

New Genus and Three New Species of Leaf-Litter-Inhabiting Ozophorini (Hemiptera: Heteroptera: Lygaeoidea: Rhyparochromidae: Rhyparochrominae)

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ABSTRACT One new genus, *Pseudomenotelus* from México, is proposed within Lygaeoidea (Ozophorini) based on the new species *P. oculatus* from the state of Chiapas in Mexico. In addition, two new species from Honduras are described in the genus *Pseudomenus*, *P. hondurensis* and *P. olanchus*, each belonging to Ozophorini. A key to the Mexican genera of Ozophorini is included, as well as a key to the known species of *Pseudomenus*. All taxa here reported are leaf-litter-inhabiting and were collected in mesophilous forest.

KEY WORDS *Pseudomenotelus*, *Pseudomenus*, México, Honduras, mesophilous forest

Ashlock and Slater (1982) provided the up-to-date generic key for Western Hemisphere Ozophorini, recognizing seven genera: *Balboa* Distant, *Bergidea* Bredin, *Lygofuscanellus* Scudder, *Micrymenus* Bergroth, *Ozophora* Uhler, *Pamozophora* Ashlock & Slater, and *Pseudomenus* Ashlock & Slater. Subsequently, Slater and Brailovsky (1983) and Slater (1985, 1993) added the three new genera *Allotrophora* and *Brailovskycoris* from Mexico and *Icaracorisis* from Colombia.

We have been able to study an extensive collection of lygaeids obtained sifting leaf-litter in mesophilous forests in southern Mexico and Central America. The specimens belong to the Leaf Litter Arthropods of Mesoamerica project (LLAMA), and among them were found one new genus and three new species, which are described here and included in the tribe Ozophorini.

Materials and Methods

The following abbreviations indicate institutions where specimens are deposited: El Colegio de la Frontera Sur, San Cristóbal de las Casas, Chiapas, México (ECOSC-E); Colección Entomológica, Instituto de Ecología, A. C. Xalapa, Veracruz, México (IEXA); LLAMA; and Colección Nacional de Insectos, Instituto de Biología, Universidad Nacional Autónoma de México (UNAM). Measurements are given in millimeters.

Results

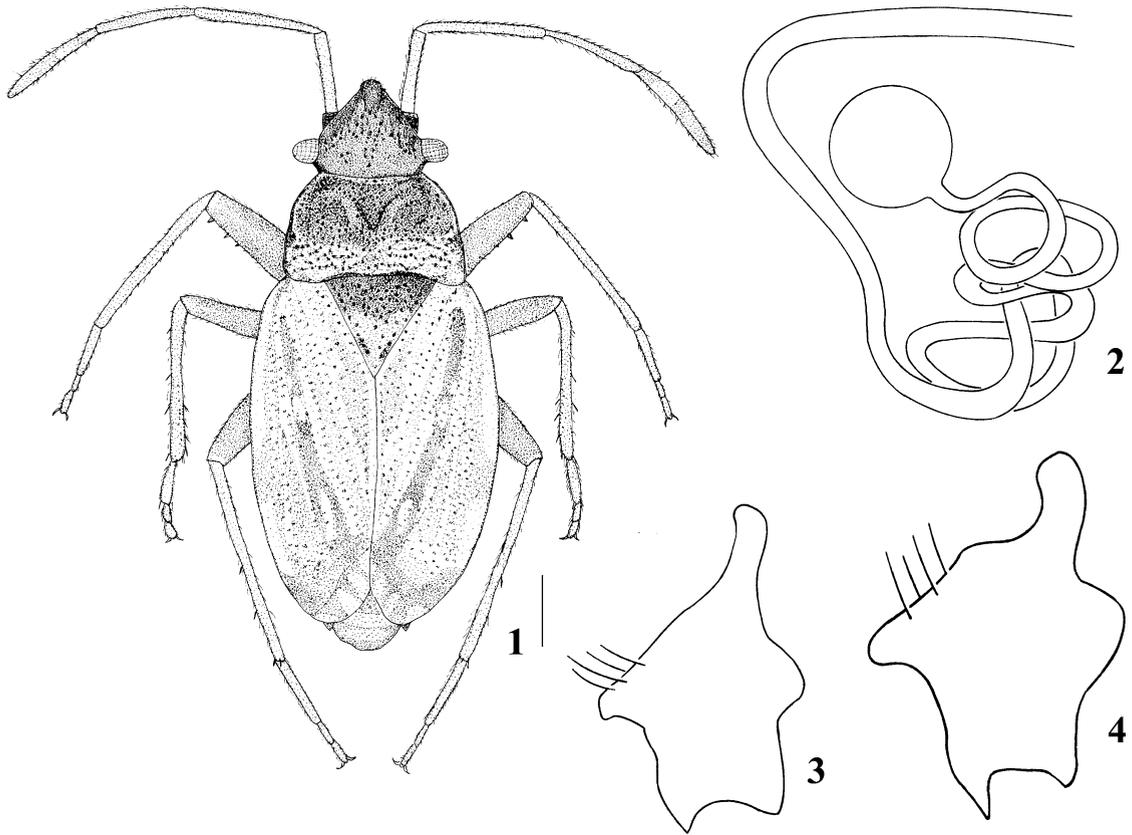
Pseudomenotelus Brailovsky & Cervantes, new genus

