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6-28-2013

## South American Coccinellidae (Coleoptera), Part XV: systematic revision of *Dilatitibialis* Duverger (Coccidulinae; Hyperaspidini)

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Canepari, Claudio; Gordon, Robert D.; and Hanley, Guy A., "South American Coccinellidae (Coleoptera), Part XV: systematic revision of *Dilatitibialis* Duverger (Coccidulinae; Hyperaspidini)" (2013). *Insecta Mundi*. 817.

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# INSECTA MUNDI

A Journal of World Insect Systematics

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0312

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of *Dilatitibialis* Duverger (Coccidulinae; Hyperaspidini)

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Date of Issue: June 28, 2013

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Insecta Mundi 0312: 1-91

ZooBank Registered: urn:lsid:zoobank.org:pub:068D2C0D-C92D-4E47-93FF-222CA4D5D824

**Published in 2013 by**

Center for Systematic Entomology, Inc.  
P. O. Box 141874  
Gainesville, FL 32614-1874 USA  
<http://www.centerforsystematicentomology.org/>

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*D. semicineta*



*D. lois*



*D. tina*



*D. phyllis*



*D. cindy*



*D. norma*



*D. hybridula*



*D. glyphica*



*D. paula*



*D. mulsanti*



*D. poortmanni*



*D. diana*



*D. suzanna*



*D. carolinae*



*D. annie*



*D. gravabilis*



*D. lillian*



*D. tropicalis*



*D. emily*



*D. robin*



*D. peggy*



*D. crystal*



*D. silvani*



*D. gladys*



*D. rita*



*D. dawn*



*D. scenica*



*D. connie*



*D. florence*



*D. tracy*



*D. edna*



*D. tiffany*



*D. carmen*



*D. rosa*



*D. grace*



*D. oseery*



*D. jucunda*



*D. fallax*



*D. wendy*



*D. dilatata*



*D. edith*



*D. kim*



*D. sherry*



*D. cognata*



*D. sylvia*



*D. luteola*



*D. florifera*



*D. fuscomaculata*



*D. guttipennis*



*D. josephine*



*D. thelma*



*D. shannon*



*D. sheila*



*D. ethel*



*D. ellen*



*D. cecilia*



*D. elaine*



*D. cruciferae*



*D. gaynoni*



*D. laterinotata*



*D. marjorie*

South American Coccinellidae (Coleoptera), Part XV: systematic revision  
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**Abstract.** *Dilatitibialis* Duverger (61 species) (Coleoptera: Coccinellidae: Coccidulinae; Hyperaspidini) is discussed, species described, illustrations provided, and a key to all recognized taxa included. *Cleothera cognata* Mulsant, *Cleothera cruciferae* Mulsant, *Cleothera fuscomaculata* Mulsant, *Cleothera gaynoni* Mulsant, *Cleothera glyphica* Mulsant, *Cleothera jucunda* Mulsant, *Cleothera luteola* Mulsant, *Cleothera mulsanti* Kirsch, *Cleothera oseryi* Mulsant, *Cleothera poortmanni* Mulsant, *Cleothera scenica* Mulsant, *Cleothera semicineta* Weise, *Cleothera tropicalis* Mulsant, *Hinda guttipennis* Weise, *Hyperaspis carolinae* Crotch, *Hyperaspis ceciliae* Crotch, *Hyperaspis dilatata* Crotch, *Hyperaspis florifera* Vogel, *Hyperaspis gravabilis* Brèthes, *Hyperaspis hybridula* Crotch, *Hyperaspis laterinotata* Brèthes, *Hyperaspis silvani* Crotch, and *Hyperaspis suzannae* Crotch are **transferred** to *Dilatitibialis*, becoming **new combinations**. **Lectotypes are designated for** *D. boliviana*, *D. cognata*, *D. florifera*, *D. fuscomaculata*, *D. gaynoni*, *D. glyphica*, *D. gravabilis*, *D. guttipennis*, *D. luteola*, *D. jucunda*, *D. mulsanti*, *D. poortmanni*, *D. retigera*, *D. scenica*, *D. semicineta*, and *D. staudingeri*. A total of 38 **new species** of *Dilatitibialis* are described: *Dilatitibialis annie*, *D. carmen*, *D. cindy*, *D. connie*, *D. crystal*, *D. dawn*, *D. diana*, *D. edith*, *D. edna*, *D. elaine*, *D. ellen*, *D. emily*, *D. ethel*, *D. fallax*, *D. florence*, *D. gladys*, *D. grace*, *D. josephine*, *D. kim*, *D. lillian*, *D. lois*, *D. marjorie*, *D. norma*, *D. paula*, *D. peggy*, *D. phyllis*, *D. rita*, *D. robin*, *D. rosa*, *D. shannon*, *D. sheila*, *D. sherry*, *D. sylvia*, *D. thelma*, *D. tiffany*, *D. tina*, *D. tracy*, and *D. wendy*. Corrections are made to titles of previous Parts of this series, as follows: South American Coccinellidae, Part XII (Gordon 2007) is changed to Part XIII; South American Coccinellidae, Part XII (Gordon et al. 2013) is changed to Part XIV.

Four **new synonymies** established here: *Cleothera staudingeri* Weise, 1901 = *Cleothera semicineta* Weise, 1899; *Hyperaspis pulcherrima* Mader, 1954 = *Hyperaspis suzannae* Crotch, 1874; *Cleothera boliviana* Weise, 1910 = *Hyperaspis carolinae* Crotch, 1874; *Cleothera retigera* Mulsant, 1850 = *Cleothera scenica* Mulsant, 1850.

**Key words.** Brachiacanthini, *Dilatitibialis*, systematics, keys, illustrations.

## Introduction

South American Coccinellidae belonging to Hyperaspidini were revised by Gordon and Canepari (2008). A revision of South American Brachiacanthini, the remaining tribe in Hyperaspidinae, was begun with revisions of *Cleothera* Mulsant, *Hinda* Mulsant, and *Serratitibia* Gordon et al. (2013). Remaining genera of Brachiacanthini such as *Brachiacantha* Dejean, *Cyrea* Mulsant, and *Tiphysa* Mulsant will be treated in future publications.

