

# REVIEW OF THE GENUS *Schildia* ALDRICH (DIPTERA: LEPTOGASTRIDAE)

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ABSTRACT—Four new species in the unique genus *Schildia* Aldrich, *S. ocellata*, *S. guatemalae*, *S. alphas*, and *S. zonae*, extend the range of the genus from Costa Rica, Jamaica, and Brazil to Guatemala, Panama, and Peru.

Types of the new species described below are deposited in the U.S. National Museum (USNM), University of São Paulo (USP), and the Entomological Collections of the University of Utah (UUEM).

## Genus *Schildia* Aldrich

*Schildia* Aldrich, 1923:4. Type-species, *microthorax* Aldrich (orig. desig.). Type, USNM. Type-locality: Costa Rica, San Mateo, Higuaita.

*Schildia*: Hull, 1962:313.

*Shannomyioleptus* Carrera, 1944:87. Type-species, *fragilis* Carrera (orig. desig.). Type, USP. Type-locality: Brazil, Mato Grosso, Maracaju.

*Schildia* (*Shannomyioleptus*): Hull, 1962:314. Subgenus of *Schildia*.

*Shannomyioleptus*: Martin, 1965:11. Synonym of *Schildia*.

Generic characters. Aldrich's characters: Outer tarsal claw longer than inner claw; mesothorax cone-like apically, overhanging the pronotum; part or all the wing veins hairy dorsally.

The hair on the wing veins long and evenly spaced; patches of microchaetae in most cells. The end of longitudinal vein 3 ( $R_1$ ) either in or below the apex of the wing. Antennal segment 3 more or less spatulate apically, style short to  $\frac{1}{4}$  as long as segment 3; 4 long dorsocentral bristles. Halteres shorter than thorax. Abdominal segment 2 about twice as long as segment 3, very narrow, slightly flared posteriorly. Hind femora clavate, slightly longer than tibia; empodia either very short or lacking.

*Leptogaster ferruginea* Walker and *L. multicineta* Walker from Brazil have hairy wing veins, but the hair is closer set than in *Schildia*. The 2 species also lack other *Schildia* characteristics.

## KEY TO THE SPECIES OF *SCHILDIA* ALDRICH

1. Thorax laterally with reddish maculae circled by dark reddish-brown rings, anteriorly median stripe outlined by yellowish spots (Brazil) ..... *ocellata* Martin, new species
- Thorax without maculae and rings on dorsum ..... 2
2. Anterior humeri yellowish or brownish ..... 5
- Anterior humeri white ..... 3

3. Anterior humeri and posterior pronotum white, dorsal areas mesad to humeri white to transparent, anteriorly dark median stripe outlined by reddish spots, posteriorly by narrow yellowish lines (Jamaica) ..... *jamaicensis* Farr
- Anterior humeri white, dorsal areas mesad to them reddish brown ..... 4
4. View behind, occiput brownish black, grayish tomentose stripe from front to collar, expanded on upper angles of occiput, occipital bristles yellowish (Guatemala) ..... *guatemalae* Martin, new species
- View behind, occiput brownish, white tomentose stripe from front to collar, not expanded on upper occiput, gray to brownish-gray tomentose stripe around eye, occipital bristles brown (Brazil) ..... *alphus* Martin, new species
5. Median thoracic stripes extending on posterior declivity; pleura yellowish from spiracle 1 to halteres, below brown (Costa Rica; Panama; Peru) --- *microthorax* Aldrich
- Posterior  $\frac{2}{3}$  or more of thorax without stripes ..... 6
6. Face yellowish, front white to yellow, vertex yellow, occiput and pleura brown tomentose (w. cen. Brazil) ..... *fragilis* (Carrera)
- Face, front, vertex, gray ..... 7
7. Abdominal segment 2 pale reddish-yellow brown, anterior and posterior margins blackish brown; pleura black, brown tomentose, above coxa 1 and 3 white tomentose (Panama) ..... *zonae* Martin, new species
- Abdominal segment 2 reddish brown with a median yellow band; pleura red, thinly white tomentose, with a dark brown stripe from middle coxa to wing base (Pará, Brazil) ..... *gracillima* Walker

*Schildia alphas* Martin, new species

*Schildia alphas* and *S. guatemalae* are closely related species. The densely gray stripe from front to collar of *S. alphas* does not encroach on the upper angles of the occiput but does encroach on *S. guatemalae*.

Female: Length 9 mm. Head black; face, front, vertex, and stripe to collar, gray; from a rear view, occiput blackish brown, a gray to grayish-brown stripe beginning at the first occipital bristles and extending completely around eye margin; antennae yellow, segment 3 brown on apical  $\frac{2}{3}$ , 2 whitish mystax bristles, occipital bristles long, brown, sparse.

Thorax slightly longer than wide; reddish-brown, anterior mid-stripe with pale stripes beside it, posterior  $\frac{2}{3}$  without stripes, anterior humeri white, anterior and posterior pronotum white tomentose, scutellum reddish, brown pollinose, no marginal bristles; pleura reddish, brownish yellow tomentose medially, above coxa 1 to wing base broadly grayish tomentose.

Abdomen reddish brown, tergite 2 dark reddish on anterior and on posterior margins, yellow-banded medially, tergites 3 and 4 narrowly yellow-banded on anterior margins, tergites 6 and 7 blackish.

Wings hyaline.

Hind femora reddish brown, yellow band on base of clavus, hind tibia reddish brown, yellow band medially, middle femora yellow with 2 reddish bands, tibia yellow with 3 reddish brown bands.

Male: Unknown.

Type-material: Holotype, female, Sit. B. Vista, Cascavel, Ceará, Brazil, December 1940 (O. C. Alves) (USP). Paratype, Cascavel, Ceará, Brazil, December 1940 (Shannon and Alves).

