

SIX NEW SPECIES OF MOZENA FROM MEXICO
(HETEROPTERA: COREIDAE: COREINAE: NEMATOPODINI)

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ABSTRACT

Six new species of *Mozena*, *M. atra*, *M. nogueirana*, *M. pardalota*, *M. perezae*, *M. preclara*, and *M. presigna*, collected in Mexico, are described; dorsal habitus, antennal segments, pronotum, abdomen in lateral view, paramere and male genital capsule of most of the species are illustrated.

Key Words: Insecta, Heteroptera, Coreidae, Nematopodini, *Mozena*, new species, Mexico

RESUMEN

Seis nuevas especies de *Mozena*, *M. atra*, *M. nogueirana*, *M. pardalota*, *M. perezae*, *M. preclara*, y *M. presigna*, colectadas en México son descritas; el cuerpo en vista dorsal, las antenas, el pronoto, el abdomen en vista lateral, los parámetros y la capsula genital del macho de la mayoría de las especies son ilustrados.

The genus *Mozena* Amyot and Serville (1843) is a large, complex group that ranges from the Southern United States, throughout Mexico, Cuba, and Central America to Northeastern South America including Colombia and Venezuela, with the greatest number of species being known from Mexico (Brailovsky 1999).

These are medium-sized to large coreids which are rather variable in color and size as well as in the general development of the humeral angles of the pronotum, development of the hind femur, and allometry of the scutellum.

Within the tribe Nematopodini, *Mozena* can be recognized by the triangular, flat, apically acute scutellum, the hind tibia only dilated ventrally, the humeral pronotal angles produced but not into sharp spines, the body usually longer than 20.00 mm, the tylus produced anterior to antennifers, the dorsal surface of the hind femur armed with tubercles or spines in three or more rows, the outer surface of the male hind coxa with large and robust tubercle (blunt in female without tubercle), and the mesosternum with a median sulcus between the bases of the fore coxae, with in which the rostrum usually lies. In the related genus *Piezogaster* Amyot and Serville the anterior third of the mesosternum lacks a median longitudinal sulcus (O'Shea 1980).

The genus is usually associated with Leguminosae, and has been collected on Mesquite (*Prosopis* spp.), sweet acacia (*Acacia* spp.), and *Schrankia uncinata* (Ward et al. 1977). The biology of most species is poorly known. Brailovsky et al. (1995) studied the immature stages, life history, and biological aspects of *Mozena lunata* (Burmeister).

Previous to this paper, 15 species and one subspecies of *Mozena* were known in Mexico (*M. affinis* (Dallas), *M. arizonensis* Ruckes, *M. brunnicornis*

(H. S.), *M. buenoi* Hussey, *M. gaumeri* Distant, *M. hector* Van Duzee, *M. lineolata* (H.S.), *M. lunata* (Burmeister), *M. lunata rufescens* Ruckes, *M. lurida* (Dallas), *M. lutea* (H.S.), *M. nestor* (Stål), *M. pallisteri* Ruckes, *M. rufula* Van Duzee, *M. scrupulosa* (Stål), and *M. ventralis* (Mayr). This contribution adds six new species.

The following abbreviations are used to identify institutions where types are deposited or which generously lent material for this paper: AMNH: American Museum of Natural History, New York; BMNH: The Natural History Museum, London, England; BYU: Brigham Young University, Monte L. Bean Life Science Museum, Provo, UT; CAS: California Academy of Sciences, San Francisco; CMN: Carnegie Museum of Natural History, Pittsburgh; CUIC: Cornell University, Insect Collection, Ithaca, NY; FNS: Forschungsinstitut und Naturmuseum Senckenberg, Germany; FMNH: Field Museum Natural History, Chicago, IL; FSCA: Florida State Collection of Arthropods, Gainesville, FL; LACM: Los Angeles County Museum, CA; NMW: Naturhistorisches Museum, Wien; NRE: Naturhistoriska Riksmuseet, Stockholm; TAMU: Texas A&M University, College Station; UCB: University of California, Berkeley; UCD: University of California, Davis; UGA: University of Georgia, Athens, GA; UNAM: Instituto de Biología, Universidad Nacional Autónoma de México; USNM: National Museum of Natural History, Smithsonian Institution, Washington, DC.

All measurements are given in millimeters.

Mozena atra Brailovsky and Barrera, **New Species**

Figs. 13, 26

Description. Male (holotype). Dorsal coloration: head including antennal segments I to IV or-

ange; pronotum bright chestnut orange with outer margin of humeral angles black, and small tubercles dark yellow; scutellum creamy yellow, with chestnut orange spot on basal and middle third; clavus and corium chestnut orange, with middle third of costal margin whitish; hemelytral membrane dark amber-like, with veins darker; connexival segments III to VII reddish brown, with anterior third yellow, and posterior border and spines black; dorsal abdominal segments light orange yellow. Ventral coloration. Bright orange with following areas yellow: acetabulae, tubercles nearest each acetabulae, posterior margin of propleura, and anterior third of pleural abdominal sterna III to VII; rostral segments orange with apex of IV black; propleura, mesopleura, and metapleura with clearly creamy yellow vittae obliquely directed; anterior and posterior lobe of metathoracic peritreme black; fore and middle legs bright orange, with coxae tinged with bright red; hind leg with coxa and trochanter bright orange red, femur dark orange with ventral spines black, tibia with inner surface bright black, and outer surface and distal third bright red to orange red, tarsus bright orange; creamy yellow vittae along each side of abdominal sterna broken into two sections on each sternite, the anterior one small and more or less discoidal, and posterior one bigger and enlarged posteriorly; rim of abdominal spiracle creamy yellow to yellow. Anterolateral margins of pronotum obliquely straight, uniformly dentate; humeral angles produced laterally, each margin dentate, and apically acute; posterolateral and posterior margin straight and smooth; calli behind with two short small tubercles laterad to midline (Fig. 13). Legs. External face of hind coxa with a large and robust tubercle; hind femur medially incrassate, with three rows of tubercles on dorsal surface, ventrally with two rows of lateral spines; hind tibiae conspicuously dilated. Scutellum longer than wide. Abdomen slightly dilated, wider than hemelytra, maximum width less than maximum width of pronotum across humeral angles.

Genitalia. Posteroventral edge of genital capsule simple, straight.

Coloration of females similar to holotype. Connexival segments VIII and IX black, with anterior third yellow to orange; dorsal abdominal segments VIII and IX orange yellow with posterior margin black; genital plates orange with outer border of paratergite VIII and IX black. Scutellum wider than long; external face of hind coxae blunt without tubercles; hind tibiae scarcely dilated. Plica located near the posterior border of abdominal sternite VI.

Body surface rather dull, seldom shiny, almost glabrous; bristle-like setae of antennal segments, legs, and body surface scattered, short and appressed; antennal segment I with erect setae; fore and middle leg with erect to suberect setae inter-

mixed with appressed setae; posterior third of pronotal disc, scutellum, clavus, corium, acetabulae, and posterior margin of prothorax, mesothorax, and metathorax sparsely to strongly punctate; head, anterior third of pronotal disc, calli, connexival segments, prosternum, mesosternum and metasternum, upper anterior third of propleura and metapleura, and abdominal sterna impunctate; posterior third of pronotal disc with scattered with minute tubercles; thorax with minute tubercles near upper margin of each acetabulum; genital segments of both sexes minutely punctate and tuberculate.

Variation. 1: Posterior region of scutellum including apex black, with anterolateral margins creamy yellow, and basal and middle third chestnut orange. 2: Creamy yellow vitta along each side of abdominal sterna III to VII complete and characteristically enlarged posteriorly.

Measurements. ♂ holotype first, then ♀: Head length 1.90, 1.80, width across eyes 2.40, 2.35, interocular space 1.55, 1.45, interocellar space 0.88, 0.79, preocular distance 1.35, 1.20; length of antennal segments: I, 3.85, 3.40, II, 3.80, 3.35, III, 2.90, 2.70, IV, 3.25, 3.00. Pronotum: Total length 5.68, 5.36, width across frontal angles 2.70, 2.75, width across humeral angles 10.25, 9.85. Scutellar length 3.25, 3.15, width 3.20, 3.25. Maximum width of abdomen 9.50, 9.70. Total body length 23.83, 23.20.