Diagnosis. Coleopteroid; claval commissure shorter than length of head and pronotum taken together; ocelli absent; eyes protruding laterally on short stalks; forefemora ventrally armed with two setigerous spines; lateral edge of corium (viewed laterally), and basal segments of abdomen laterally without stridulitrum.

Description. Body oval, coleopteroid; dorsal surface dull. *Head* wider than long, very slightly declivent anteriorly, not narrowed posteriorly; interocular space much less than width of head at base; eyes protruding laterally on short stalks, removed from base of head by about one-quarter length of eye; ocelli absent; juga without dorsal carina; antennal segments I to III slender, terete, and IV narrowly fusiform; antennal segment II the longest, I the shortest, and IV longer than III; bucculae U-shaped, extending posteriorly of anterior margin of eye; rostrum reaching posterior third of metacoxae; rostral segment II subequal to I, IV the shortest, and III shorter than I and II; rostral segment I almost touching anterior border of prothorax. *Thorax.* Pronotum wider than long, flat, campanuliform, not clearly bilobed with broad laterally rounded anterior lobe, broad trapezoidal posterior lobe, and both moderately punctate; collar well defined by an impressed line; anterolateral margins weakly emarginated on both lobes; posterior margin slightly concave; metathorax scent gland auricle elongate, finger-like, curving posteriorly; evaporative area large, occupying two-thirds of mesopleuron. *Legs.* Forefemur moderately incrassate, armed below on distal one third with two conspicuous sharp setigerous

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Figs. 1-4. *Pseudomenotelus oculatus* new species. (1) Dorsal view, male. (2) Spermatheca. (3-4) Parameres.

spines; middle and hind femora unarmed; tibiae unarmed. Scutellum triangular, longer than wide, moderately punctate with a tiny tumid elevated area near middle third. Hemelytra coleopteroid; clavus suture absent; clavus with three rows of punctures with middle row irregular; claval commissure shorter than length of head and pronotum taken together; costal margin conspicuously emarginate, and laterally without stridulitrum; hemelytral membrane reduce to small flaps, not overlapping but meeting along middle line. Abdomen with middle third sternite III (first visible) looking creased. *Male genital capsule*. Posteroventral edge hemispheric, entire. Paramere with body robust, and apex medium sized and elongate (Figs. 3-4). *Spermatheca* with bulb spherical; duct moderately elongate, and coiled (Fig. 2).

Etymology. Named for its similarity to the ozophorine genus *Pseudomenus* Ashlock & Slater; gender masculine.

Discussion. *Pseudomenotelus*, new genus, like *Pseudomenus* Ashlock & Slater (Ashlock and Slater 1982) has the forefemur armed ventrally on distal one third with two or three sharp spines, the ocelli absent, the lateral edge of corium and abdomen without stridulatory structures, the mesosternum with a conspicuous shining area, the pronotal collar distinct, and the body oval and coleopteroid.