Gordon et al. (2013) presented an overview of Brachiacanthini including taxonomic history, current classification, diagnostic characters of the included genera, type materials, and tribal systematics including a key to tribal genera as currently understood. Users of this revision are referred to publications listed above for details on these subjects.

*Dilatitibialis* Duverger is here revised with all known taxa described, illustrated, and keyed to species. Duverger (2001) described this genus as new for the first time, but the taxon was originally defined by El-Ali (1972) as *Dilatitibiaspis* in an unpublished dissertation. *Dilatitibialis* appears to be a valid, defensible taxon as we define it here. Sixty-one species are currently recognized as members of this genus.

Changes to Coccinellidae classification were recently made by Seago et al. (2011). These changes impact the status of various traditionally recognized tribes and subfamilies because the only subfamilies now recognized are Microweisinae and Coccinellinae. The tribe Hyperaspidini is part of Coccinellinae with Brachiacanthini as a synonym.

Parts of the ongoing revision of South American Coccinellidae are consecutively numbered. Some errors have been made in numbering these parts, and those are hereby corrected. South American Coccinellidae, Part XII (Gordon 2007), *Carinoscymnus*, new genus, should be Part XIII; South American Coccinellidae, Part XII (Gordon et al 2013), new name for *Cyra* Mulsant, revision of *Cleothera* Mulsant, *Hinda* Mulsant and *Serratitibia*, new genus, should be Part XIV.

## Materials and Methods

**Morphology and terminology.** Morphological structures, both external and internal, were discussed and illustrated by Gordon (1985) and Gordon et al. (2013). Some of the same terminology is used here but changes have been made to conform to terminology developed and used by Slipinski (2007), which publication should be consulted if clarification is needed.

**Dissections.** Both sexes should be dissected when examining specimens of Brachiacanthini. Specific techniques consist of softening a specimen in hot water, removing the abdomen, placing it in a dilute solution of potassium or sodium hydroxide until muscle and fat are removed, rinsing abdomen and genitalic structures in clean water, and placing cleaned structures in glycerine for examination. Genitalia may be stored in several ways, but here they were stored in glycerine in microvials.

**Types.** Taxa newly described herein are authored by Canepari and Gordon. Lectotypes for many species are designated to stabilize current classification for future researchers. Lectotype and paralectotype labels were affixed to specimens so designated throughout.

**Names.** Because of the large number of new names necessary, traditional methods of selecting names were not used. Instead, names were formed as nouns in apposition using female given names, except where otherwise noted.

**Locality records.** Locality records listed in the text were taken from specimens actually examined; published records were not accepted because genitalia, nearly always the defining criteria at the species level, were not examined by previous authors. All information listed for new taxa is given as it appears on the labels, with correction of obvious incorrect spelling.

**Male genitalia.** Species of *Dilatitibialis* are grouped according to male genitalia type, type based primarily on parameral form. Several siphonal illustrations show the presence of slender spines in the apical 1/3. These spines may be present in all taxa, but cannot be seen unless they become separated from the siphonal axis for whatever reason.

**Collections codens.** The following acronyms denote depositories for borrowed specimens of *Dilatitibialis*: (BMNH) Natural History Museum, London; (CAS) California Academy of Sciences, San Francisco, California; (CMNH) Carnegie Museum of Natural History, Pittsburgh, Pennsylvania; (CNC) Canadian National Collection, Ottawa, Ontario; (CSCA) California State Collection of Arthropods, California

Department of Food and Agriculture; (**DEI**) Deutsches Entomologisches Institut, Müncheberg; (**DZUP**) Universidade Federal do Paraná, Curitiba, Brazil; (**GGC**) Guillermo González, Santiago, Chile; (**JEBC**) Juan Enrique Barriga, Santiago, Chile; (**MBR**) Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires, Argentina; (**MIZA**) Museo del Instituto de Zoología Francisco Fernandez Yepez, Maracay, Venezuela; (**MKRBB**) Museo de Entomología Klaus Raven Büller, Universidad Agraria la Molina, Peru; (**MNHL**) Muséum d’Histoire Naturelle, Lyon, France; (**MNHP**) Muséum d’Histoire Naturelle, Paris; (**MZSP**) Museo de Zoología, Universidad de Sao Paulo, Sao Paulo, Brazil; (**NHNV**) Naturhistorisches Museum Wien, Austria; (**SNSD**) Staatliches Museum für Tierkunde, Dresden, Germany; (**UNMSM**) Universidad Nacional Mayor de San Marcos, Lima, Peru; (**UMZC**) Cambridge University Museum, Cambridge, England; (**USNM**) U.S. National Museum of Natural History, Smithsonian Institution, Washington, DC; (**ZMHB**) Zoologisches Museum, Humboldt Universität, Berlin, Germany; (**ZMUC**) Zoologisk Museum, Copenhagen, Denmark.

## Systematics

### *Dilatitibialis* Duverger

*Dilatitibialis* Duverger, 2001: 226; Gordon et al. 2013: 7, 8.

**Type species.** *Cleothera jucunda* Mulsant 1850, by original designation.

**Description.** Brachiacanthini with form variable, round or oval, convex, occasionally elongate. Head usually yellow in male, at least partially brown or black in female. Elytral color variable, but usually dark with pale maculation, or pale with dark maculation, rarely vittate. Antenna with 11 articles, basal article twice as long as wide, antennal insertion exposed. Clypeus with apical margin nearly truncate or distinctly emarginate. Labrum rectangular. Apical maxillary palpomere securiform with sides slightly diverging. Scutellum large, wider than long. Elytral epipleuron narrow or wide, deeply excavated for reception of tibiae. Prosternal process slightly convex, with two carinae. Protibia with narrow, usually arcuate flange, or flange wide, outwardly arcuate (Fig. 2). Abdomen with visible primary pores present between ventrites 4 and 5. Tarsal claw with subquadrate basal tooth. Postcoxal line on basal abdominal ventrite incomplete, of *Scymnus* (*Scymnus*) type. Fifth abdominal ventrite nearly always without tubercle on each side of median apical emargination, if tubercle present, then without surrounding clump of setae; 6th ventrite with median emargination, lateral angle bearing setal tuft. Male genitalia with asymmetrical basal lobe, paramere variable, *Unm* (paramere unmodified), *Psc* (paramere similar in shape to a scimitar), or *Pvl* (Paramere mostly unmodified, but distinctly lobed ventrally). Female genitalia with spermathecal capsule variable but usually short, wide (Fig. 32).