Holotype. ♂ Mexico: Sinaloa, 7mi S Culiacan, 23-VIII-1960 (R. L. Westcott). (CUIC). Paratypes. 1 ♂, 2 ♀: Same data as holotype. (CUIC, UNAM).

Etymology. From the Latin, *atra*, black, in reference to the color of the anterior and posterior lobes of the metathoracic peritreme.

Discussion. The laterally produced pronotal shape is somewhat similar to that of *M. buenoi* Hussey (Figs. 13, 14). However *M. atra* can be easily separated by having the anterior and posterior lobe of metathoracic peritreme entirely black, the antennal segments orange, the bristle-like setae of antennal segment I appressed, and intermixed with erect setae, and the rims of the abdominal spiracles creamy yellow to yellow. In *M. buenoi* the anterior lobe of the metathoracic peritreme is yellow with its inner margin narrowly black, the antennal segments are not entirely orange, antennal segment I is shorter (♂ 3.20, ♀ 2.75, against ♂ 3.85, ♀ 3.40) with bristle like setae appressed, and the rims of abdominal spiracles black to brown.

Mozena nogueirana Brailovsky and Barrera,

New Species

Figs. 6, 8, 17, 23

Description. Male (holotype). Dorsal coloration: head dark yellow hazel, with tylus, midline stripe running from tylus to apex, and upper margin of antenniferous tubercles reddish brown; an-

tenal segment I and II with dorsal face reddish brown and ventral face orange yellow to bright orange; segments III and IV bright orange; pronotum, scutellum, clavus and corium chestnut, with following areas creamy yellow to light yellow: few scattered dots on pronotal disc, clavus and corium, apex of scutellum and claval and corial veins; humeral angles black; hemelytral membrane amber-like with basal angle and veins brown; connexival segments II and III yellow, IV yellow with upper margin of posterior third light brown, and V to VII with anterior half yellow and posterior half including the spines brown; dorsal abdominal segments II to V yellow, VI yellow with two light brown discoidal spots near to posterior margin, and VII black with lateral margins light orange brown. Ventral coloration. Included buccula, rostral segments (apex of IV black), and coxae (outer margin chestnut brown) chestnut yellow; humeral angles, tubercles of thoracic mesopleura, and spines of pleural abdominal segments IV to VI black; anterior lobe of metathoracic peritreme black, with central area dark orange, and posterior lobe black; trochanters reddish brown with upper third chestnut yellow; fore and middle femora chestnut orange yellow, and hind femur chestnut orange yellow with dorsal tubercles light yellow, ventral spines reddish brown, and a wide stripe reddish brown running throughout dorsal surface; fore and middle tibiae with dorsal face reddish brown, and ventrally chestnut orange yellow, and hind tibiae dorsally reddish brown, and ventrally chestnut orange yellow with inner spines reddish brown; basal tarsi chestnut orange yellow, and middle and hind tarsi chestnut orange yellow to reddish brown; propleura, mesopleura and metapleura with the creamy yellow vitta poorly developed, discontinuous, those on metapleura sometimes lacking; creamy yellow to light orange vittae along each side of abdominal sterna III to VII characteristically enlarged posteriorly; rim of abdominal spiracles creamy yellow to whitish. Anterolateral margins of pronotum obliquely straight, with few tubercles on anterior half; humeral angles exposed, slightly elevated, small to medium sized, hemispheric, directed upward, with the tips slightly or conspicuously curved inwards, and apically acute; posterolateral margins straight, with upper half sparsely dentate, and inner half smooth; posterior margin entire, straight, sometimes rounded; calli lacking tubercles behind (Fig. 17). Legs. External face of hind coxa with large and robust tubercle; hind femur with three rows of tubercles on dorsal surface, and ventrally with two rows of lateral spines; hind tibiae medially dilated on male, and cylindrical and slender on female. Scutellum wider than long. Abdomen slightly dilated, slightly wider than hemelytra, with maximum width less than maximum width of pronotum across humeral angles.

Genitalia. Posteroventral edge of genital capsule simple, with a weakly concavity (Fig. 6). Paramere as in Fig. 8.

Coloration of females similar to male. Connexival segment VIII black with anterior third yellow, IX entirely black; dorsal abdominal segments II to VII black with lateral margins usually yellow; segments VIII and IX entirely black; abdominal sterna bright yellow, sometimes tinged with bright reddish orange; genital plate chestnut orange with external face of paratergite IX brown. Plica close to posterior border of abdominal sternite VI.

Body surface rather dull, seldom shiny. Head, pronotum, scutellum, clavus, corium, and thorax clothed with long erect to suberect bristle-like setae; bristle-like setae of antennal segments I to III, legs, and abdominal sterna usually short, appressed, intermixed with sparse suberect setae; posterior third of pronotal disc, clavus, and corium strongly punctate; head, anterior third of pronotal disc, calli, thorax, and abdominal sterna almost impunctate; scutellum with few scattered punctures; posterior third of pronotal disc, clavus and corium with few irregular scattered, and small tubercles or callosities; propleura, mesopleura and metapleura without tubercles; genital segments of both sexes minutely tuberculate and punctate.

Measurements. ♂ holotype first, then ♀: Head length 1.85, 1.75, width across eyes 2.35, 2.25, interocular space 1.44, 1.35, interocellar space 0.68, 0.62; length of antennal segments: I, 4.25, 3.60, II, 4.25, 3.50, III, 3.15, 2.60, IV, 3.30, 2.75. Pronotum: Total length 4.84, 4.35, width across frontal angles 2.25, 2.05, width across humeral angles 6.90, 6.80. Scutellar length 2.70, 2.40, width 2.85, 2.60. Maximum width of abdomen 5.32, 5.38. Total body length 20.32, 18.83.

Holotype. ♂ Mexico: Jalisco, Alista, 1100m, 16-VI-1996 (G. Nogueira). (UNAM). Paratypes. 1 ♀, same data as holotype. (UNAM). 1 ♀ Mexico: Jalisco, Copala, 1170m, 17-IX-1995 (G. Nogueira). (UNAM). 1 ♀ Mexico: Michoacán, 48 km S Nueva Italia, 8-VIII-1978 (Plitt and Schaffner). (TAMU). 1 ♀ Mexico: Michoacán, 4.8 km N. Capirio, 12-VII-1981 (E. M. Fisher). (UNAM). 2 ♂, 2 ♀ Mexico: Michoacán, Apatzingan, 1200', 12-VIII-1941 (H. Hoogstraal). (FSCA). 1 ♀ Mexico: Guerrero, Tecpan de Galeana, 19-VIII-1971 (H. Brailovsky). (UNAM). 1 ♂ Mexico: Puebla, Acatlan, 26-VII-1942 (F. Islas). (UNAM). 2 ♀ Mexico: Puebla, Matamoros, 28-VII-1942 (F. Islas). (UNAM). 1 ♀ Mexico: Oaxaca, 17km, SE from Huajuapán de León, 29-VI-1996 (H. Brailovsky and E. Barrera). (UNAM).

Etymology. Named for Guillermo Nogueira, our friend and excellent collector.

Discussion. *Mozena nogueirana* resembles *M. buenoi* Hussey by having the maximum width of abdomen less than maximum width of pronotum across humeral angles, the antennal segment I without erect setae (Fig. 2), and the

creamy yellow to orange vittae along each side of abdominal sterna III to VI enlarged posteriorly (Fig. 4). In *M. buenoi* the humeral pronotal angles are produced laterally and the antennal segment I is robust and shorter than 3.30. In the new species the humeral angles are moderately raised, hemispheric, and the antennal segment I is slender and longer than 3.50.