Pseudomenotelus can be distinguished by having the eyes protruding laterally on short stalks, the costal margin of corium clearly emarginate, the claval commissure shorter than length of head and pronotum taken together, the pronotal disk flat and not clearly bilobed, the posterior margin of pronotal disk slightly concave, the scutellar disk scarcely tumid and longer than wide, and rostral segment I clearly touching the base of prothorax. In *Pseudomenus* the eyes are large, and not protruding laterally, the costal margin of corium weakly emarginate, the claval commissure usually longer than length of head and pronotum taken together, the pronotal disk clearly bilobed, with anterior lobe moderately swollen and elevated above posterior lobe, the posterior margin of pronotal disk straight, the scutellar disk with a tumid elevated Y-shaped area, wider than long, and rostral segment I nearly reaching the base of head.

Type Species. *Pseudomenotelus oculatus*, new species.

Pseudomenotelus oculatus Brailovsky & Cervantes,
new species
(Figs. 1-4)

Male. HOLOTYPE: *Dorsal color.* Head black; apex of tylus dark chestnut orange; antennal segment I

shiny dark chestnut orange, II and III dark reddish brown, and IV dark reddish brown with a strongly yellowish proximal annulus, nearly occupying proximal one third of the segment. Pronotum with anterior lobe black, and posterior lobe dark yellow with strongly contrasting dark brown punctures; collar mesally dark yellow; anterolateral margin with dark yellow reflections. Scutellum dark reddish brown, with tumid area pale yellow. Hemelytra chiefly pale yellow but with a somewhat diffuse brown area near middle of each hemelytron, a smaller brown spot at same level along lateral margins, and a large dark brown spot near distal end of anterior half; hemelytral membrane brown with margins dark yellow. *Ventral color.* Head and thorax black; mesosternum shiny dark chestnut orange; rostral segments (apex of IV dark brown), trochanter, tibiae, and tarsi shiny yellow; coxae and femora dark to pale chestnut orange; abdominal sterna and genital capsule pale reddish brown. Integument. Dorsal surface nearly glabrous, with only a few scattered and short inconspicuous setae; antennae with prominent semidecumbent setae, shorter than diameter of segment. Ventral surface with head and thorax glabrous; legs with prominent semidecumbent setae, shorter than diameter of segment; abdomen densely clothed with decumbent setae.

Female. Color and structure similar to male holotype.

Male Measurements. Body length 4.32; head length 0.71; width across eyes 0.98; interocular distance 0.65; preocular distance 0.53; antennal segments lengths: I, 0.65, II, 0.96, III, 0.80, IV, 0.86; pronotum: length 0.80, width across humeral angles 1.27; scutellum: length 0.65, width 0.62; maximum width of abdomen: 1.82.

Female Measurements. Body length 4.57; head length 0.74; width across eyes 1.08; interocular distance 0.70; preocular distance 0.56; antennal segments lengths: I, 0.65, II, 1.02, III, 0.86, IV, 0.93; pronotum: length 0.78, width across humeral angles 1.30; scutellum: length 0.66, width 0.63; maximal width of abdomen: 1.95.

Type Material. HOLOTYPE: male, MEXICO, CHIAPAS, 2 km SE Custepec, 1,520 m, 15.7° 20'77" N–92.9° 50'81" W, LLAMA, WA-A-02-1, 17-V-2008, in mesophil forest, sifted leaf-litter, J. Luna-Cozar, E. Obed Reyes De León, and J. McAlpine (ECOSC-E). Paratypes. 4 males, 9 females, CHIAPAS, 2 km SE Custepec, 1,520 m, 15.7° 20'77" N–92.9° 50'81" W, LLAMA, WA-A-02-1, 17-V-2008, in mesophil cloud forest, sifted leaf-litter, J. Luna-Cozar, E. Obed Reyes De León, and J. McAlpine (ECOSC-E, IEXA, UNAM); 2 males, CHIAPAS, 4 km SE Custepec, 2,140 m, 15.7° 10'18" N–92.9° 28'37" W, 20-V-2008, B. Broyles, and M. D. Estrada Marroquin (ECOSC-E); 4 males, 1 female, CHIAPAS, Reserva Biosfera, El Triunfo, Angel Albino Corzo, Campamento El Quetzal, 1,700–2,220 m, 16° 72.1'78" N–93° 94.5'44" W, 17-21-V-2008, in oak (*Quercus* spp.) forest litter, R. Anderson (ECOSC-E, UNAM).