**Remarks.** This genus was originally defined by the presence of a distinct protibial flange, a character that has proved nearly useless as a generic character because all degrees of flange development have been observed between *Dilatitibialis* and *Cyrea* Gordon and Canepari. There are certainly two distinct genera, and we have elected to use the presence or absence of primary abdominal pores to distinguish between them. This character varies in degree of development from extremely large, outstanding primary pores between abdominal ventrites 4-5 to pores that are small and may have to be observed from inside the abdomen, but it is always either present or absent. Both *Hinda* and *Serratitibia* species have primary pores, but both are distinguished from *Dilatitibialis* by different male abdominal ventrites and nearly all species having outwardly serrate protibiae.

Groups are difficult to define within *Dilatitibialis*, but species are generally arranged on the basis of male genitalia type. Those species having genitalia whose parameres are not *Psc* shaped and have no unifying characters are placed first. For convenience of reference, this assemblage is called the semicincta group, and contains those species from *D. semicincta* (Weise) through *D. paula*, n. sp. These species have mostly dissimilar male parameres that defy attempts to further group them. A large group of species, referred to as the mulsanti group, is defined by having *Psc* shaped male parameres (Fig. 76) and contains those species from *D. mulsanti* (Kirsch) through *D. josephine*, n. sp. A small group of five species from *D.*



*thelma*, n. sp. through *D. ellen*, n. sp. forms a compact, uniform group referred to as the *thelma* group, defined by a basal abdominal ventrite with median tuft of setae; ventrites 5-6 deeply, widely emarginate apically; apical tergite deeply, broadly emarginate with lateral angle large, projecting; and male genitalia with parameres apically emarginate (Fig. 292). Another group of two species, *D. ceciliae* (Crotch) and *D. elaine*, n. sp., the *ceciliae* group, is defined by abdominal ventrite 5 with a tubercle on each side of apical emargination, tubercle not partially concealed by clump of setae, and male genitalia with basal lobe long, apically bent to one side (Fig. 308). The tuberculate 5th abdominal ventrite of the latter group is a character that would seem to place them in *Serratitibia* (except that the tubercle in *Serratitibia* is at least partially concealed by a dense clump of setae), but the unusual male genitalia exclude them from that genus. Therefore they are placed in *Dilatitibialis*, seemingly the next best alternative. Those females distinctive enough to be distinguished from other *Dilatitibialis* species are grouped together because, without male genitalia, they cannot be assigned to a group.

Illustrations consist of color photographs of the habitus of nearly all species as well as pen and ink illustrations of genitalia.

This genus was first recognized by El-Ali (1972) in an unpublished doctoral dissertation. He named it *Dilatitibiaspis* in recognition of the widely flanged protibia found in many species of the genus, and designated *Cleothera fuscomaculata* (Mulsant) as the type species. Duverger (2001) recognized the validity of El-Ali's genus, described it, modified the original name to *Dilatitibialis*, and designated *Cleothera jucunda* as the type species.

#### Key to species of *Dilatitibialis*

1. Elytron, including sutural margin, entirely yellow or reddish yellow, without dark maculae . 2
- Elytron maculate, or at least sutural margin of pale specimens black or brown ..... 3
- 2(1). Length more than 3.8 mm (Fig. 218) ..... 40. *D. dilatata* (Crotch)
- Length less than 3.2 mm (Fig. 251) ..... 46. *D. luteola* (Mulsant)
- 3(1). Elytron entirely black ..... 4
- Elytron dark with pale maculation, pale with dark maculation, or mostly immaculate ..... 5
- 4(3). Length 2.8 mm or more, metafemur mostly black (Fig. 9) ..... 2. *D. lois*, n. sp.
- Length 2.6 mm, metafemur yellow (Fig. 235) ..... 43. *D. sherry*, n. sp.
- 5(3). Elytron mostly immaculate, yellow except narrow sutural margin brown or black, lateral and apical margins usually narrowly dark with small dark area at apex of elytron; pronotum always with at least some dark areas (Fig. 1) ..... 1. *D. semicincta* (Weise)
- Elytron with variable maculation, but never as described for *D. semicincta* ..... 6
- 6(5). Elytron with dark vittae on pale background ..... 7
- Elytron not vittate ..... 12
- 7(6). Elytron with 1 or 2 vittae ..... 8
- Elytron with 3 or more vittae ..... 10
- 8(7). Elytron with sutural and lateral vittae on reddish yellow background (Fig. 22); male metaventrite with large, median setal tuft; Brazil ..... 5. *D. cindy*, n. sp.
- Elytron with sutural and lateral vittae on yellow background (Fig. 296); male metaventrite without median setal tuft; Ecuador ..... 9
- 9(8). Length 3.30 to 3.4 mm; apex of visible male abdominal tergite deeply emarginate with projecting lateral angles; female pronotum mostly black; (Fig. 296) ..... 54. *D. ethel*, n. sp.

