

TWO NEW SPECIES OF *MORMIDEA* FROM MEXICO AND GUATEMALA (HETEROPTERA: PENTATOMIDAE)¹

D. A. RIDER AND L. H. ROLSTON

Department of Entomology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge, Louisiana 70803

Abstract.—*Mormidea polita* n. sp. and *M. guatemalensis* n. sp. are described from Mexico and Guatemala, respectively. A key is provided for the identification of the 14 species of *Mormidea* Amyot and Serville known to occur in Mexico, Belize and Guatemala.

The genus *Mormidea* Amyot and Serville, which is restricted to the western hemisphere, belongs in the Pentatomini among those genera lacking a medial spine or tubercle at the base of the abdominal venter. The genera in this group that occur in the western hemisphere north of South America were keyed by Rolston and McDonald (1984), and the genus *Mormidea* was revised, with a subsequent emendation, by Rolston (1978, 1984).

Here, a new species from Mexico and a new species from Guatemala are added to the genus. A key is provided to facilitate identification of the species of *Mormidea* that are known from Mexico, Belize and Guatemala.

KEY TO MEXICAN, BELIZIAN AND GUATEMALAN SPECIES OF *MORMIDEA*

- 1. Middle half of pronotum at posterior margins of cicatrices traversed by narrow, ivory callus (subgenus *Melanochila* Stål) *lugens* (F.)
- Pronotum with calloused spot (usually ivory) at posterior margin of each cicatrice; or with large, irregularly shaped, calloused, ivory macule covering much of anterior pronotal disk; or without callus (subgenus *Mormidea*) 2
- 2(1). Dark spot on each mesopleuron at distal end of supracoxal cleft larger than least diameter of tibiae; endocoria nearly transparent excepting punctation; last antennal segment without pale, basal band *angustata* Stål
- Dark spot smaller than least diameter of tibiae, or absent, or obscured by dark punctation and infuscation of mesopleuron; endocoria translucent or obscure; at least last antennal segment bicolored with pale, basal band (except *laevigata*) ... 3
- 3(2). Connexiva entirely pale, or with broad, entirely pale lateral borders on at least last four connexival segments (Fig. 2) 4
- Connexiva dark with pale areas confined to lateral edges or to marginal scallops, each between transverse sutures (Fig. 1) 11
- 4(3). Abdominal venter pale with dark medial vitta (sometimes in addition a vague lateral vitta on each side) or a medial row of spots 5
- Abdominal venter pale and without vitta (occasionally a thin, dark medial line on last sternite and sometimes at base of one or more of preceding sternites) ... 10
- 5(4). Submarginal, ivory callus along frena continuing to scutellar apex as marginal ivory band with very few or no punctures *laevigata* Distant

