

ADDITIONS AND CORRECTIONS TO THE CLASSIFICATION OF WESTERN HEMISPHERE *Epilachna* (COLEOPTERA: COCCINELLIDAE)

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RESUMEN

En este trabajo se describen tres especies nuevas: *Epilachna rauli*, *E. madrigali* y *E. pseudotumida*; los homónimos *Epilachna kraatzi* Gordon y *E. nana* Gordon son reemplazados por los nuevos nombres *E. colombiana*, y *E. minuta* respectivamente. Se dan nuevos registros de plantas hospedantes para algunas especies de Epilachninae.

ABSTRACT

Three new species, *Epilachna rauli*, *E. madrigali*, and *E. pseudotumida* are described; the homonyms *Epilachna kraatzi* Gordon and *E. nana* Gordon are replaced by *E. colombiana*, and *E. minuta*, new names, respectively. New host records are given for some species Epilachninae.

Examination of the Coccinellidae in the collection of the Universidad Nacional de Colombia, Medellín, resulted in the discovery of 3 undescribed species of *Epilachna*. These are described here and 2 specific names proposed by Gordon (1975) are replaced. New host records from label data on specimens in the collection are included.

Type specimens are deposited in the Universidad Nacional de Colombia (UNCM) and the U.S. National Museum of Natural History, Washington, D.C. (USNM).

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Epilachna colombiana, new name

Epilachna kraatzi Gordon, 1975:118 (not *Epilachna kraatzi* Weise, 1898:110).

Weise (1898) described *Solanophila*

kraatzi from Africa, and *Solanophila* Weise was synonymized with *Epilachna* Chevrolat by Korschefsky (1931). Therefore a new name is proposed for *E. kraatzi* Gordon (1975). I thank H. Fursch (pers. comm.) for bringing this situation to my attention.

Epilachna minuta, new name

Epilachna nana Gordon, 1975:104. (not *Epilachna nana* Kapur, 1950:22).

Epilachna nana was described from India in 1950 by A. Kapur, who has kindly informed me of the homonymy (pers. comm.). I take this opportunity to propose a replacement name for *E. nana* Gordon.

Toxotoma murilloi Gordon

One specimen in the UNCM was collected on "maleza" (weed) in the Valle Medellín, Colombia, in November 1942. Five specimens were collected on "Compositae" at Prado, Antioquia, Colombia, in February, 1982.

Epilachna walteri (Sicard)

The species redescribed and illustrated by Gordon (1975) as *E. walteri* is not that species but another that I describe below and name *E. rauli*. The description and illustrations of "*E. walteri*" are actually of *E. rauli*. No specimens of the true *E. walteri* were available in 1975 other than the type specimen, and because of the extreme similarity in external appearance, it was presumed that the species on hand was indeed *E. walteri*. Specimens present in the Medellín collection represent both species so it is now possible to sort the two out and describe the true *E. walteri*.

Description: Male, length 6.0 mm, width 6.0 mm. Form subcordate, widest behind humeral angles, elytron with lateral margin rounded from base to apex, lateral margin strongly explanate. Color black; pronotum with anterolateral angle very narrowly yellow, elytron yellowish orange bordered

with black, with transverse black spot on disc usually not connected to sutural border, humeral callus covered by black projection, black projection of lateral border present just behind middle, black spot in apical 1/4 narrowly connected to lateral black border (Fig. 1).