Biology. Collected at mesophil cloud forest, sifting oak, and general leaf-litter.

Etymology. The name refers to the very protruding eyes.

Distribution. This species is only known from México.

Key to the Mexican Genera of Ozophorini

- 1. Forefemur ventrally unarmed
- *Allotrophora* Slater & Brailovsky
- 1'. Forefemur armed on distal one third with two sharp spines 2
- 2. Lateral edge of corium (viewed laterally) with a finely striated stridulitrum, hind femora with plectrum (regular and dense field of tubercles on apical half); anterolateral margins of pronotum sharply and broadly explanate, gently narrowing to humeral angles, without posterior notch *Balboa* Distant
- 2'. Lateral edge of corium (viewed laterally) without stridulitrum; hind femora without plectrum; anterolateral margins of pronotum bluntly carinate, or if explanate (some species of *Ozophora*) then ending abruptly to form a notch at humeral angles 3
- 3. Eyes protruding laterally on short stalks
- *Pseudomenotelus*, new genus
- 3'. Eyes large, sessile, not protruding laterally 4
- 4. Coleopteroid, clavus and corium completely fused; hemelytral membrane absent; ocelli absent; vertex tumid, convex
- *Brailovskycoris* Slater
- 4'. Usually macropterous, if hemelytra modified then not extremely so; ocelli present, vertex usually flat or slightly convex
- *Ozophora* Uhler

***Pseudomenus* Ashlock & Slater**

Diagnosis. Coleopteroid; claval commissure longer than length of head and pronotum taken together; ocelli absent; mesosternum with a conspicuous shining area; collar and pronotal lobes distinct; forefemur ventrally armed; basal segments of abdomen laterally without stridulitrum; lateral edge of corium (viewed laterally) without a stridulitrum, at most with, minute crenulations on narrow lateral edge.

***Pseudomenus hondurensis* Brailovsky & Cervantes, new species**

Diagnosis. Body small, oval, coleopteroid; anterolateral margins of pronotum conspicuously emarginate; antennal segment IV dark reddish brown; ground color chiefly shiny dark reddish brown; antennal segment II subequal to IV; antennal segment IV dark reddish brown; claval commissure length almost equal to head and pronotum taken together.

Female. HOLOTYPE: *Dorsal color.* Head shiny dark reddish brown with tylus shiny chestnut orange; antennal segments I and II shiny chestnut orange, III shiny dark reddish brown, and IV dull dark reddish

