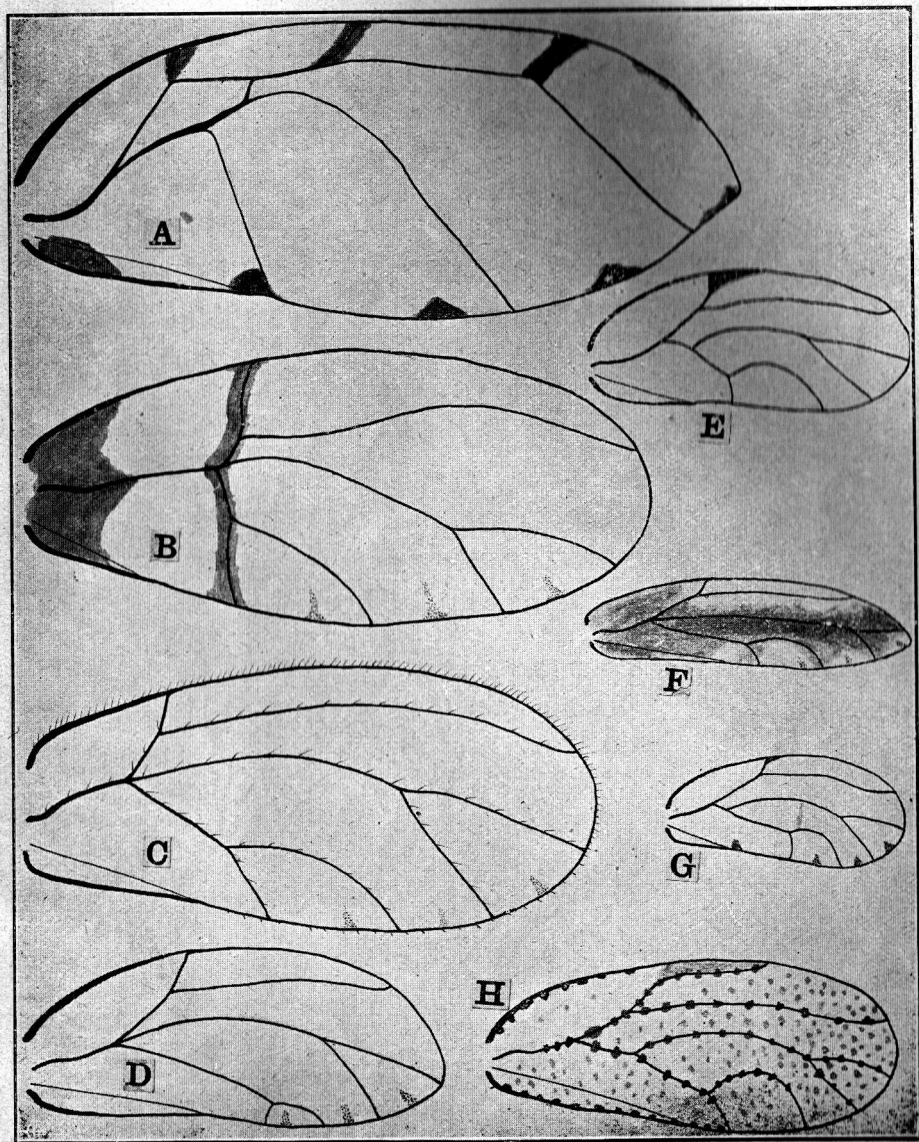
ment prominent; forceps stout, acutely pointed, nearly as long as anal valve; anal valve broadest subapically, abruptly narrowed at apex.

Locality: Buenos Ayres, Argentina (Juan Brethes) on *Erythrina cristagalli*.

The genus *Trigonon* was erected by me in 1920 ⁽¹⁾ to receive two Asiatic species previously associated with *Heteropsylla*, an American genus ⁽²⁾. *Trigonon* differs chiefly in the triangular vertex, and excessively long antennae.

⁽¹⁾ *Philippine Journal of Science*, vol. 17, p. 354, 1920.

⁽²⁾ U. S. Nat. Mus. Bul. 85, p. 44, 1914.



A. *Dynopsylla grandis* Crawford.—B. *Neolithus fasciatus* Scott.—C. *Trioza Ulei* (Rübsaamen).
D. *Neotrioza Tavaresi* n. sp.—E. *Metaphalara cannella* n. sp.—F. *Leuronota leguminicola* n. sp.—
G. *Psylla itaparica* n. sp.—H. *Euphalerus ostreoides* n. sp.

Brotéria

REVISTA LUSO-BRAZILEIRA

Série Zoológica

SUMMÁRIO DO FASCÍCULO II

VOL. XXII—1925

Nova contribuição para o conhecimento da Cecidologia brasileira, pelo Prof. J. S. Tavares.

Psyllidae of South America, por D. L. Crawford.

Algunos Insectos del Museo de Paris, pelo R. P. Longinos Navás, S. J.

Importância da Cecidologia da Península Ibérica, pelo Prof. J. S. Tavares.

FASC. II

(Publicado a 1 de Setembro)

CAMINHA

1925

SOCIÉTÉ ENTOMOLOGIQUE
DE FRANCE
BIBLIOTHÈQUE