- Length 2.6 to 3.4 mm; apex of visible male abdominal tergite weakly emarginate; female pronotum with basomedian black macula small; (Fig. 17) ..... 4. *D. phyllis*, n. sp.
- 10(7). Elytron with 7 brown macula, basal 2 macula and macula near outer margin near apex small, not vittate, vitta near suture broken medially into basal and apical halves, outer 2 vittae entire (Fig. 33) ..... 7. *D. hybridula* (Crotch)
- Elytron with all maculae vittate, sutural vitta absent, or if present, not medially broken .... 11
- 11(10). Pronotum with median macula light brown, small macula on each side of middle dark brown; elytron without sutural vitta (Fig. 307) ..... 56. *D. ceciliae* (Crotch)
- Pronotum with all maculae dark brown; elytron with complete sutural vitta (Fig. 324) ..... 61. *D. marjorie*, n. sp.
- 12(6). Elytron pale with varying dark maculation ..... 13
- Elytron dark with varying pale maculation ..... 33
- 13(12). Elytron with single, discrete, black vitta (Fig. 240) ..... 14
- Elytron with spots in varying numbers, spots not vittate ..... 15
- 14(13). Elytron with punctures smaller than pronotal punctures; prosternal carinae not joined before base; habitus (Fig. 246) ..... 45. *D. sylvia*, n. sp.
- Elytron with punctures larger than pronotal punctures, prosternal carinae joined before base; habitus (Fig. 240) ..... 44. *D. cognata* (Mulsant)
- 15(13). Length 3.2 to 3.7 mm; dorsal surface pale yellow, elytron with number of spots variable, but usually with 7 discrete, pale brown spots (Fig. 50); female genitalia with cornu of spermatheca beaked (Fig. 55) ..... 10. *D. mulsanti* (Kirsch)
- Average length usually less than 3.0 mm; dorsal surface rarely pale yellow; elytron with variable number of spots, but spots not pale brown; female genitalia with cornu of spermatheca lacking beak ..... 16
- 16(15). Elytron with 6 or 9 small, dark, discrete spots on each elytron, spots dense, closely spaced . 17
- Elytron with 6 or fewer dark, discrete spots, spots often larger, less densely spaced ..... 18
- 17(16). Elytron with 9 dark spots (Fig. 39) ..... 8. *D. glyphica* (Mulsant)
- Elytron with 6 dark spots (Fig. 74) ..... 14. *D. carolinae* (Crotch)
- 18(16). Elytron with 3 faint, elongate spots in outer 1/2 of elytron (Fig. 27) ..... 6. *D. norma*, n. sp.
- Elytron with spots variable, but either not faint or not restricted to outer 1/2 of elytron .... 19
- 19(18). Elytron with 5 spots, 3 spots in apical 1/2 elongate, almost vittate, 2 spots on apical declivity (Fig. 262) ..... 48. *D. fuscomaculata* (Mulsant)
- Elytron with different number of spots, spots not as described above ..... 20
- 20(19). Elytron with 1 or 2 small, dark spots, anterior spot on humeral callus always present, smaller than apical spot (Fig. 194); Brazil ..... 36. *D. oseryi* (Mulsant)
- Elytron with 2 or more spots, if with 2 spots then spot location and size different than from those of *D. oseryi* ..... 21
- 21(20). Elytron with 2 spots or maculae ..... 22
- Elytron with more than 2 spots or maculae ..... 23
- 22(21). Spots on elytron irregularly transverse, apical spot not reaching dark sutural border (Fig. 67); Tobago, Trinidad, Venezuela ..... 13. *D. suzanna*e (Crotch)

- Spots on elytron dissimilar, apical spot extended to dark sutural border (Fig. 224); Peru ..... 41. *D. edith*, n. sp.
- 23(21). Elytron with 3 spots, including sutural spots ..... 24
- Elytron with more than 3 spots ..... 26
- 24(23). Lateral spots on elytron connected to suture (Fig. 184); Trinidad ..... 34. *D. rosa*, n. sp.
- Lateral spots on elytron not connected to suture ..... 25
- 25(24). Spot on elytral suture elongate, cordate apically, apical spot transversely oval (Fig. 178); Venezuela ..... 33. *D. carmen*, n. sp.
- Spot on elytral suture not elongate, not cordate apically, apical spot irregularly rectangular (Fig. 172); Argentina ..... 32. *D. tiffany*, n. sp.
- 26(23). Elytron pale yellow with 4 small, black spots, discal spot irregular, wide laterally (Fig. 279 ); male apical tergite deeply emarginate, lateral angle projecting; Peru .... 51. *D. thelma*, n. sp.
- Elytron not as described above; male apical tergite not deeply emarginate, lateral angle not projecting ..... 27
- 27(26). Elytron with 4 black, discrete spots, and trace of spot on lateral margin in apical 1/4 (Fig. 45) Venezuela ..... 9. *D. paula*, n. sp.
- Elytron not as described above ..... 28
- 28(27). Elytron with 4 small, faint, light brown spots, anterolateral spot connected to lateral margin of elytron (Fig. 118); Colombia ..... 22. *D. crystal*, n. sp.
- Elytron with spots larger, darker, distinct, anterolateral spot not connected to lateral margin of elytron ..... 29
- 29(28). Elytron with 4 large, elongate spots, sutural spot medially indented on outer margin (Fig. 56); Brazil ..... 11. *D. poortmanni*, n. sp.
- Elytron with spots not large and elongate, not as described above ..... 30
- 30(29). Elytron with 2 irregular, narrow, transverse brown bands (Fig. 80); Venezuela ..... 15. *D. annie*, n. sp.
- Elytron without irregular, transverse bands ..... 31
- 31(30). Elytron with 4 somewhat elongate brown spots, humeral spot short, irregularly rounded (Fig. 129); Brazil ..... 24. *D. gladys*, n. sp.
- Elytron not as described above, spots not elongate ..... 32
- 32(31). Elytron with 4 black spots, 1 spot on suture rectangular, forming a square with spot on opposite elytron (Fig. 123); paramere of male genitalia strongly curved, almost scimitar—like (Fig. 125); Brazil ..... 23. *D. silvani* (Crotch)
- Elytron with 4 large brown spots in 2 rows, 1 row in anterior 1/2 of elytron, 1 row in posterior 1/2 (Fig. 318); paramere of male genitalia not known; Brazil ..... 59. *D. cruciferae* (Mulsant)
- 33(12). Elytron with 7 or more small, dense yellow spots on a light brown background (Fig. 146); Colombia ..... 27. *D. scenica* (Mulsant)
- Elytron with 6 or fewer pale spots, spots usually on a dark background; Colombia and elsewhere ..... 34
- 34(33). Elytron black with single, triangular yellow spot widest at lateral margin, extended inward onto disc of elytron (Fig. 322); Brazil ..... 60. *D. laterinotata* (Brèthes)
- Elytron with more than one spot, or spot not reaching lateral margin of elytron ..... 35