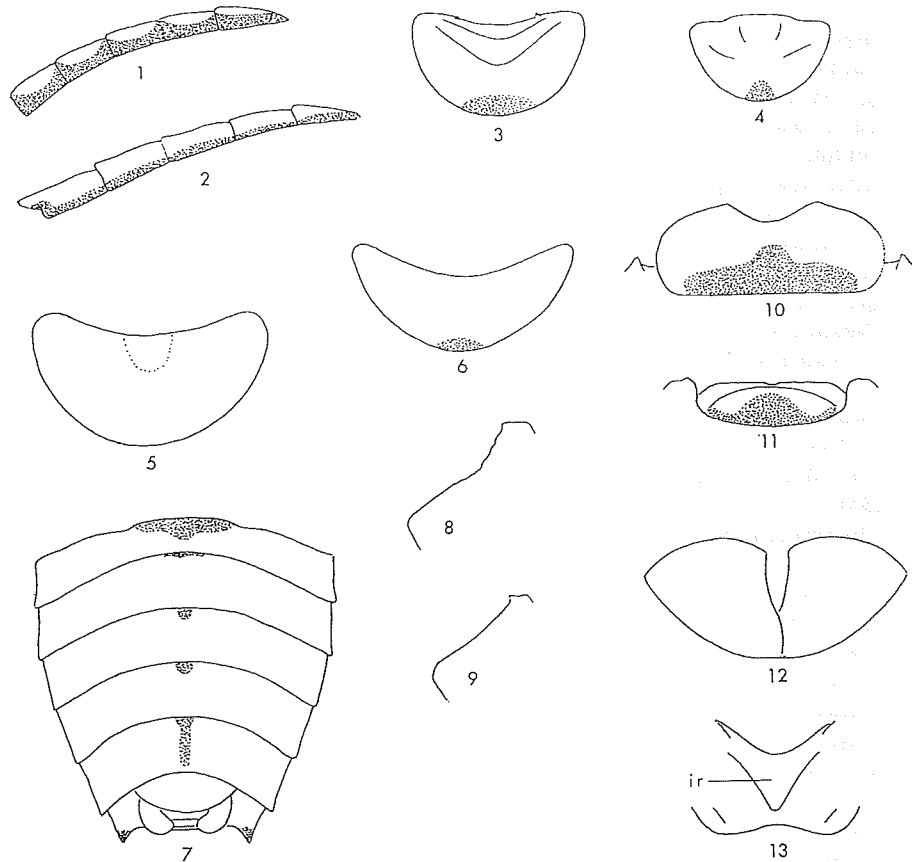
¹ Approved for publication by the Director of the Louisiana Agricultural Experiment Station as manuscript number 88-17-2387.

- Sides of scutellum not or incompletely ivory bordered, or if completely bordered, numerous dark punctures present at distal end of each frenum 6
- 6(5). Ground color of dorsum light to dark brown; body length without hemelytral membranes usually less than 7 mm; spiracles concolorous with surrounding area 7
- Ground color of dorsum black or fuscous; body length without hemelytral membranes usually more than 7 mm; spiracles usually black 8
- 7(6). Small, sharp tooth on posterior margin of pygophore at beginning of each arm of chevron-shaped carina on posterior surface of pygophore (Fig. 3); basal plates mostly fuscous *pictiventris* Stål
- Posterior margin of pygophore unarmed (Fig. 4); basal plates entirely or almost entirely light brown *faisana* Rolston
- 8(6). Pale markings on pronotum, scutellum and hemelytra limited to spot on scutellar apex and small medial spot or dot at base of scutellum 9
- A pale spot present on apex of scutellum and medial spot or dot at base (latter rarely obscure) plus some or all of following: spot at posterior margin of each cicatrice, in each basal angle of scutellum (sometimes extending along frenum), and on disk of each hemelytron *notulata* (Herrich-Schäffer)
- 9(8). Middle half of posterior pygophoral margin evenly concave from ventral view (Fig. 15) *polita*, n. sp.
- Concavity in middle half of posterior pygophoral margin truncate ventrally (Fig. 22) *guatemalensis*, n. sp.
- 10(4). Dark spot present at distal end of each supracoxal cleft; from caudal view, dorsal border of pygophore conspicuously impressed medially (Fig. 5); basal plates finely and densely punctate *collaris* Dallas
- Distal ends of supracoxal clefts immaculate, or each with minute dark dot; from caudal view, dorsal border of pygophore smoothly contoured or slightly flattened medially (Fig. 6); basal plate finely striate, a few punctures at apical angles *psilon* (L.)
- 11(3). Abdominal venter dark, or pale with mostly rufous to black punctation; a broad, irregularly shaped, dark medial vitta usually accompanied by lateral vitta on each side at base of abdominal venter 12
- Venter pale with concolorous punctation; abdominal vitta absent or at most a dark, medial discontinuous line on last three sternites (Fig. 7) *lunara* Rolston
- 12(11). Anterolateral margins of pronotum strongly concave (Fig. 8); spiracles black; basal angles of scutellum usually immaculate, occasionally each with pale dot *discoidea* (Dallas)
- Anterolateral margins of pronotum weakly concave (Fig. 9); spiracles and surrounding areas of sternites concolorous; basal angles of scutellum each with pale spot which often continues as callus along frenum 13
- 13(12). Posterior margin of pygophore from ventral view conspicuously notched medially (Fig. 10); basal plates deeply impressed at posterolateral angles, their mesial margins straight, contiguous *pama* Rolston
- Posterior margin of pygophore from ventral view shallowly notched medially (Fig. 11); basal plates not impressed at posterolateral angles, their margins sinuous and contiguous only at base (Fig. 12) *cubrosa* (Dallas)