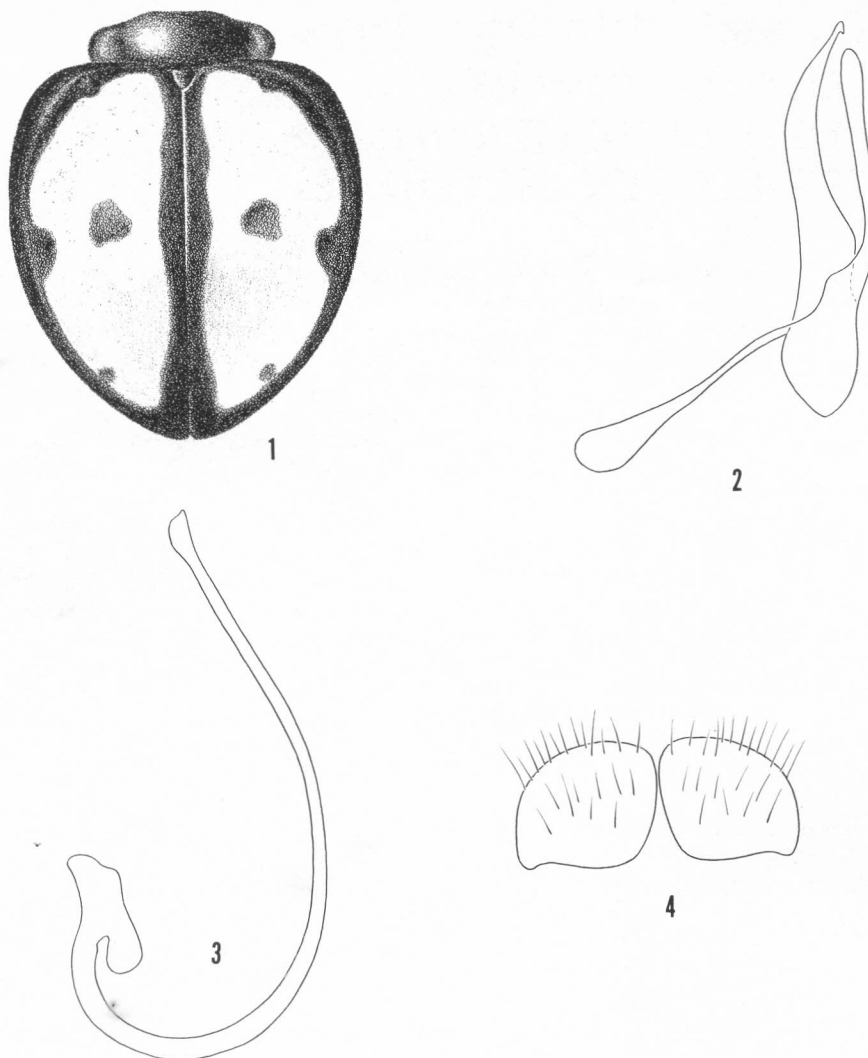
Punctuation on elytron dual, small punctures separated by their diameter or less, large punctures separated by one to 2 times their diameter. Surface of elytron finely reticulate. Pubescence yellowish white. Postcoxal line on 1st abdominal sternum complete, extending to middle of sternum. Abdomen with hind margin of 5th sternum truncate; 6th sternum notched; 6th tergum feebly emarginate. Genitalia with basal lobe longer than paramere, curved throughout with dorsal hump at base and apex abruptly reflexed; paramere slender, straight (Fig. 2); siphon curved from base to apex, apex laterally flattened, enlarged, pointed (Fig. 3).

Female: Similar to male except hind margin of 5th sternum slightly produced medially, 6th sternum very feebly emarginate; 6th tergum rounded. Genitalia with 10th tergum feebly emarginate; genital plate somewhat rectangular, stylus not visible (Fig. 4).

Variation: Length 6.0 to 8.50 mm, width 6.0 to 7.50 mm. The discal and apical spots may be reduced in size and free of the sutural and lateral black borders.

Remarks: This species and *E. rauli* are very similar in appearance, but the male genitalia place *E. walteri* in the vittigera Group and *E. rauli* in the latimargo Group. Externally *E. walteri* is distinguished from *E. rauli* by the following: form subcordate; black area covering humeral callus not extended beyond callus; discal black spot on elytron either connected to sutural border or, if free, very small, apical spot either connected to lateral border, or, if free, very small. Host data on the specimens of *E. walteri* examined in-

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Figs. 1 - 4; *E. walteri*. Fig. 1, habitus; figs. 2 and 3, male genitalia; Fig. 4, female genital plates.

clude "Solanaceae" and "maleza"; the latter means simply "weed".