- 35(34). Elytron with 6 yellow spots, 1 small spot medially at center of elytron (Fig. 86); Brazil ..... 16. *D. gravabilis* (Brèthes)  
 — Elytron with fewer than 6 spots, spot arrangement variable; Brazil and elsewhere ..... 36
- 36(35). Elytron with 4 or 5 spots ..... 41  
 — Elytron with 1, 2, or 3 spots ..... 37
- 37(35). Disc of elytron without median spot ..... 38  
 — Disc of elytron with single, elongate spot ..... 39
- 38(37). Length 2.0 mm; elytral spots small, irregularly rounded (Fig. 135) ..... 25. *D. rita*, n. sp.  
 — Length 3.0 mm; elytral spots large, scutellar spot obliquely oval (Fig. 62) ..... 12. *D. diana*, n. sp.
- 39(37). Length 2.3 mm; elytron with single discal spot and small, humeral spot (Fig. 190); Bolivia ..... 35. *D. grace*, n. sp.  
 — Length more than 2.5 mm; elytron usually with apical spot in addition to discal spot; not known from Bolivia ..... 40
- 40(39). Length 2.7 to 3.3 mm; male genitalia with apex of paramere entire (Fig. 229) ..... 42. *D. kim*, n. sp.  
 — Length 2.5 to 2.6 mm; male genitalia with apex of paramere emarginate (Fig. 284) ..... 52. *D. shannon*, n. sp.
- 41(36). Elytron with humeral spot extended posteriorly nearly to apical spot, forming almost complete yellow lateral border (Fig. 167) ..... 31. *D. edna*, n. sp.  
 — Elytron with humeral spot not extended posteriorly, or if so, then extended only to mediolateral spot ..... 42
- 42(41). Elytron with 5 yellow spots on pale brown background, apical spot large, anterior margin deeply emarginate (Fig. 257) ..... 47. *D. florifera* (Vogel)  
 — Elytron with 4 or 5 yellow spots on black or dark brown background, if background light brown then apical spot not enlarged with anterior margin deeply emarginate ..... 43
- 43(42). Spots on elytron large, occupying most of elytral surface (Fig. 290) ..... 53. *D. sheila*, n. sp.  
 — Spots on elytron small, not occupying most of elytral surface ..... 44
- 44(43). Elytral background color brown, spots evenly round, equally spaced; relatively large species around 3.0 mm long ..... 45  
 — Elytral background color black or dark brown, spots uneven, not all round or equally spaced, size variable but usually small species ..... 46
- 45(44). Basal lobe of male genitalia long, slender, sides constricted in apical 1/3 (Fig. 269); habitus (Fig. 268) ..... 49. *D. guttipennis* (Mulsant)  
 — Basal lobe of male genitalia long, slender, sides not constricted in apical 1/3 (Fig. 114); habitus (Fig. 113) ..... 21. *D. peggy*, n. sp.
- 46(44). Length 3.0 mm or more ..... 47  
 — Length less than 3.0 mm ..... 48
- 47(46). Basal lobe of male genitalia nearly as long as paramere, narrowed and bent in apical 1/6 (Fig. 98); habitus (Fig. 97) ..... 18. *D. tropicalis* (Mulsant)  
 — Basal lobe of male genitalia 2/3 length of paramere, sides parallel, not bent in apical 1/6 (Fig. 213); habitus (Fig. 212) ..... 39. *D. wendy*, n. sp.

- 48(46). Spots on elytron reddish yellow (Fig. 320) ..... 59. *D. gaynoni* (Mulsant)  
 — Spots on elytron yellow ..... 49
- 49(48). Male apical tergite with apex deeply emarginate, lateral angle produced; male genitalia with  
 paramere abruptly narrowed in apical 1/4 (Fig. 304) ..... 55. *D. ellen*, n. sp.  
 — Male apical tergite slightly emarginate apically, lateral angle not produced; male genitalia with  
 paramere not apically emarginate ..... 50
- 50(49). Male genitalia with basal lobe abruptly hooked at apex (Fig. 314) ..... 57. *D. elaine*, n. sp.  
 — Male genitalia variable, but basal lobe never abruptly hooked at apex ..... 51
- 51(50). Male genitalia with paramere *Unm*, slender, straight (Fig. 15) ..... 3. *D. tina*, n. sp.  
 — Male genitalia with paramere *Psc* (Fig. 108) ..... 52
- 52(51). Male genitalia with basal lobe long, usually about as long as paramere, slender (Fig. 109) .. 53  
 — Male genitalia with basal lobe short, distinctly shorter than paramere, wide (Fig. 163) ..... 57
- 53(52). Basal lobe of male genitalia not curved upward in apical 1/2 ..... 54  
 — Basal lobe of male genitalia strongly curved upward in apical 1/2 ..... 55
- 54(53). Basal lobe of male genitalia weakly convergent from base to apex, notched on one side before  
 apex, apex narrowly rounded (Fig. 109) ..... 20. *D. robin*, n. sp.  
 — Basal lobe of male genitalia parallel sided, apex obliquely rounded (Fig. 103) .....  
 ..... 19. *D. emily*, n. sp.
- 55(53). Basal lobe of male genitalia strongly constricted in apical 1/3 ..... 56  
 — Basal lobe of male genitalia not constricted in apical 1/3 (Fig. 207); habitus (Fig. 205) .....  
 ..... 39. *D. fallax*, n. sp.
- 56(55). Basal lobe slender, apex obliquely rounded (Fig. 202); habitus (Fig. 200) .....  
 ..... 37. *D. jucunda* (Mulsant)  
 — Basal lobe wide, apex weakly rounded, nearly truncate (Fig. 275) ..... 50. *D. josephine*, n. sp.
- 57(52). Elytron without mediolateral spot (Fig. 162) ..... 30. *D. tracy*, n. sp.  
 — Elytron with mediolateral spot ..... 58
- 58(57). Elytron with discal spot triangular on both ends, apical and mediolateral spots narrowly connected  
 (Fig. 157) ..... 29. *D. florence*, n. sp.  
 — Elytron with discal spot not triangular, mediolateral spot oval, apical and mediolateral spots not  
 connected (Fig. 140) ..... 59
- 59(58). Mediolateral spot on elytron projected inward (Fig. 92) ..... 17. *D. lillian*, n. sp.  
 — Mediolateral spot on elytron not projected inward ..... 60
- 60(59). Sutural spot on elytron triangular (Fig. 152); Peru ..... 29. *D. connie*, n. sp.  
 — Sutural spot on elytron apically rounded (Fig. 140) ..... 26. *D. dawn*, n. sp.