Mozena pardalota Brailovsky and Barrera,

New Species

Figs. 9, 18, 24

Description. Male (holotype). Dorsal coloration: orange yellow with a olivaceous tinge; antennal segments I to III orange yellow, with apical joint reddish brown, and IV yellowish with a brownish tinge; pronotal disc at middle third with one dark orange longitudinal stripe running from anterior margin to near posterior margin (best seen with naked eye); apex and lateral margins of scutellum light yellow; hemelytral membrane amber-like; connexival segments light orange with inner third of anterior margin yellow, upper margin yellow with one to four black spots; dorsal abdominal segments black, with lateral margins of V and VI bright orange yellow, and VII bright orange yellow with two anterior spots black and lateral to midline. Ventral coloration. Including rostral segments (apex of IV black), legs, and genital capsule bright orange yellow; spines and tubercles of femora light yellow; anterior lobe of metathoracic peritreme yellow with outer margin narrowly black, and posterior lobe black; propleura, mesopleura, and metapleura with the creamy yellow vitta well developed, and obliquely straight; acetabulae, thoracic tubercles, and posterior margin of propleura, mesopleura, and metapleura creamy yellow; upper margin of pleural abdominal sterna light yellow; creamy yellow vittae along each side of abdominal sterna III to VII uniformly straight, not enlarged posteriorly; rim of abdominal spiracles yellow. Anterolateral margins of pronotum obliquely straight, conspicuously dentate; humeral angles slightly exposed, subacute, directed laterally, almost at right angles to longitudinal axis of body, each border dentate; posterolateral and posterior margin straight, and entire; calli behind with two tubercles lateral to midline (Fig. 18). Legs. External face of hind coxa with a large and robust tubercle; fore and middle femora with three rows and hind femur with four rows of tubercles on dorsal surface, ventrally with two rows of lateral spines; hind tibia slightly incrassate near the middle third. Scutellum wider than long. Abdomen dilated, wider than hemelytra, with maximum width wider than maximum width of pronotum across humeral angles.

Genitalia. Posteroventral edge of genital capsule simple, transversely straight. Paramere as in Fig. 9.

Coloration of females similar to holotype. Connexival segments dark orange with tubercles yellow, and upper margin yellow with one to four black spots; dorsal abdominal segments bright orange; gonocoxae I bright orange, and paratergite VIII and IX orange yellow. External face of hind femur blunt, without tubercle; hind tibia cylindrical. Plica close to posterior margin of abdominal sternite VI.

Body surface rather dull, seldom shiny, and almost glabrous; antennal segment I clothed with erect setae; antennal segments II to IV clothed with appressed setae; femora and tibiae with erect to suberect setae; calli behind with six tubercles in transverse row; posterior third of pronotal disc, scutellum, clavus, corium, acetabulae, posterior margin of propleura, mesopleura and thoracic metapleura punctate; head, calli, connexival segments, and abdominal sterna impunctate; connexival segments scarcely tuberculate; genital segments of both sexes minutely tuberculate and punctate.

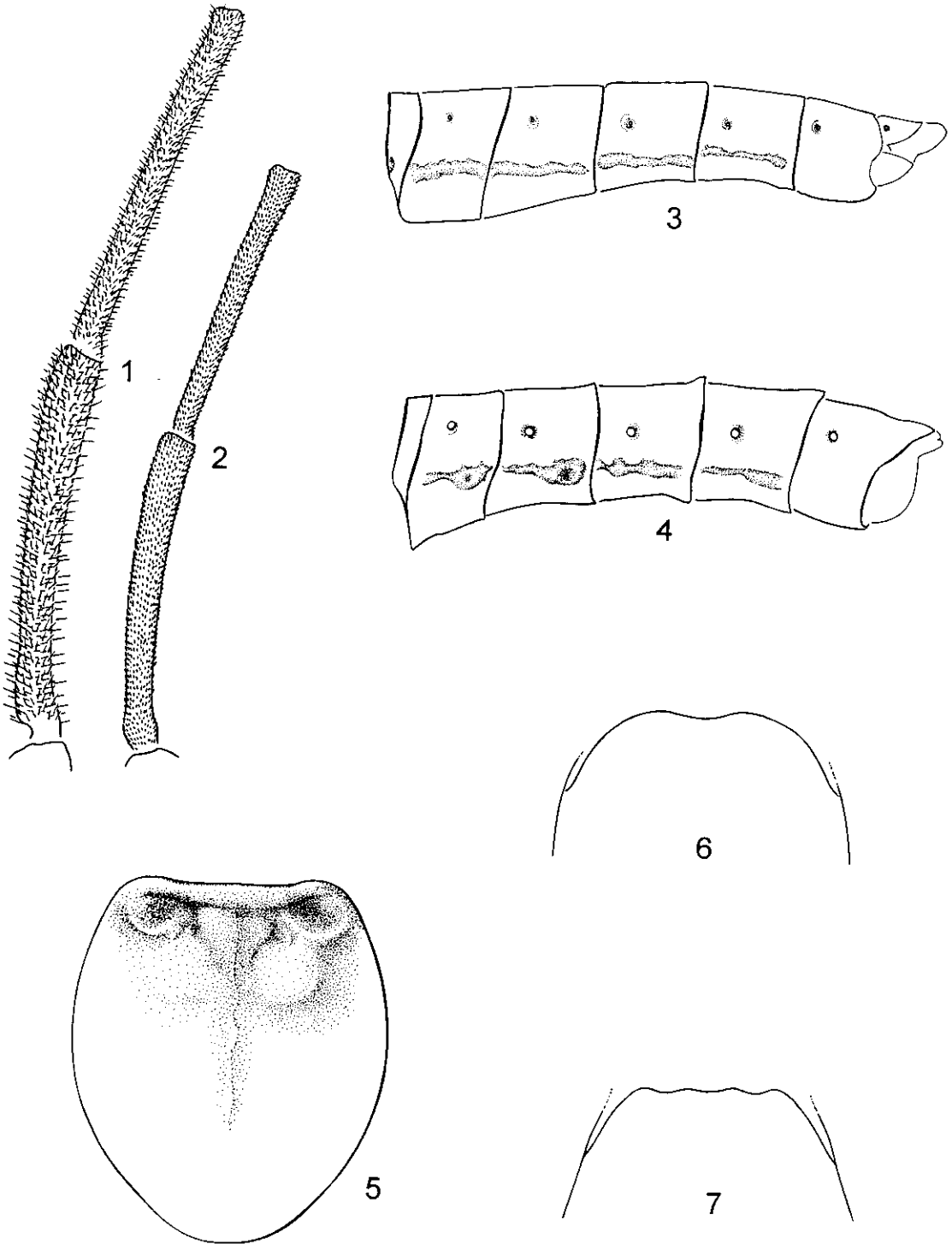
Variation. 1: Body light yellow, with antennal segments, clavus, and corium bright orange, and upper margin of connexival segments with one to four black spots.

Measurements. ♂ holotype first, then ♀: Head length 1.57, 1.50, width across eyes 1.95, 1.95, interocular space 1.20, 0.98, interocellar space 0.65, 0.65, preocular distance 1.10, 1.00; length of antennal segments: I, 2.75, 2.20, II, 2.65, 2.10, III, 2.20, 1.65, IV, 2.75, 2.20. Pronotum: Total length 4.35, 4.45; width across frontal angles 2.55, 2.35; width across humeral angles 7.00, 7.55. Scutellar length 2.55, 2.55, width 2.75, 2.85. Maximum width of abdomen 8.45, 8.85. Total body length 17.30, 18.50.