Distribution records: Colombia: Caldas (Ant.); Porce (Ant.) Manizales; Sta. Bárbara; V. Medellín.

Epilachna rauli, new species

Description: Male, length 7.0 mm, greatest width 6.10 mm. Form oval, widest at middle of elytron, elytron rounded from humeral angle to apex, lateral margin weakly explanate. Color black; pronotum with anterolateral angle narrowly yellow, elytron as described for *E. walteri* above except black area covering humeral callus produced inward, discal spot triangular, not connected to sutural border, apical spot large, transverse, not connected to lateral border. Punctuation on elytron dual, small punctures separated by

their diameter or less, large punctures separated by one to 2 times their diameter. Surface of elytron finely reticulate. Pubescence yellowish white. Postcoxal line complete, extending to middle of 1st abdominal sternum. Abdomen with hind margin of 5th sternum faintly emarginate; 6th sternum notched; 6th tergum truncate. Genitalia with basal lobe longer than paramere, lower margin truncate in apical 1/4, apex abruptly curved upward, in ventral view orifice for siphon gradually widened from base to apical 1/4; siphon curved from base nearly to apex, apex pointed, curved upward, orifice dorsal, subterminal (Figs. 728-730 in Gordon, 1975).

Female: Similar to male except hind margin of 5th sternum feebly notched; 6th sternum convex with longitudinal suture; 6th tergum broadly convex. Genitalia with 10th tergum convex;

genital plate suboval, transverse, stylus visible (Figs. 1575-1578 in Gordon, 1975).

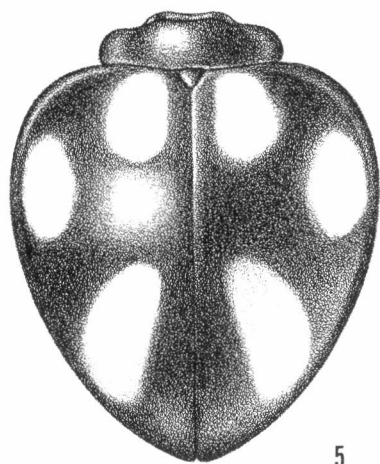
Variation: Length 6.75 to 7.50 mm, width 6.0 to 7.0 mm. Black elytral spots somewhat variable in size, discal spot sometimes connected to sutural border (Fig. 244 in Gordon, 1975).

Type-material: Holotype, male, Colombia, Caldas (Ant.), Sept. 1973, R. Vélez, en maleza. (USNM). Allotype, Colombia, Retiro (Ant.), Nov. 1974, R. Vélez, en maleza. (UNC). Paratypes: 2, same data as holotype; 2, same data as allotype; 1, Colombia, Cauca; 1, Colombia, Prado (Ant.), Oct. 1973, R. Vélez, en maleza; 1, Colombia, S. Ant. Prado (Ant.), Oct. 1981, R. Vélez, en maleza; 1, Colombia, S.A. Prado (Ant.), Sept. 1981, G. Mora, en maleza; 1, Colombia, Encarnación (Ant.), Dic. 1980, A. Madrigal C.; 1, no data; 3, Colombia, Cald., Salento, 1895 m., 14-VII-1939, Murillo No. 5168. (UNC) (USNM).

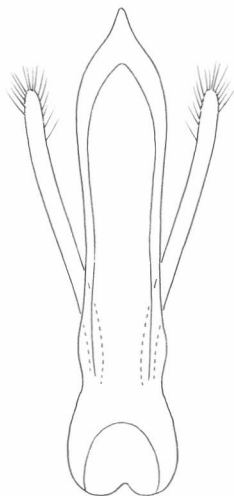
Remarks: The description above is a modification of the description of "*E. walteri*" in Gordon (1975). *Epilachna rauli* is externally quite similar to *E. walteri*; see comparative comments under that species. This species is named for Raúl Vélez-Angel, an esteemed colleague and collector of part of the type series.