***Mormidea polita*, new species**

Figs. 14–20

Description. Dorsum fuscous to black, rather polished, occasionally with interstitial areas of pronotum and hemelytra pale brown; cordiform ivory spot covering scutellar



Figs. 1-13. 1. Connexivum with pale scallops. 2. Connexivum with entirely pale border. 3. *M. pictiventris*. Pygophore, caudal view. 4. *M. faisana*. Pygophore, caudal view. 5. *M. collaris*. Pygophore, caudal view. 6. *M. ypsilon*. Pygophore, caudal view. 7. *M. lunara*. Abdominal venter. 8. *M. discoidea*. Anterolateral margin of pronotum. 9. *M. pama*. Anterolateral margin of pronotum. 10. *M. pama*. Pygophore, ventral view. 11. *M. cubrosa*. Pygophore, ventral view. 12. *M. cubrosa*. Basal plates. 13. *M. integella*. Inferior ridge (ir) and posterior pygophoral margin, dorsal view.

apex and usually a medial ivory dot present at scutellar base; connexiva ivory; hemelytral membranes fumose. Venter stramineous to pale brown, sometimes with reddish suffusion, and with broad, fuscous to black medial vitta on abdomen; punctures fuscous, usually becoming crowded on abdomen into vague, lateral vitta on each side between medial vitta and spiracles; spiracles dark, usually black; thoracic sterna black. Basal segment of each antenna pale brown, usually with dorsolateral dark streak; segments 2-3 varying from entirely light brown to fuscous with basal ivory band on each segment; segments 4-5 fuscous except ivory band on basal one-

fifth of segment 4 and basal one-third of segment 5. Rostrum pale brown with segment 4 largely fuscous. Femora and tibiae pale brown with numerous fuscous spots.

Each humeral angle narrowly rounded to angulate, produced beyond base of corium (Fig. 18); anterolateral margins of pronotum concave. Scutellum slightly longer than wide at base; apex narrowly rounded.

Middle one-half of posterior pygophoral margin concave in ventral and caudo-ventral views (Figs. 14, 15); inferior ridge produced caudad, sides arcuate with small, troughed, apical projection (Fig. 19). Paramere stout, posterior edge with convex prominence (Fig. 20). Basal plates impunctate except in apical angles; mesial margins straight, slightly separated anteriorly and posteriorly; posterior margins convex, apical angles rounded, fuscous (Fig. 17).

Measurements (mm) (Holotype in parentheses). Total length excluding hemelytral membranes 6.9–8.3 (8.2); width across humeri 4.6–5.2 (5.1). Mesial length of pronotum 1.5–1.7 (1.7). Length of scutellum 2.8–3.3 (3.2); basal width 2.7–3.2 (3.0). Length of head from apex to posterior margin of ocelli 1.5–1.7 (1.6); width across eyes 2.0–2.2 (2.1). Length of antennal segments 1–5 about 0.4 (0.4), 0.6–0.7 (0.7), 0.7–0.8 (0.7), 1.0–1.1 (1.1), and 1.1–1.3 (1.2). Length of labial segments 1–4 about 0.8–0.9 (0.85), 1.1–1.25 (1.25), 0.5–0.6 (0.55), 0.45–0.6 (0.55).