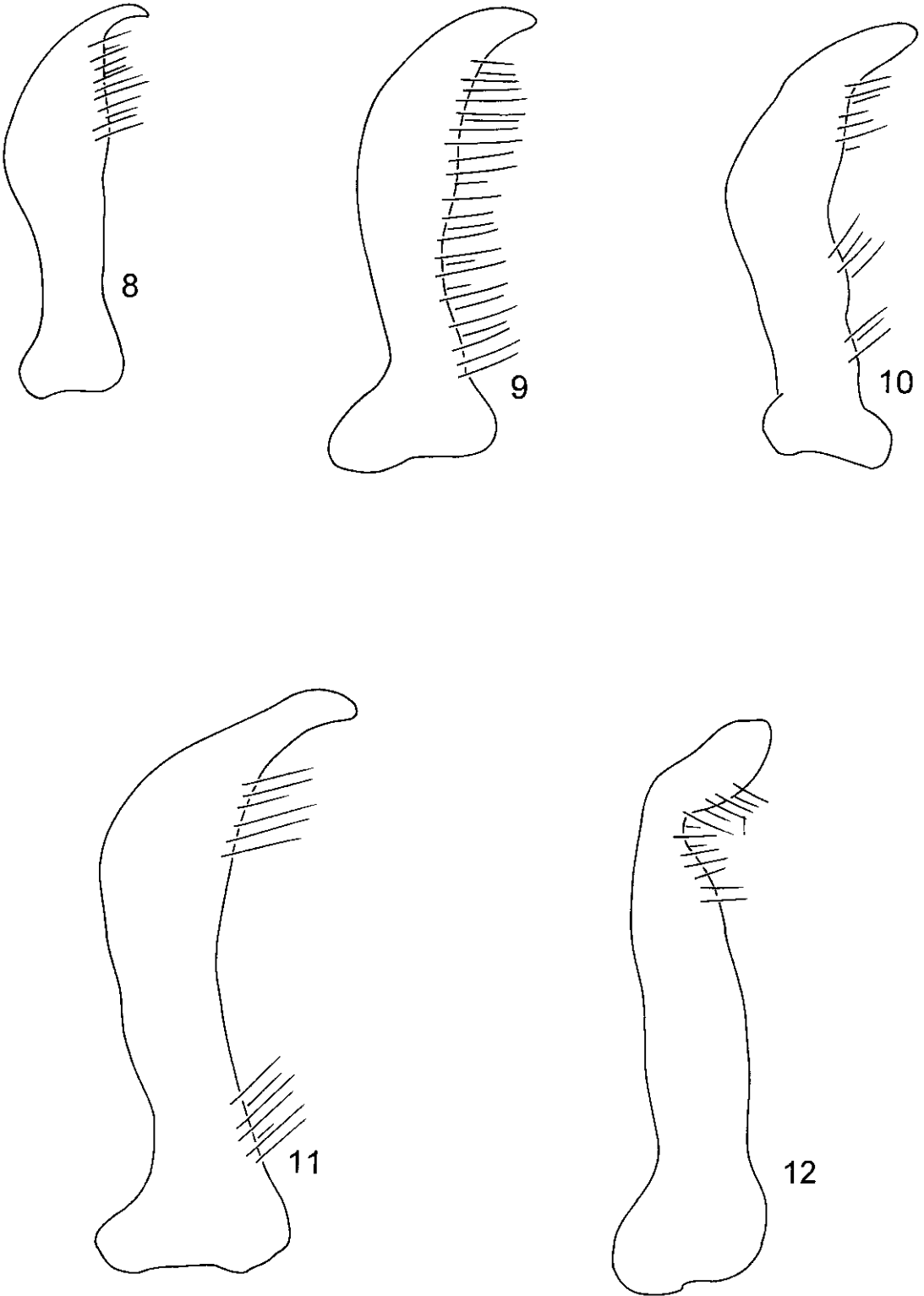
Holotype. ♂ Mexico: Jalisco, km 4 El Tuito-Tehuamixtle, 23-XI-1991 (J. Villa and E. Ramirez). (UNAM). Paratypes. 2 ♂, 1 ♀: Same data as holotype. 1 ♂ Mexico: Jalisco, Chamela, Tomatlán, 7-IX-1979 (H. Brailovsky). (UNAM). 2 ♀ Mexico: Nayarit, 44 mi NW Tepic, 30-VIII-1971 (J. L. Petty). (BYU). 1 ♂ Mexico: Nayarit, 68 mi SE Tepic, 31-VIII-1971 (J. L. Petty). (BYU).

Etymology. The specific name is from the Greek *pardalota* meaning "spotted like a leopard" in reference to its spotted color pattern on upper margin of connexival segments.

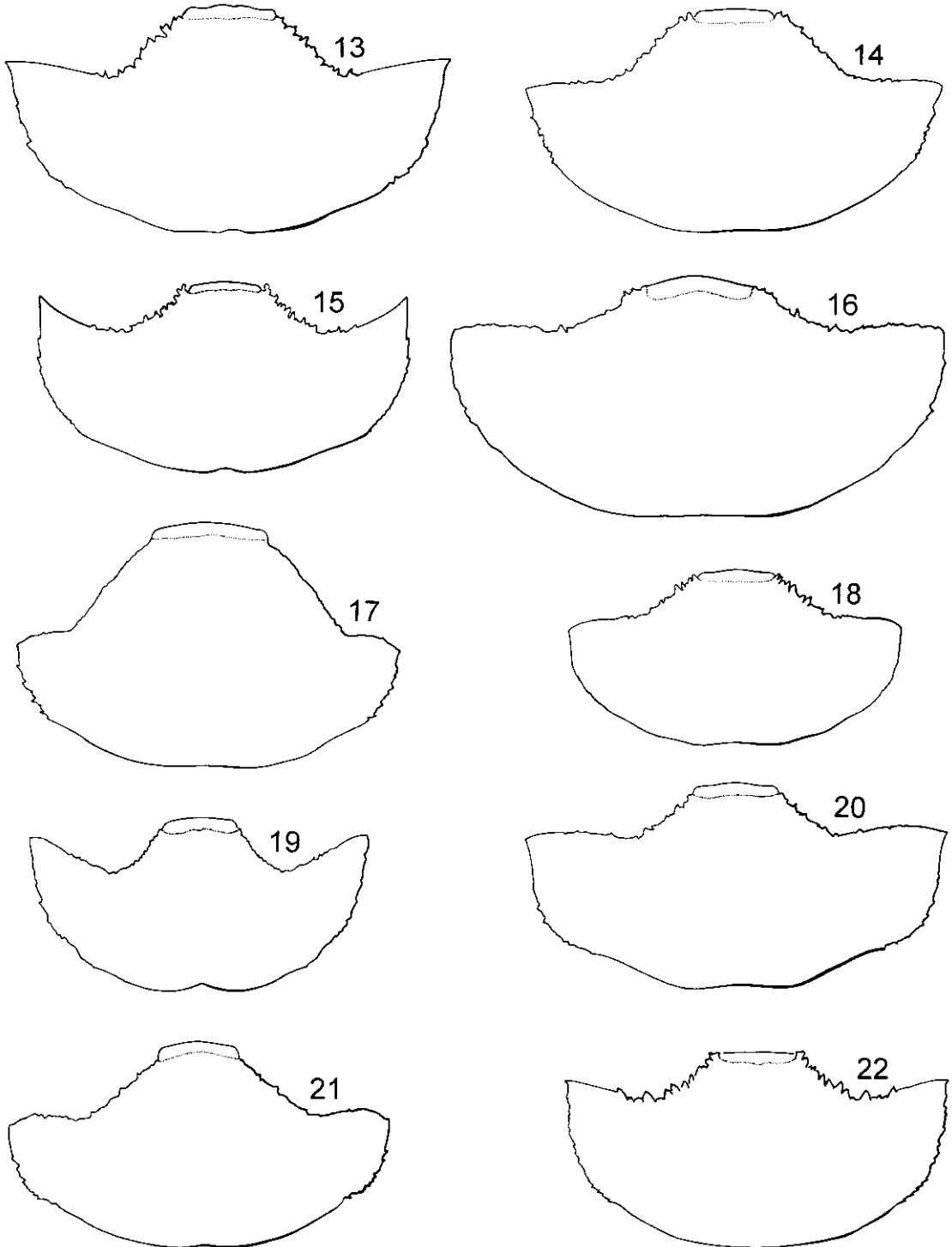
Discussion. The pronotal shape including the humeral angles is somewhat similar to those of *M. buenoi* Hussey (Figs. 14, 18). *M. pardalota* is recognized by having the maximum width of abdomen wider than maximum width of pronotal disc across humeral angles, antennal segment I orange yellow, slender, and clothed with erect setae (Fig. 1), calli behind with two lateral tubercles, apical margin of corium unicolorous in reference to corial disc, and upper margin of connexival segments yellow with one to four black spots. In *M. buenoi* the maximum width of abdomen is less



Figs. 1-7. *Mozena* spp. Figs. 1-2. Antennal segments I-II. 1, *M. nestor* (Stål). 2, *M. lunata* (Burmeister). Figs. 3-4. Abdomen in lateral view. 3, *M. perezae* Brailovsky and Barrera, **New Species**. 4, *M. presigna* Brailovsky and Barrera, **New Species**. Figs. 5-7. Caudal view of male genital capsule. 5, *M. perezae* Brailovsky and Barrera, **New Species**. 6, *M. nogueirana* Brailovsky and Barrera, **New Species**. 7, *M. presigna* Brailovsky and Barrera, **New Species**.