**List of South American species of *Dilatitibialis*****semicineta Group**

1. *D. semicineta* (Weise)
2. *D. lois*, n. sp.
3. *D. tina*, n. sp.
4. *D. phyllis*, n. sp.
5. *D. cindy*, n. sp.
6. *D. norma*, n. sp.
7. *D. hybridula* (Crotch)
8. *D. glyphica* (Mulsant)
9. *D. paula*, n. sp.

**mulsanti Group**

10. *D. mulsanti* (Kirsch)
11. *D. poortmanni* (Mulsant)
12. *D. diana*, n. sp.
13. *D. suzannae* (Crotch)
14. *D. carolinae* (Crotch)
15. *D. annie*, n. sp.
16. *D. gravabilis* (Brèthes)
17. *D. lillian*, n. sp.
18. *D. tropicalis* (Mulsant)
19. *D. emily*, n. sp.
20. *D. robin*, n. sp.
21. *D. peggy*, n. sp.
22. *D. crystal*, n. sp.
23. *D. silvani* (Crotch)
24. *D. gladys*, n. sp.
25. *D. rita*, n. sp.
26. *D. dawn*, n. sp.
27. *D. scenica* (Mulsant)
28. *D. connie*, n. sp.
29. *D. florence*, n. sp.
30. *D. tracy*, n. sp.
31. *D. edna*, n. sp.
32. *D. tiffany*, n. sp.
33. *D. carmen*, n. sp.
34. *D. rosa*, n. sp.
35. *D. grace*, n. sp.
36. *D. oseryi* (Mulsant)
37. *D. jucunda* (Mulsant)
38. *D. fallax*, n. sp.
39. *D. wendy*, n. sp.
40. *D. dilatata* (Crotch)
41. *D. edith*, n. sp.
42. *D. kim*, n. sp.
43. *D. sherry*, n. sp.
44. *D. cognata* (Mulsant)
45. *D. sylvia*, n. sp.
46. *D. luteola* (Mulsant)
47. *D. florifera* (Vogel)

48. *D. fuscomaculata* (Mulsant)  
 49. *D. guttipennis* (Weise)  
 50. *D. josephine*, n. sp.

#### thelma Group

51. *D. thelma*, n. sp.  
 52. *D. shannon*, n. sp.  
 53. *D. sheila*, n. sp.  
 54. *D. ethel*, n. sp.  
 55. *D. ellen*, n. sp.

#### ceciliae Group

56. *D. ceciliae* (Crotch)  
 57. *D. elaine*, n. sp.

#### Unassociated females

58. *D. cruciferae* (Mulsant)  
 59. *D. gaynoni* (Mulsant)  
 60. *D. laterinotata* (Brèthes)  
 61. *D. marjorie*, n. sp.

### 1. *Dilatitibialis semicincta* (Weise), new combination

*Cleothera semicincta* Weise, 1899: 270.

*Hyperaspis semicincta*: Korschefsky 1931: 195; Blackwelder 1945: 448.

*Cleothera semicincta* var. *humeralis* Weise 1899: 270.

*Hyperaspis semicincta* ab. *humeralis*: Korschefsky 1931: 195; Blackwelder 1945: 448.

*Cleothera semicincta* var. *limbata* Weise 1899: 270.

*Hyperaspis semicincta* ab. *limbata*: Korschefsky 1931: 195; Blackwelder 1945: 448.

*Cleothera staudingeri* Weise, 1901: 284. (NEW SYNONYM).

*Hyperaspis staudingeri*: Korschefsky 1931: 197; Blackwelder 1945: 448.

**Description. Male.** Length 4.0 mm, width 3.0 mm; body rounded, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color yellow except pronotum with large, dark brown, basomedian macula, apex of macula indented with yellow; elytron narrowly bordered with dark brown ring, except anterolateral angle narrowly yellow (Fig. 1); ventral surface with head, prosternum, meso- and metaventrites dark brown except 6th ventrite and apical tergite pale reddish yellow. Head punctures small, separated by a diameter or less, as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by less than to twice a diameter; elytral punctures larger than on pronotum, separated by 1 to 3 times a diameter; metaventral punctures much larger than on elytron, separated by a diameter or less medially, becoming larger and contiguous toward lateral margin. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, slightly angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin feebly rounded, basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin rounded, smooth, sponda represented by diagonal ridge across flange (Fig. 2). Carinae on prosternal process widely separated at apex, narrowed toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite with sparse setal tuft. Basal abdominal ventrite with sparse setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, slightly indenting apical margin of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, extended to apical margin of ventrite at middle, slightly flattened along margin, then broadly forward,

ventrite with sparse, long pubescence and dense, sparse punctures medially; ventrites 2-4 sparsely pubescent throughout, punctures small, sparse medially, becoming dense toward lateral margin; 5th ventrite slightly depressed medially at apex, sparse patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface densely punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, surface densely punctured. Apical tergite coarsely, densely punctured, pubescent, posterolateral angle abrupt, lateral 1/6 smooth, without punctures or pubescence. Genitalia with basal lobe slightly shorter than paramere, slightly asymmetrical, slender, narrowed from base to rounded apex; paramere *Pvl*, curved upward in apical 1/2, broadly lobed ventrally, apex with short, acute projection (Fig. 3, 4); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, narrow, apically rounded, outer arm wider than inner arm, slightly longer than inner arm, with large accessory piece, basal border deeply emarginate (Fig. 5, 6).

**Female.** Similar to male except head and pronotum entirely dark brown. Genitalia with spermathecal capsule long, slender, cornu gradually widened; bursal cap widely oval, with 2 distinct outer arms and trace of 3rd median arm, apical strut long, spatulate at apex in lateral view (Fig. 7).