Distribution. Mexican states of Hidalgo and Oaxaca.

Holotype. Male, labeled "MEX: Hgo., 2.7 mi N. Tlanchinol, 14-V-83, C.W. & L.B. O'Brien & Marshall." Deposited in the U.S. National Museum of Natural History, Washington, D.C. (USNM).

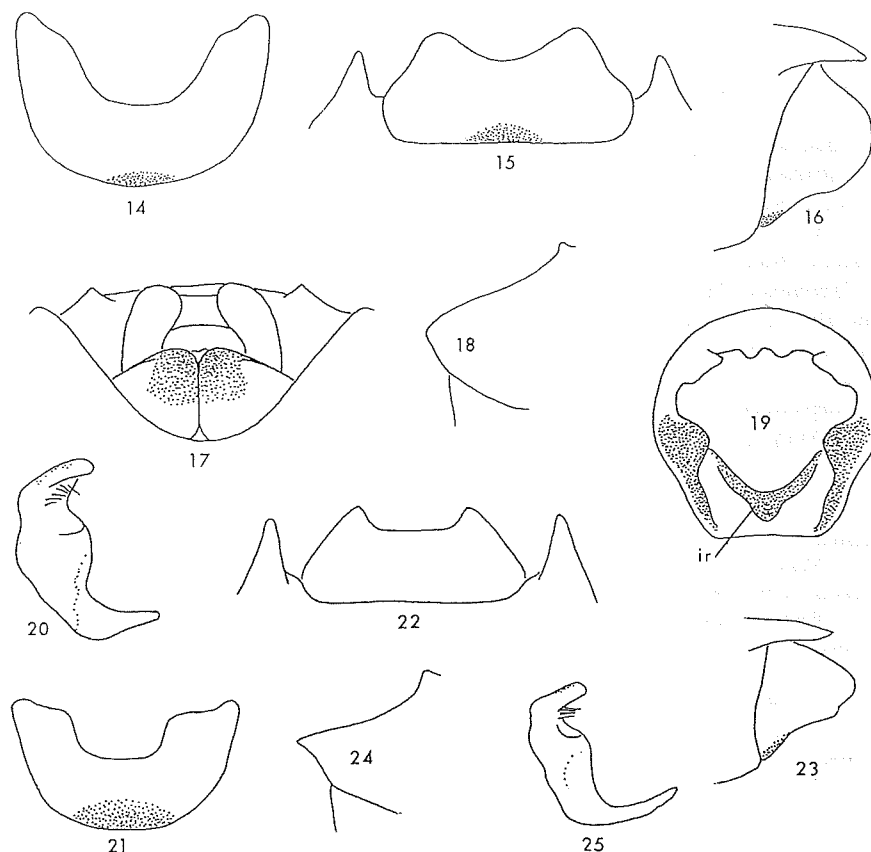
Paratypes. 11 specimens. 2 males, labeled as holotype. Female, 3 males, labeled "MEX: Hgo., 2.4 mi N Tlanchinol, 5000' Hwy 105. Aug. 1, 82 O'Briens & G. Wibmer." 2 males, labeled "MEXICO, Hgo. Hwy 105 2.7 mi. N Tlanchinol 5000' 2 Aug. 1982 C.W. & L. O'Brien & G. Wibmer." Female, male, labeled "MEXICO, Oax., Hwy 175 18 mi. S. Valle Nacional, 4600' 25 Aug. 1982 C. & L. O'Brien & G. Wibmer." Male labeled "MEXICO: Oaxaca Vista Hermosa 3 July 1982 William Ables." Paratypes deposited in the American Museum of Natural History, USNM, and the author's collections.