Figs. 8-12. Paramere of *Mozena* spp. 8, *M. nogueirana* Brailovsky and Barrera, **New Species**. 9, *M. pardalota* Brailovsky and Barrera, **New Species**. 10, *M. perezae* Brailovsky and Barrera, **New Species**. 11, *M. preclara* Brailovsky and Barrera, **New Species**. 12, *M. presigna* Brailovsky and Barrera, **New Species**.



Figs. 13-22. Pronotum of *Mozena* spp. 13, *M. atra* Brailovsky and Barrera, **New Species**. 14, *M. buenoi* Hussey. 15, *M. lunata* (Burmeister). 16, *M. nestor* (Stål). 17, *M. nogueirana* Brailovsky and Barrera, **New Species**. 18, *M. pardalota* Brailovsky and Barrera, **New Species**. 19, *M. perezae* Brailovsky and Barrera, **New Species**. 20, *M. preclara* Brailovsky and Barrera, **New Species**. 21, *M. presigna* Brailovsky and Barrera, **New Species**. 22, *M. lunata rufescens* Ruckes.

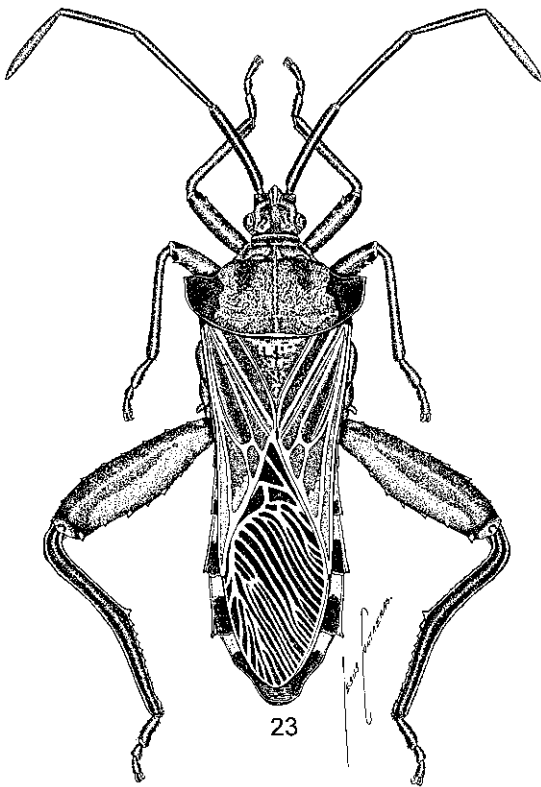


Fig. 23. *Mozena nogueirana* Brailovsky and Barrera, **New Species**, dorsal view (male).

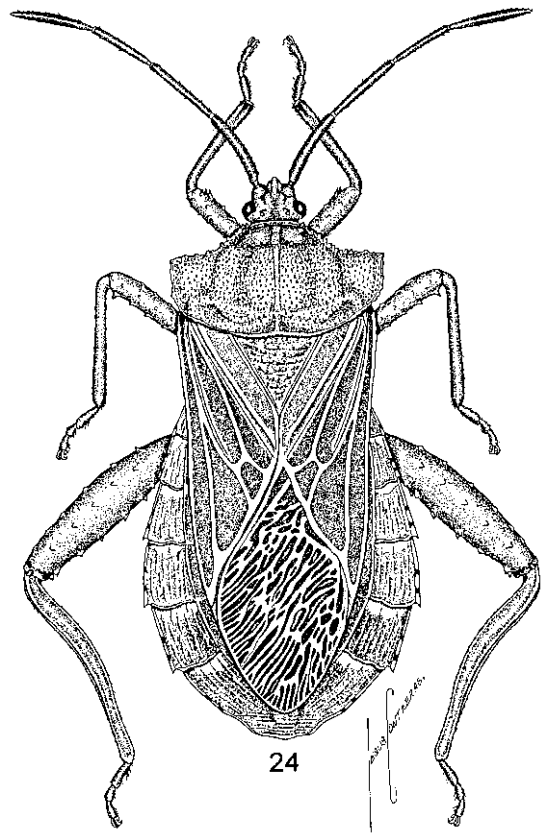


Fig. 24. *Mozena pardalota* Brailovsky and Barrera, **New Species**, dorsal view (male).

than maximum width of pronotal disc across humeral angles, antennal segment I dorsally black, ventrally orange, robust, without or with few erect setae, calli behind lacking tubercles or scarcely developed, apical margin of corium light yellow to ivory and contrasting with corial disc, and upper margin of connexival segments with anterior half yellow, and posterior half brown to orange, without black discoidal spots.

In *M. rufula* Van Duzee (Fig. 29) the body and antennal segments I to IV are orange, but the maximum width of abdomen is less than maximum width of pronotal disc across humeral angles.

Mozena perezae Brailovsky and Barrera, **New Species**
Figs. 3, 5, 10, 19, 28

Description. Male (holotype). Dorsal coloration: head dark orange; tylus and space between eye and antenniferous tubercle black; antennal segment I dorsally black, and ventrally orange except basal third black; segments II to IV bright orange; calli dark orange; collar and posterior lobe dark yellow with callosities and two prominent tubercles behind calli light yellow; humeral angles black; scutellum light yellow with irregular black dots, and punctures chestnut orange; clavus

and corium yellow with olivaceous tinge, punctures chestnut orange, and anterior half of costal margin of corium brown; hemelytral membrane amber-like with basal angle and veins darker; connexival segments III to VII black, with anterior third light yellow; dorsal abdominal segments black with scent gland scars IV-V and V-VI yellow. Ventral coloration. Head including buccula black, with the area neighbouring eyes yellow; rostral segments chestnut red; thorax bright orange with anterior third of propleura, each margin of humeral expansion, and great portion of meta-acetabulae black to reddish brown; propleura, mesopleura and metapleura with conspicuous creamy yellow vittae; upper margin of metapleura posteriorly yellow; anterior lobe of metathoracic peritreme yellow and posterior lobe black; coxae bright orange with inner third black to reddish brown; trochanters bright orange; fore and middle femora bright orange with apical third black; hind femur bright orange with apical third, tubercles and spines black to reddish brown; fore and middle tibiae bright orange, with sulcate region black to reddish brown; hind tibia with dorsal face black, and ventrally orange; tarsi

chestnut orange with reddish brown dots; laevigate creamy yellow and polished line along each side of abdominal sterna III to VII uniformly straight (Fig. 3); rim of abdominal spiracles black; pleural abdominal segments III to VII black with anterior third yellow; abdominal sterna bright orange; genital capsule black with lateral margin almost orange. Anterolateral margins of pronotum obliquely straight, with few tubercles on anterior half; humeral angles exposed, elevated, strongly developed, elongate, produced laterally, out and slightly upwards directed, and apically subacute; posterolateral margins straight, and smooth; posterior margin sinuate, smooth, with shallow concavity at middle third; calli behind with two prominent tubercles lateral to midline (Fig. 19). Legs. External face of hind coxa with blunt, inconspicuous tubercle; hind femur with three rows of tubercles on dorsal surface, ventrally with two rows of lateral spines; hind tibia conspicuously dilated. Scutellum wider than long. Abdomen slightly dilated, wider than hemelytra, with maximum width less than maximum width of pronotum, across humeral angles.

Genitalia. Posteroventral edge of genital capsule simple, with shallow medial plate emargination (Fig. 5). Paramere as in Fig. 10.