**Variation.** Length 3.0 to 4.0 mm, width 2.5 to 3.0 mm. Mediobasal brown spot on male pronotum variable in shape, sometimes reduced to small basal border (*C. staudingeri*); elytron with dark border sometimes reduced to narrow line, or entirely absent (*C. staudingeri*); legs sometimes with femora and base of tibiae brown in females.

**Type locality.** Of *semicincta*, Peru, Callanga (lectotype here designated); of *staudingeri*, Peru, Vilcanota (lectotype here designated).

**Type depository.** Of both *semicincta* and *staudingeri*, ZMHB.

**Geographical distribution.** Bolivia, Peru.

**Specimens examined.** 78. **Bolivia.** Bolivia, no data; Longo(sic). **Peru.** Callanga; Chanchamayo; Cusco, 80 km N. Calca; Cusco, Paucartambo, Kosnipata Bosque Nublado Reserve; Cusco, San Pedro Manu; Monson Valley, Tingo Maria; Satipo; Vilcanota. (CAS) (GGC) (MKRB) (UNMSM) (USNM) (ZMHB).

**Remarks.** This species is recognizable by its distinctive color pattern, in spite of some variation. Male genitalia are also highly distinctive.

The lectotype of *D. semicincta* is a male in the ZMHB labeled "Callanga Peru (green paper, handwritten)/*Cleothera semicincta* m (handwritten)/ex coll. J. Weise." A second type specimen, bearing the same labels except the handwritten name, is designated a paralectotype. *Cleothera semicincta* var. *humeralis* is just a slight variation of the typical form, the lectotype male and 4 paralectotypes bear the same labels as the series of *Cleothera semicincta* except the lectotype with a name label "var. *humeralis* (handwritten)." *Cleothera semicincta* var. *limbata* - is also just a slight variation of the typical form, the lectotype male is labeled "Callanga Peru (green paper, handwritten)/var. *limbata* (handwritten)/ex. coll. J. Weise," and 2 paralectotypes are labeled "Longo (sic.) Bolivia (green paper, handwritten)/ex. coll. J. Weise," one paralectotype is labeled "Bolivia Drake (green paper, hand written)/Bolivia (handwritten)/ex. coll. J. Weise." *Cleothera staudingeri* Weise is a distinctive variation of typical *D. semicincta*, but male genitalia are identical, therefore we place the former as a junior synonym of the latter. A male syntype in the ZMHB collection labeled "Vilcanota Peru (green label, handwritten)/ex. Coll. J. Weise/Var. A." is designated the lectotype of *C. staudingeri*. In addition, there are 4 other specimens in the series labeled "SYNTYPUS", bearing the same labels, these are designated as paralectotypes.

## 2. *Dilatitibialis lois* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.8 mm, width 2.3 mm; body rounded, convex. Dorsal surface mostly shiny, lacking alutaceous sculpture except pronotum with weakly alutaceous background. Color



black except head yellow; pronotum with lateral 1/3 and apical 1/6 yellow; elytron entirely black (Fig. 8); ventral surface with mouthparts, antenna, legs yellow except metafemur black with yellow apex; abdomen mostly black except apices of ventrites 5-6 yellow. Head punctures small, separated by about a diameter, slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by 1 to 2 times a diameter; metaventral punctures smaller than on pronotum medially, dense, becoming large, nearly contiguous toward lateral margin. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin broadly rounded, basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia weakly flanged, flange about 1/2 width of remainder of protibia, outer margin rounded, smooth, sponda distinct, extended slightly beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventricle with large, dense setal tuft. Basal abdominal ventrite with dense, long setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, slightly indenting apical margin of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, extended to apical margin of ventrite at middle, rounded along margin, then broadly forward, ventrite with sparse, long pubescence and sparse punctures medially; ventrites 2-4 densely pubescent throughout, punctures small, sparse medially, becoming dense toward lateral margin; 5th ventrite depressed medially in apical 1/2, dense patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical border broadly emarginate, surface densely punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, surface densely punctured. Apical tergite coarsely, densely punctured, pubescent, posterolateral angle abrupt. Genitalia with basal lobe shorter than paramere, slightly asymmetrical, narrowed from base to truncate apex; paramere *Unm*, straight, apex rounded (Fig. 9, 10); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, narrow, apically truncate, outer arm wider, longer than inner arm, with accessory piece, basal border broadly emarginate (Fig. 11, 12).

**Female.** Unknown.

**Variation.** Length 2.8 to 3.5 mm, width 2.3 to 2.6 mm.

**Type material.** Holotype male; Brazil, Corcovado, Rio de Janeiro, G. E. Bryant, 13.V.1912, G. Bryant Coll. 1919-147, *Cleothera flavocalceata* Muls. (BMNH). Paratypes: 2, 1, Brazil, Ilha dos Buzios, S. Paulo - Brasil, 16.X.4.XI.963, Exp. Dep. Zool. (DZUP); 1, Brazil, Santa Teresa-ES Brasil - 15/XI/67, C. and T. Elias leg, Dpto Zool UF - Parana (DZUP).

**Remarks.** *Dilatitibialis lois* is distinctive within the genus because of its nearly all black dorsal color, mostly black metafemur, and form of male genitalia.

### 3. *Dilatitibialis tina* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 2.7 mm, width 2.3 mm; body rounded, slightly elongate, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color dark brown except head yellow; pronotum yellow with basal margin and 2 triangular, median spots in apical 1/2 dark brown; elytron with 5 large, yellow spots arranged in rows of 2 each with single apical spot, humeral and mediolateral spot narrowly connected along lateral margin (Fig. 13); ventral surface with mouthparts, antenna, prothoracic hypomeron, legs yellow; abdomen brownish yellow. Head punctures small, separated by about a diameter, slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by less than to twice a diameter; metaventral punctures larger than on elytron, separated by less than a diameter, becoming large, nearly contiguous toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded,

basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia weakly flanged, flange about 1/2 width of remainder of protibia, outer margin slightly rounded, smooth, sponda distinct, extended slightly beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/5 with single carina extended to basal margin of prosternum. Metaventricle with large, sparse setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of ventrite 4; postcoxal line on basal abdominal ventrite rounded, extended to apical margin of ventrite at middle, slightly flattened along margin, then broadly forward, ventrite with sparse, short pubescence and dense, coarse punctures medially; ventrites 2-4 densely pubescent throughout, punctures small, dense medially, becoming denser toward lateral margin; 5th ventrite depressed medially in apical 1/2, patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface nearly impunctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, surface nearly impunctate. Apical tergite coarsely, densely punctured, pubescent, posterolateral angle abruptly rounded, densely, finely punctured. Genitalia with basal lobe shorter than paramere, asymmetrical, narrowed from base to obliquely truncate apex; paramere *Unm*, straight, unmodified, widest at apex, apex rounded (Fig. 14, 15); siphon lost.