brown. Pronotum shiny dark reddish brown, with following areas dark yellow to chestnut orange: collar, anterolateral margins, and two spots at posterior margin and lateral to middle line. Scutellum shiny dark reddish brown, with middle third shiny dark chestnut orange. Hemelytra chiefly pale yellow, with somewhat diffuse shiny dark reddish brown area near middle of each hemelytron, and a large discoidal spot near the anterior third; punctures shiny dark reddish brown; hemelytral membrane dark brown; dorsal abdominal segments dark reddish brown. *Ventral color.* Ground color shiny dark reddish brown; rostral segments shiny dark chestnut orange; coxae, trochanter, tibiae and tarsi pale chestnut orange, and femur dark shiny chestnut orange. *Structure.* Head wider than long, dorsally slightly convex, not narrowed posteriorly; juga without dorsal carina; antennal segment I the shortest, II subequal to IV, and III shorter than IV; ocelli absent; eyes large, not protruding laterally, removed from base of head by about one quarter length of eye; bucculae V-shaped, short, not reaching the anterior margin of eye; rostrum reaching anterior edge of metacoxae; rostral segment I nearly reaching base of head. *Thorax.* Pronotum wider than long, nearly quadrate; collar well defined by an impressed line; disk divided into a broad mesally rounded anterior lobe, and a broad trapezoidal posterior lobe; anterior lobe longer than posterior lobe; collar and posterior lobe moderately punctate, and anterior lobe almost impunctate; anterolateral margins conspicuously emarginated and raised; transverse pronotal impression well defined. Mesosternum with small shining area; metathoracic scent gland auricle elongate, fingerlike, curving slightly posteriorly; evaporative area large, occupying ventral two thirds of metapleuron. *Legs.* Forefemur moderately incrassate, ventrally armed with four setigerous spines; tibiae unarmed. Scutellum triangular, as longer as wide, with a tumid, elevated Y-shaped area. Hemelytra coleopteroid, slightly convex; clavus and corium form a single coriaceous wing cover that meets the opposite cover; claval suture absent; clavus with three rows of punctures with middle row irregular; claval commissure length almost equal than length of head and pronotum taken together; costal margin weakly emarginated; lateral edge of corium (viewed laterally) without stridulitrum, but with minute crenulations; hemelytral membrane reduced to a small flap reaching posterior margin of abdominal segment VI. Abdomen without stridulatory structures.

Measurements. Body length 4.68; head length 0.74; width across eyes 0.80; interocular distance 0.46; preocular distance 0.49; antennal segments lengths: I, 0.68, II, 0.90, III, 0.74, IV, 0.90; pronotum: length 0.77, width across humeral angles 1.16; scutellum: length 0.38, width 0.38.

Male. Unknown.

Type Material. HOLOTYPE: female, HONDURAS: FRANCISCO MORAZAN, Parque Nacional La Tigra, 3.2 km SW San Juancito, 1,850 m, 14° 12.7'N–87° 05.6' W, 24-IX-2008, M. G. Branstetter (UNAM).

Etymology. Named after the type locality, Honduras.

Distribution. This species is only known from Honduras.

Biology. Collected at mesophilous forest, sifting leaf-litter.

Discussion. *Pseudomenus veovatus* Ashlock & Slater (Ashlock and Slater 1982), the only previously included species and recorded from Costa Rica, is easily distinguished by having the hemelytral membrane dark yellow with pale brown spots, the claval commissure length longer than length of head and pronotum taken together, the general coloration light yellow with strongly contrasting dark brown punctuation, the scutellum wider than long, the anterior lobe of pronotal disk clearly punctate, the anterolateral margins of pronotum obtusely carinate, and antennal segment II clearly longer than IV. *Pseudomenus hondurensis*, new species, recorded from Honduras, represents the second species of the genus and is recognized by having the hemelytral membrane dark brown, the claval commissure length almost equal than head and pronotum taken together, the general color chiefly shiny dark reddish brown, the scutellum as long as wide, the anterior lobe of pronotal disk almost impunctate, the anterolateral margins of pronotum strongly emarginate and raised above disk, and antennal segment II subequal to IV.

Pseudomenus olanchus Brailovsky & Cervantes,
new species

Diagnosis. Body small, oval, coleopteroid; anterolateral margins of pronotum conspicuously emarginate; antennal segment IV yellowish white with basal joint and apical third reddish brown; claval commissure length shorter than length of head and pronotum taken together.