Coloration of females similar to male. Head black with area around ocelli orange; collar and calli black; scutellum light yellow, with black squarish mark on basal third; clavus yellow with olivaceous tinge, and black punctures along anal suture; connexival segments VIII and IX, and abdominal segments VIII and IX black; thorax black, with mesosternum and metasternum orange yellow, with following areas yellow: one irregular spot on propleura, mesopleura and metapleura, anterior tubercle of mesopleura, and posterior third of upper margin of metapleura; anterior and posterior lobe of metathoracic peritreme yellow; legs black with dark orange trochanters; laevigate creamy yellow polished line running from III to VI abdominal sterna uniformly straight; genital plates black. External face of hind coxa blunt, with inconspicuous tubercle; hind tibia conspicuously dilated. Plica located far from posterior border of abdominal sternite VI.

Body surface rather dull, almost entirely glabrous; bristle-like setae of antennal segments I to III appressed; bristle-like setae of femora, and hind tibiae scattered, appressed, and on fore and middle tibiae densely appressed or suberect; head, anterior third of pronotal disc, calli, thorax (acetabulae usually punctate) connexival segments and abdominal sterna impunctate; posterior third of pronotal disc, clavus, and corium strongly punctate, and each puncture with short decumbent bristle-like setae; scutellum with few scattered punctures; posterior third of pronotal disc with irregular, small tubercles or callosities; propleura, mesopleura and metapleura without

tubercles; genital segments of both sexes minutely tuberculate and punctate.

Variation. 1: Head, pronotum, and scutellum mostly black. 2: Head, antennal segments I to IV, pronotum (humeral angles black), scutellum, clavus, corium, thorax, fore and middle legs, and abdomen bright orange. 3: Anterior and posterior lobe of metathoracic peritreme black. 4: Trochanters black. 5: Pleural abdominal sterna III to VII black with small yellow spot on anterior third of sterna V to VI.

Measurements. ♂ holotype first, then ♀: Head length 1.65, 1.65, width across eyes 2.07, 2.10, interocular space 1.28, 1.25, interocellar space 0.74, 0.74, preocular distance 1.12, 1.15; length antennal segments: I, 4.30, 3.85, II, 3.50, 3.30, III, 2.55, 2.35, IV, 3.15, 3.00. Pronotum: Total length 4.30, 4.30, width across frontal angles 2.20, 2.15, width across humeral angles 8.60, 8.65. Scutellar length 2.45, 2.50, width 2.55, 2.60. Maximum width of abdomen 5.16, 5.23. Total body length 22.20, 20.78.

Holotype ♂ Mexico: Chiapas, Aguacero, 16km W from Ocozocoautla, 15-VI-1987 (D. B. Thomas). (UNAM). Paratypes. 1 ♀ Mexico: Chiapas, La Trinidad, 1-X-1983 (E. Barrera). (UNAM). 1 ♀ Mexico: Chiapas, Tuxtla Gutierrez, 10-VIII-1983 (E. Barrera). (UNAM). 1 ♀ Mexico: Chiapas, Reserva El Ocote, 2-10-XII-1993 (G. Ortega León, E. Barrera, and A. Casasola). (UNAM). 1 ♂ Mexico: Chiapas, Municipio Ocozocoautla, El Aguacero, 2200', 6-VIII-1990 (J. C. Schaffner). (TAMU).

Etymology. Named for Olga Leticia Perez Ramirez, friend for many years.

Discussion. *Mozena perezae* is related to *M. nogueirana*, sharing with it the following characters: maximum width of abdomen less than maximum width of pronotum across humeral angles, and antennal segment I without erect setae (Fig. 2). In *M. perezae* the body is slender, and narrowed, the humeral angles strongly developed (Fig. 19), and the creamy yellow to orange vitta along each side of abdominal sterna III to VI not enlarged posteriorly (Fig. 3).

In *M. lunata* (Burmeister) and *M. lunata rufescens* Ruckes the humeral angles are not conspicuously developed (Figs. 15, 22), and the connexival segments II and III are yellow and not black which is characteristic of *M. perezae*.

Mozena preclara Brailovsky and Barrera, **New Species**
Figs. 11, 20, 25

Description. Male (holotype). Dorsal coloration: head dark orange with the interocular space reddish brown; antennal segment I black dorsally, orange ventrally, segments II and III orange, and IV reddish brown with basal joint orange; pronotum dark chestnut orange with humeral angles black; scutellum light yellow, and basally with dark chestnut orange central area; clavus and

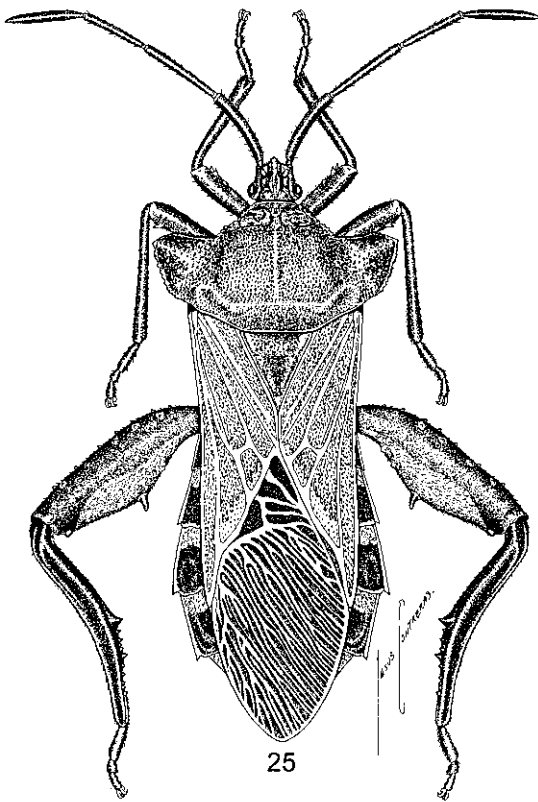


Fig. 25. *Mozena preclara* Brailovsky and Barrera, **New Species**, dorsal view (male).

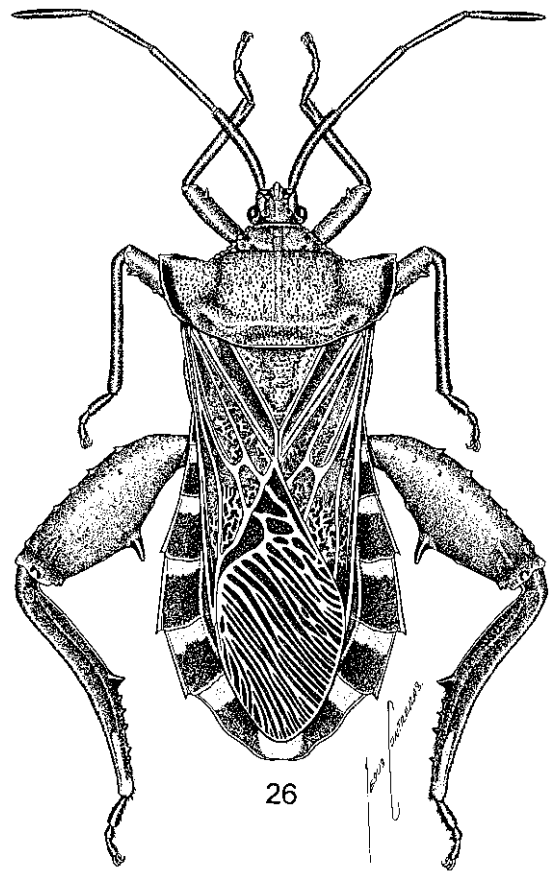


Fig. 26. *Mozena atra* Brailovsky and Barrera, **New Species**, dorsal view (male).