*Schildia guatemalae* Martin, new species

*Schildia guatemalae* closely resembles *S. alphas*. Depending on the angle of view, the occiput of *S. guatemalae* is more or less extensively gray pollinose.

Male: Length 11 mm. Head black; face, front, and stripe from ocellar tubercle to collar, white, behind ocellar tubercle white tomentum expanding on upper occipital angles, occiput blackish brown tomentose, at some angles of view upper occiput white tomentose; antennae yellowish, apical  $\frac{2}{3}$  of segment 3 brown; mystax of 2 yellowish bristles; upper occipital bristles long, sparse, pale yellowish.

Thorax dark reddish brown, on anterior  $\frac{1}{3}$  yellow stripes outlining median stripe, anterior humeri white, anterior and posterior pronotum white tomentose; scutellum dark brown, brown tomentose, no marginal bristles; pleura dark reddish, white tomentose above and anteriorly, brown tomentose below.

Wings hyaline.

Hind femora dark reddish brown, yellow band on base of clavus, hind tibia dark reddish brown with median yellow band.

Type-material: Holotype, male, Guazaeápan, Guatemala, August 1952 (R. H. Painter) (USNM).

*Schildia fragilis* (Carrera)

*Shannomyioleptus fragilis* Carrera, 1944:87. Type, University of São Paulo. Type-locality: Brazil, Mato Grosso, Maracaju.

*Schildia* (*Schannomyioleptus*) *fragilis*; Hull, 1962:314.

*Schildia fragilis*; Martin, 1965:116.

*Schildia gracillima* (Walker)

*Leptogaster gracillimus* Walker, 1855:722. Type, British Museum (Natural History). Type-locality: Brazil, Pará (Belem).

*Leptogaster gracillimus*; Hull, 1962:299.

*Schildia gracillimus*; Martin, 1965:116.

*Schildia jamaicensis* Farr

*Schildia jamaicensis* Farr, 1962:191. Type, USNM. Type-locality: Jamaica, St. Andrew, Long Mountain.

*Schildia microthorax* Aldrich

*Schildia microthorax* Aldrich, 1923:4. Type, USNM. Type-locality: Costa Rica, San Mateo, Huiguita.

*Schildia microthorax* Aldrich is the only species of the genus with a median stripe, outlined by yellow stripes, extending on the posterior declivity but not reaching the scutellum. Comparison of specimens from Panama and Peru do not reveal any marked differences.

Distribution: Panama, Canal Zone, Barro Colorado Island, May 18-23, 1967 (Rodger D. Akre). Peru, Tingo Maria, December 23, 1957 (Schlinger and Ross).

*Schildia ocellata* Martin, new species

*Schildia ocellata* is the only species of *Schildia* with lateral thoracic yellowish-brown maculae encircled by darker reddish-brown circles.

Male: Length 12 mm. Face, front, vertex, black, thinly dark brown pollinose, occiput black, at 1 angle of view thinly dark brown tomentose, at another view grayish brown; antennal segments 1 and 2 yellowish brown (segment 3 missing); proboscis dark brown.

Thoracic median stripe dark reddish brown, outlined on anterior half by paler yellowish-red stripes expanding anteriorly, laterally large yellowish-red spots surrounded by reddish-brown circles broader latero-anteriorly than mesally, about medially the rings coalesce with the median stripe, the yellowish color of posterior humeri expanding to outline the gradually narrowing reddish brown of the dorsal region; scutellum yellowish, darker anteriorly; pleura yellowish, darker below, thinly white tomentose; halteres, black knobs, yellow stalks.

Abdomen dark reddish brown, segment 1 pale yellow, tergite 2 with a yellow band about  $\frac{2}{5}$  of distance from base, tergites 3 and 4 anteriorly with narrow yellow bands; hypandrium rises above basistyli, a thin dark line marking the coalescence of basistyli and epandrium, epandrium truncate, not as long as apex of basistyli and appendages, 3 long yellowish bristles on corner of truncation, epandrium without a visible lateral slit between apex and base.

Wings hyaline.

Hind femora slightly longer than abdominal segment 2, reddish brown, yellow band covering basal half of clavus; without empodium, 1 tarsal claw shorter than the other.

Female: Unknown.

Type-material: Holotype, male, Brazil, Territory Amapá, Rio Ampari (J. Lane). (USP).

*Schildia zonae* Martin, new species

*Schildia zonae* with yellow humeri, thorax blackish except on anterior  $\frac{1}{3}$  where reddish spots outline the short median stripe.

Female: Length 9 mm. Head black; face gray tomentose, occiput brown tomentose, narrowly gray along eyes, densely gray tomentose stripe from front to collar; antennae yellowish, segment 3 brown dorsoapically, style short; a pair of yellowish mystax bristles, occipital bristles sparse, long, yellow.

Thorax blackish, apical cone reddish, outlining a dark reddish median stripe, posterior pronotal lobes and below anterior humeri densely white tomentose, posterior humeri yellowish, brown tomentose above scutellum; sparse bristles on apical cone of thorax; scutellum brown, brown tomentose, without marginal bristles; pleura dark reddish, white tomentose above coxa 1 and 3, medially thinly brown tomentose.

Abdominal segment 2 pale reddish-yellow brown, tergites 2 and 3 with anterior and posterior margins blackish reddish-brown.

Wings clear.

Hind leg, a pale yellow ring between the broadly blackish apex and reddish-yellow base; outside tarsal claw longer than inside claw.

Type-material: Holotype, female, Piña area, Canal Zone, Panama, 18 November 1957 (W. J. Hansen) (UUEM). Allotype, male, same data as holotype.

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