Male. HOLOTYPE: *Dorsal color.* Head shiny dark reddish brown; tylus and antennal segment I shiny chestnut orange; antennal segment II shiny reddish brown with basal third shiny chestnut orange, III shiny reddish brown, and IV yellowish white with basal joint and apical third reddish brown. Pronotum with anterior lobe shiny reddish brown, and posterior lobe dark yellow with punctures and narrow longitudinal stripe at middle third shiny reddish brown; collar with anterior border, and anterolateral margins of pronotum shiny castaneus orange. Scutellum with anterior third shiny reddish brown, and posterior third shiny castaneus orange; punctures and irregular longitudinal stripe at middle third shiny reddish brown. Hemelytra chiefly pale to dark yellow with somewhat diffuse dull dark reddish brown spot near middle of each hemelytron, and a large reddish brown discoidal spot near the apical angle; punctures shiny reddish brown; hemelytral membrane dark brown, with dark yellow stripes; dorsal abdominal segments pale brownish orange. *Ventral color.* Head and thorax shiny dark reddish brown; rostral segments pale yellowish orange (apex of IV brown); outer margin of metapleura yellow; coxae, and trochanter yellowish orange, tibiae and tarsi paler; femur yellowish orange with apical third dark to pale yellow; abdomen and genital capsule

pale reddish orange. *Structure*. Structurally much as in *P. hondurensis*. Antennal segment II the longest, IV longer than III, and I the shortest. Pronotum wider than long; anterior lobe finely punctate; anterolateral margins conspicuously emarginate, and raised. Fore-femur moderately incrassate, ventrally armed with three setigerous spines; tibiae unarmed. Scutellum wider than long, triangular, flat, with anterior third raised. Hemelytra coleopteroid; claval commissure length shorter than length of head and pronotum taken together; lateral margin of corium (viewed laterally) without stridulitrum; hemelytral membrane reduced to a small flap reaching anterior third of abdominal segment VII. Abdomen without stridulatory structures.

Measurements. Body length 3.83; head length 0.58; width across eyes 0.74; interocular distance 0.44; pre-ocular distance 0.38; antennal segments lengths: I, 0.60, II, 0.82, III, 0.70, IV, 0.78; pronotum: length 0.74, width across humeral angles 1.17; scutellum: length 0.63, width 0.68.

Female. Unknown.

Type Material. HOLOTYPE: male, HONDURAS: OLANCHO, Parque Nacional La Muralis, 8.9 km NNW La Unión, 1,649 m, 15° 62' N–86° 44.2' W, 4-X-2008, M. G. Branstetter (UNAM). Paratypes. HONDURAS: 2 males, same data as male holotype (UNAM).

Etymology. Named after the type locality, Olancho in Honduras.

Distribution. Only known from Honduras.

Biology. Collected at mesophilous forest, sifting leaf-litter.

Discussion. This species is very similar to *P. hondurensis* Brailovsky & Cervantes with the anterolateral margins of pronotum conspicuously emarginate and raised, and claval commissure length not longer than length of head and pronotum taken together. In *P. olanchus*, new species, antennal segment IV is yellowish white with the basal joint and apical third dull reddish brown, the scutellum is flat with anterior margin raised, the anterior lobe of pronotal disk finely punctate, and the claval commissure length clearly shorter than length of head and pronotum taken together. In *P. hondurensis*, the antennal segment IV is entirely dull dark reddish brown, the scutellum with a tumid elevated Y-shaped area, the anterior lobe of pronotal disk almost impunctate, and the claval commissure length almost equal than head and pronotum taken together.

In *P. veovatus* Ashlock & Slater the antennal segment IV is entirely dark reddish brown, and the an-

terolateral margins of pronotum obtusely carinate, and slightly raised.

Key to Species of *Pseudomenus*

1. Antennal segment IV yellowish white, with basal joint and apical third reddish brown; femur pale yellowish orange, with apical third dark to pale yellow *P. olanchus*, new species
- 1'. Antennal segment IV entirely dull dark reddish brown; femur dark shiny chestnut orange or entirely pale yellow 0.2
2. Hemelytral membrane dark yellow with pale brown spots; anterior lobe of pronotal disk clearly punctate; anterolateral margins of pronotum obtusely carinate, not conspicuously raised; claval commissure length clearly longer than length of head and pronotum taken together; femora chiefly yellow *P. veovatus* Ashlock & Slater
- 2'. Hemelytral membrane dark brown; anterior lobe of pronotal disk almost impunctate; anterolateral margin of pronotum strongly emarginate and raised; claval commissure length almost equal than length of head and pronotum taken together; femora dark shiny chestnut orange *P. hondurensis*, new species

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