corium chestnut orange with veins, apical margin, anterior third of costal margin, and small tubercles light yellow to dark orange; hemelytral membrane dark amber-like, with basal angle and veins brown; connexival segments reddish brown with anterior third yellow; dorsal abdominal segments bright orange, with posterior margin of segment VII black. Ventral coloration. Bright chestnut orange; rostral segments orange with apical third of IV black; anterior lobe of metathoracic peritreme black, with central area orange, and posterior lobe black; propleura, mesopleura and metapleura with creamy yellow vitta slender, obliquely straight; acetabulae, few tubercles scattered on thoracic pleura, upper tubercle of anterior angle of mesopleura, and posterior angle of metapleura creamy yellow; legs orange with following areas black: fore and middle femora dorsally with slender longitudinal stripe, hind femur with tubercles, spines and dorsal surface with wide longitudinal stripe, and dorsal surface of hind tibia (apical third orange); creamy yellow vitta along each side of abdominal sterna III to VII uniformly broad; rim of abdominal spiracles yellow; genital capsule orange. Anterolateral margins of pronotum obliquely straight, uni-

formly dentate; humeral angles exposed, relatively quadrate, produced laterally, directed upwards, each margin dentate, and apically subacute with tip slightly turned backwards; posterolateral and posterior margin straight and smooth; calli lacking tubercles behind (Fig. 20). Legs. External face of hind coxa with large, and robust tubercle; hind femur medially incrassate, with three to four rows of tubercles on dorsal surface, and ventrally with two rows of lateral spines; hind tibia conspicuously dilated. Scutellum wider than long or as long as wide. Abdomen slightly dilated, wider than hemelytra, with maximum width less than maximum width of pronotum, across humeral angles.

Genitalia. Posteroventral edge of genital capsule simple, straight. Paramere as in Fig. 11.

Coloration of females similar to holotype. Antennal segment IV orange; scutellum light yellow, and basally light orange; connexival segments VIII and IX black, with anterior third yellow; dorsal abdominal segment VIII black, and IX dark orange with posterior margin black; anterior lobe of metathoracic peritreme yellow with outer bor-

der narrowly black, and posterior lobe black; fore and middle femora orange; hind femur orange and dorsally black; genital segments bright orange with outer border of gonocoxae I, paratergite VIII and IX yellow; abdominal sterna III to VII medially light yellow, laterally light orange; pleural sterna light orange, with anterior third yellow. External face of hind coxa blunt, without tubercle; hind tibia almost cylindrical. Plica located close to posterior border of abdominal sternite VI.

Body surface rather dull, seldom shiny ventrally, and clothed with short, decumbent, silvery pubescence, intermixed with few erect bristle-like setae; antennal segment I clothed with erect setae; antennal segments II to IV and legs with appressed and few suberect setae; posterior third of pronotal disc, scutellum, clavus, corium, and acetabulae punctate; head, anterior third of pronotal disc, calli, connexival segments, thorax, and abdominal sterna impunctate; posterior third of pronotal disc with few irregular or rather inconspicuous small tubercles or callosities; propleura, mesopleura, and metapleura with few tubercles, almost inconspicuous; genital segments of both sexes minutely tuberculate and punctate.

Measurements. ♂ holotype first, then ♀: Head length 1.95, 1.90, width across eyes 2.45, 2.40, interocular space 1.50, 1.47, interocellar space 0.83, 0.85, preocular distance 1.40, 1.40; length of antennal segments: I, 4.00, 3.70, II, 3.75, 3.50, III, 3.05, 2.85, IV, 3.25, 3.25. Pronotum: Total length 5.95, 5.93, width across frontal angles 2.60, 2.60, width across humeral angles 10.55, 11.15. Scutellar length 3.35, 3.65, width 3.35, 3.75. Maximum width of abdomen 9.80, 11.05. Total body length 28.00, 26.53.

Holotype. ♂ Mexico: Guerrero, Cañon del Zopilote, 23-VIII-1984 (H. Brailovsky). (UNAM). **Paratypes.** 3 ♀ Mexico: Guerrero, Valerio Trujano, 9-VII-1961, 8-VIII-1962, 21-VI-1964 (L. Vazquez). (UNAM). 1 ♂ Mexico: Guerrero, 8 km, W Iguala, 25-VIII-1983 (H. Brailovsky). (UNAM). 2 ♀ Mexico: Guerrero, Mezcala, 12-VII-1967 (H. Perez), 26-VI-1971 (E. Martin). (UNAM). 1 ♂ Mexico: Guerrero, 6mi W Iguala, 19-VIII-1981 (J. Chemsak and A. & M. Michelbacher). (UCB). 1 ♀ Mexico: Guerrero, 3km S Xalitla, 610m, 18-00 N-98 -24 W, 1-VII-1992 (C. L. Bellamy). (CMN). 1 ♀ Mexico: Puebla, km 78 carr. Cuautla-Oaxaca, 30-X-1987 (F. Arias, R. Barba, and E. Barrera). (UNAM).

Etymology. From the Latin *preclarus* meaning very beautiful, splendid, in reference to the general shape.

Discussion. *Mozena preclara* (Fig. 25) appears to be closely related to *M. nestor* (Stål) (Fig. 27) on the basis of the body surface clothed with short and decumbent silvery pubescence, intermixed with few erect bristle-like setae, antennal segment I clothed with erect setae (Fig. 1), with dorsal surface black, and ventrally orange, hu-

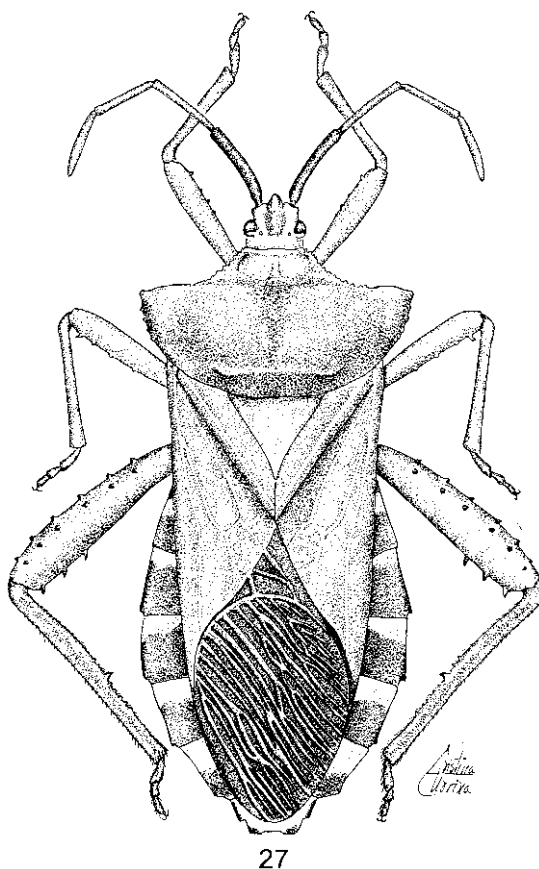


Fig. 27. *Mozena nestor* (Stål), dorsal view (female).

meral angles outwardly directed, slightly upwards, and not lunate, and calli lacking tubercles behind him. *M. nestor* is recognized by the widely dilated abdomen, with maximum width wider than maximum width of pronotum across humeral angles, male hind femur heavily incrassate, and humeral angles robust and medially produced (Fig. 16). In *M. preclara* the maximum width of abdomen is less than maximum width of pronotum across humeral angles, male hind femur medially incrassate, and humeral angles relatively quadrate, not widely expanded, and conspicuously produced (Fig. 20).

Mozena presigna Brailovsky and Barrera, **New Species**
Figs. 4, 7, 12, 21

Description. Male (holotype). Dorsal coloration: head dark orange hazel, with tylus reddish brown, and space between ocelli dark orange; antennal segment I with dorsal face reddish brown, ventrally dark orange; segments II and III reddish brown, with basal and apical joint dirty yellow to dark orange; antennal segment IV bright orange; pronotum, scutellum, clavus and corium

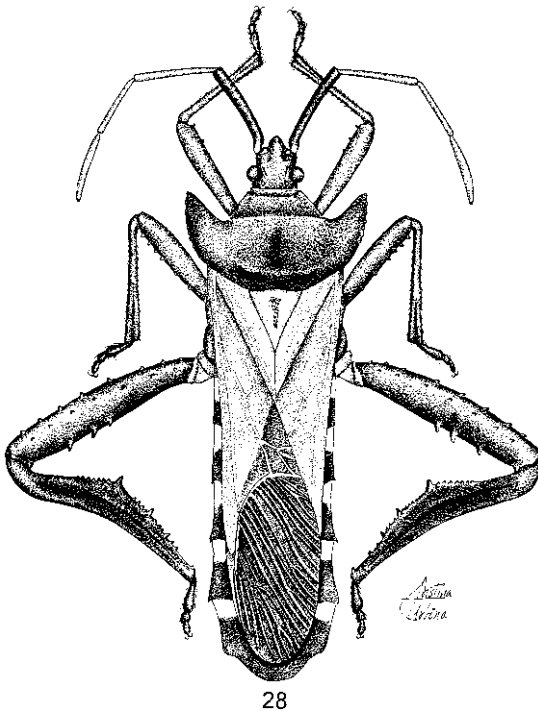


Fig. 28. *Mozena perezae* Brailovsky and Barrera, **New Species**, dorsal view (male).