Comments. *Mormidea polita* will key to *M. notulata* in the revision by Rolston (1978). It can be separated from that species by the reduced amount of ivory markings on the dorsum and by differences in the male and female genitalia. In the structure of the male genitalia it more closely resembles *M. integella* (Distant), particularly in the posteriorly projecting inferior ridge (Figs. 13, 19). *Mormidea polita* has a heart-shaped spot on the scutellar apex, and dark, usually black spiracles. *Mormidea integella*, which is known only from Costa Rica and Panama, lacks ivory marks on the apex of the scutellum, and the spiracles and surrounding surface are usually concolorous.

***Mormidea guatemalensis*, new species**

Figs. 21–25

Description. Dorsum fuscous to black with some interstitial areas on corium, scutellar tongue, and posterior half of pronotum dark brown; scutellar apex and small medial spot along base ivory; connexiva ivory; hemelytral membranes fumose. Venter stramineous with some reddish infusion and black medial vitta; punctures black,



Figs. 14–25. 14–20. *M. polita*. 14. Pygophore, caudoventral view. 15. Pygophore, ventral view. 16. Pygophore, lateral view. 17. Genital plates. 18. Anterolateral pronotal margin. 19. Genital cup; inferior ridge (ir). 20. Right paramere, lateral view. 21–25. *M. guatemalensis*. 21. Pygophore, caudoventral view. 22. Pygophore, ventral view. 23. Pygophore, lateral view. 24. Anterolateral pronotal margin. 25. Right paramere, lateral view.

slightly crowded laterally. Antennal segment 1 pale with small fuscous apical band and fuscous dorsolateral streak; segment 2 pale, becoming infuscated apically; segments 4 and 5 fuscous except basal one-fourth of segment 4 and basal one-half of segment 5 pale. Rostrum pale brown, segment 4 fuscous. Femora and tibiae pale brown with numerous fuscous spots.

Each humeral angle acute, nearly spinose, produced beyond base of adjacent corium; anterolateral margins of pronotum concave (Fig. 24). Scutellar length and basal width subequal.

Posterior margin of pygophore truncately concave in ventral and caudoventral views (Figs. 21, 22); inferior ridge as in *polita*. Paramere relatively slender, posterior edge undulating, without marked prominence (Fig. 25). Female unknown.

Measurements (mm). Total length excluding hemelytral membranes 6.9; width across humeri 4.8. Mesial length of pronotum 1.4. Length of scutellum 2.7; basal width 2.7. Length of head from apex to posterior margin of ocelli 1.6; width across eyes 2.0. Length of antennal segments 1–5 about 0.4, 0.6, 0.7, 1.0, and 1.3. Length of labial segments 1–4 about 0.85, 1.25, 0.55, 0.55.

Distribution. Guatemala.

Holotype. Male, labeled "GUATEMALA, 32mi. SE. Coban, 6000' VII26-1974 C.W. & L. O'Brien & Marshall." Deposited in the U.S. National Museum of Natural History, Washington, D.C. No paratypes.

Comments. This species will key to *M. notulata* in the revision by Rolston (1978). The absence of most of the dorsal pale markings and the appearance of the male genitalia will easily separate these two species. *Mormidea guatemalensis* is most closely related to *M. integella* and *M. polita*. It can be separated from both species by differences in the male genitalia. It also differs from *M. integella* by the presence of an ivory spot on the scutellar apex.

LITERATURE CITED

- Rolston, L. H. 1978. A revision of the genus *Mormidea* (Hemiptera: Pentatomidae). J. New York Entomol. Soc. 86(3):161–219.
- Rolston, L. H. 1984. New synonymy and a new species in the genus *Mormidea* (Hemiptera: Pentatomidae). J. New York Entomol. Soc. 92(4):342–343.
- Rolston, L. H. and F. J. D. McDonald. 1984. A conspectus of Pentatomini of the western hemisphere. Part 3 (Hemiptera: Pentatomidae). J. New York Entomol. Soc. 92(1): 69–86.

Received July 1, 1988; accepted August 23, 1988.