Epilachna madrigali, new species

Description: Male, length 7.0 mm, greatest width 6.40 mm. Form strongly cordate, widest across humeral angles, lateral margin of elytron nearly straight. Color black; elytron with 3 yellow spots, basal spot elongate from base near scutellum to disc, median spot near lateral margin below callus, posterior spot obliquely triangular on apical 1/3 (Fig. 5). Punctuation on elytron dense, dual, coarse punctures large, separated by a diameter or less. Pubescence yellowish white. Postcoxal line on 1st abdominal sternum complete, not reaching middle of sternum. Abdomen with hind margin of 5th sternum truncate, entire; 6th sternum notched medially; 6th tergum faintly emarginate medially. Genitalia with basal lobe longer than paramere, curved upward at apex in lateral view, apex pointed, lacking setae; paramere slender, not widened apically (Figs. 6, 7); siphon broad, robust, basal capsule not defined, median 2/3 laterally flat-



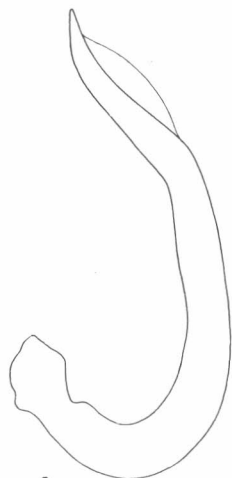
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Figs. 5-8. *E. madrigali*. Fig. 5, habitus; figs. 6-8, male genitalia. Fig. 9; *E. pseudotumida*, habitus.

tened, apical 1/3 wide, spoonlike in dorsal view, apex pointed (Fig. 8).

Female: Not known.

Variation: Length 7.0 to 7.7 mm, width 6.4 to 6.7 mm. The size of the yellow elytral spots varies slightly.

Type-material: Holotype, male, Colombia, (Ant.), Encarnación, Dic. 1980, A. Madrigal C., en maleza. (USNM). Paratypes; 3, with same data as holotype. (UNC).

Remarks: The cordate form and elytral

spot arrangement are distinctive for this species. The only other described species of *Epilachna* with a remotely similar appearance is *E. consularis* Mulsant, which is in the *albovittata* Group (Gordon, 1975). The male genitalia of *E. madrigali* place it in the *fenestrata* Group where there are no similarly marked species. This species is named for Alejandro Madrigal, the collector of the type series and noted authority on genitalia of various sorts.

Epilachna pseudotumida, new species

Description: Female, length 7.0 mm, greatest width 6.3 mm. Form oval,

very strongly convex, gibbous, widest anterior to middle of elytra, lateral margin of elytron rather strongly explanate, rounded from humeral angle to apex. Color black; mouthparts yellow to piceous, elytron with elongate red spot on disc. Punctuation on elytron dual, large punctures separated by less than to twice a diameter. Pubescence yellowish white. Postcoxal line on 1st abdominal sternum incomplete, extending beyond middle of sternum. Abdomen with hind margin of 5th sternum truncate; 6th sternum very feebly emarginate; 6th tergum rounded, entire. Genitalia with 10th tergum rounded; genital plate transverse, stylus not visible (Fig. 9).

Male: Not known.

Type-material: Holotype, female, Colombia, (Ant.) Encarnación, Dic. 1980, A. Madrigal C., en maleza. (USNM).

Remarks: The only previously described species of *Epilachna* with the external shape and color pattern of *E. pseudotumida* is *E. tumida* Gorham, known only from Costa Rica, it is much larger (10.0 mm or more in length), has the red spot on the elytron differently shaped, and the female genital plate nearly round rather than transverse. The habitus illustration of *E. tumida* (Gordon, 1975) is indicative of the appearance of *E. pseudotumida*. *Epilachna tumida* was so named for the strongly gibbous body form, but *E. pseudotumida* is even more strongly gibbous.

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