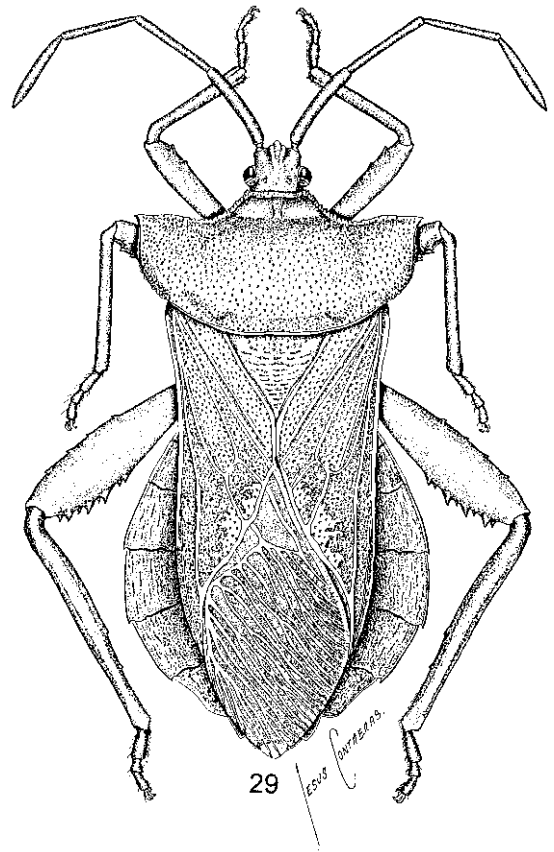


Fig. 29. *Mozena rufula* Van Duzee (female).

bright dark orange hazel with humeral angles black, and apex of scutellum yellow; hemelytral membrane amber-like with basal angle and veins brown; connexival segment III yellow with upper margin of posterior half reddish brown; connexival segments IV to VII reddish brown with anterior third yellow; dorsal abdominal segments bright orange, with black longitudinal stripe running from IV to VII segment. Ventral coloration. Included buccula, rostral segments (apex of IV black), and coxae (outer margin reddish brown) dark to light chestnut orange to chestnut yellow; outer margin of humeral angles, posterior third of pleural abdominal segments III to VII and spines black; anterior lobe of metathoracic peritreme black with central area dark orange, and posterior lobe black; trochanters dark chestnut orange, apical third reddish brown; fore and middle femora light chestnut yellow, distal joint reddish brown; hind femur chestnut orange yellow with dorsal tubercles, ventral spines and wide dorsal longitudinal stripe reddish brown; fore and middle tibiae reddish brown with ventral face lighter; hind tibia reddish brown; tarsi reddish brown to dark chestnut orange; propleura, mesopleura, and thoracic metapleura with creamy yellow vittae poorly developed, and discontinuous, those on metapleura sometimes lacking; creamy yellow to light orange vittae along each side of abdominal

sterna III to VI characteristically enlarged posteriorly (Fig. 4); rim of abdominal spiracle creamy yellow to whitish; genital capsule reddish brown with lateral margins and posteroventral edge dark chestnut orange. Anterolateral margins of pronotum obliquely straight, and sparsely tuberculate; humeral angles broad, exposed, raised, medium to large sized, hemispheric, directed upward, with tips slightly approaching inwards, and apically acute; posterolateral margins straight, with upper half sparsely dentate, and inner half smooth; posterior margin entire, straight; calli lacking tubercles behind (Fig. 21). Legs. External face of hind coxa with large, robust tubercle; hind femur with three or four rows of tubercles on dorsal surface, ventrally with two rows of lateral spines; hind tibia medially dilated on male, cylindrical and slender on female. Scutellum wider than long. Abdomen slightly dilated, wider than hemelytra, with maximum width less than maximum width of pronotum across humeral angles.

Genitalia. Posteroventral edge of male genital capsule simple, transversely sinuate (Fig. 7). Paramere as in Fig. 12.

Coloration of females similar to male. Connexival segments VIII and IX, and dorsal abdominal segments VIII and IX black; genital plates dark chestnut orange with external face of gonocoxae I, upper margin of paratergite IX, and great portion of paratergite VIII reddish brown. Plica close to posterior border of abdominal sternite VI.

Body surface rather dull, seldom shiny. Head, pronotum, scutellum, clavus, corium, thorax, and abdomen clothed with short suberect bristle-like setae; bristle-like setae of antennal segments I to III, and legs, short, appressed, intermixed with few suberect setae; posterior third of pronotal disc, clavus, and corium strongly punctate; head, anterior third of pronotal disc, calli, thorax, and abdominal sterna almost impunctate; scutellum sparsely punctate; posterior third of pronotal disc, clavus, and corium irregularly scattered with small tubercles or callosities; propleura and mesopleura without tubercles; metapleura with few and low cuticular structures like tubercles or callosities; genital segments of both sexes minutely tuberculate, and punctate.

Variation. 1: Antennal segments I to III chestnut orange. 2: Dorsal surface of head with reddish brown stripe running from tylus to vertex. 3: Scutellum black with apex dark chestnut orange. 4: Upper margin of connexival segments III to IX entirely black. 5: Dorsal abdominal segments II to IX black, or segments II to IV bright orange, and V to VII black with anterior margin bright orange. 6: Anterior lobe of metathoracic peritreme entirely black.

Measurements. ♂ holotype first, then ♀: Head length 1.80, 1.75, width across eyes 2.35, 2.30, interocular space 1.55, 1.47, interocellar space 0.72, 0.72, preocular distance 1.37, 1.27; length of antennal segments: I, 4.14, 3.50, II, 4.10, 3.40, III, 3.17, 2.50, IV, 3.25, 2.80. Pronotum: Total length 5.20, 5.20; width across frontal angles 2.70, 2.60; width across humeral angles 8.13, 8.28. Scutellar length 2.80, 2.77, width 2.87, 2.85. Maximum width of abdomen 6.08, 6.91. Total body length 21.17, 20.46.

Holotype. ♂ Mexico: Oaxaca, Totolapan, 16 39'52"N-96 16'75"W, 30-VI-1996 (H. Brailovsky and E. Barrera). (UNAM). Paratypes. 1 ♂, 1 ♀ Mexico: Oaxaca, Tehuantepec, 7-VII-1983 (H. Brailovsky). (UNAM). 1 ♂ Mexico: Oaxaca, 23 km Morro de Mazatlan-Salina Cruz, 24-III-1990 (E. Barrera and H. Brailovsky). (UNAM). 17 ♂, 20 ♀ Mexico: Oaxaca, 23 km S Matias Romero, 23-VII-1974 (Clark, Murray, Ashe, Schaffner). (TAMU, UNAM). 1 ♀ Mexico: Oaxaca, 11 km NW El Carmen, 17-VII-1981 (J. C. Schaffner). (TAMU).

Etymology. From the latin word *presignis*, distinguished or illustrious.

Discussion. *Mozena presigna* is similar to *M. nogueirana*, but may be separated by its uniformly dark coloration, the humeral angles broad, conspicuously raised and well developed (Fig. 21), and the posteroventral edge of the male genital capsule transversely sinuate (Fig. 7) without a weak concavity (Fig. 6) which is present in *M. nogueirana*, in which humeral angles are shorter (Fig. 17).

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