**Female.** Similar to male except head black, pronotum entirely black except lateral 1/6 yellow. Genitalia with spermathecal capsule short, wide, cornu slightly widened; bursal cap oval, with 3 distinct arms, apical strut short, slender, weakly spatulate at apex in lateral view (Fig. 16).

**Variation.** Length 2.4 to 2.7 mm, width 1.6 to 2.3 mm.

**Type material.** Holotype male; Brazil, St Paul Bras (Sao Paulo) (handwritten on blue disc), standing as *Cleothera jocosa* Muls., det R.G. Booth 2008. (BMNH). Paratypes; 2, 1, same data as holotype (BMNH); 1, 255 8023, *Cleothera jocosa*, m Brasil, Named by Mulsant (BMNH).

**Remarks.** This species shares the same dorsal color pattern with some other species of *Dilatitibialis*, but the unmodified male genitalia are unique.

Mulsant (1850) stated that his type specimen(s) of *Cleothera jocosa* were of Mexican origin, therefore the label "Named by Mulsant" on one of these paratype must have been attached in later years because the country listed is Brazil.

#### 4. *Dilatitibialis phyllis* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.7 mm, width 2.3 mm; body rounded, slightly elongate, convex. Dorsal surface mostly shiny, lacking alutaceous sculpture except head weakly alutaceous. Color yellow; pronotum with irregular, black basal border, border deeply emarginate with yellow medially, 2 pale brown, triangular spots present; elytron vittate with large black stripes extended nearly to apex, apically joined, 1 vitta widened medially, 1 median vitta slightly narrowed basally and apically (Fig. 17); ventral surface black except mouthparts, antenna, prothoracic hypomeron, mesepimeron, and legs yellow; abdomen black except ventrites 5-6 dark yellowish brown. Head punctures small, separated by about a diameter, slightly larger than an eye facet; pronotal punctures slightly larger than head punctures, separated by a diameter or less; elytral punctures slightly larger than on pronotum, separated by 1 to 3 times a diameter; metaventral punctures sparse, smaller than on elytron medially, becoming larger than elytral punctures laterally, separated by less than a diameter. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 4 eye facets long, strongly angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia strongly flanged, flange wider than remainder of protibia, outer margin rounded, smooth, sponda distinct, extended slightly beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/6 with single carina extended to basal margin of prosternum. Metaventricle without setal tuft. Basal abdominal

ventrite with small, sparse setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of ventrite 4; postcoxal line on basal abdominal ventrite rounded, extended to apical margin of ventrite at middle, slightly flattened along margin, then broadly forward, ventrite with sparse, short pubescence and sparse punctures medially; ventrites 2-4 sparsely pubescent throughout, punctures small, sparse medially, becoming denser toward lateral margin; 5th ventrite depressed medially in apical 1/2, patch of long pubescence at apex, without tubercle on each side of middle, apical margin broadly emarginate, surface sparsely punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly, deeply emarginate, sparsely pubescent on each side of median depression, surface densely punctured. Apical tergite coarsely, densely punctured, pubescent. Genitalia with basal lobe slightly shorter than paramere, asymmetrical, weakly narrowed from base to oblique apex; paramere *Unm*, straight, apex rounded (Fig. 18, 19); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, narrow, angled forward, narrowed from base to apex, outer arm wider, longer than inner arm, with accessory piece, basal border broadly emarginate (Fig. 20, 21).

**Female.** Unknown.

**Variation.** Length 2.6 to 3.4 mm, width 2.0 to 2.7 mm.

**Type material.** Holotype male; Ecuador, Pichincha Prov., 15 km E. Sto. Domingo, Trinalandia, 23.II.1981, day, 70m, H. F. Howden. (USNM). Paratypes; 3, 1, same data as holotype (USNM); 1, Ecuador, Pich., 47km SE Sto Domingo, Rio Palenque Sta., 11.22-28.1976, 300m, J. M. Campbell (CNC); 1, Ecuador, Pichilinque, 1-X'44, EJ Hambleton (USNM).

**Remarks.** *Dilatitibialis phyllis* and *D. cindy* share a similar dorsal color pattern, but differ in other ways, see remarks under the latter species. This species is named for Phyllis, a niece of Claudio Canepari.

##### 5. *Dilatitibialis cindy* Canepari and Gordon, new species

**Description. Male** holotype. Length 3.5 mm, width 2.8 mm; body rounded, slightly elongate, convex. Dorsal surface weakly alutaceous, shiny. Color yellow; pronotum with black basomedian macula, lateral margin of macula briefly extended laterally, macula extended 3/4 distance to anterior pronotal margin; elytron vittate with large, black sutural vitta extended from scutellum to apex, and large, black lateral vitta extended from base across humeral callus, joining sutural vitta at apical 7/8 of elytron (Fig. 22); ventral surface black except mouthparts, antenna, prothoracic hypomeron, mesepimeron, and legs yellow; abdomen with ventrites 1-4 dark brown medially, brownish yellow in lateral 1/4, ventrite 6 brownish yellow. Head punctures small, separated by about a diameter, slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures as large as on pronotum, separated by less than to 2 times a diameter; metaventral punctures dense, larger than on elytron medially, separated by a diameter or less, becoming larger toward lateral margin, separated by less than a diameter. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, strongly angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin nearly straight, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia strongly flanged, flange slightly wider than remainder of protibia, outer margin rounded, smooth, sponda extended slightly beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/7 with single carina extended to basal margin of prosternum. Metaventrite with large setal tuft. Basal abdominal ventrite with setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of ventrite 4; postcoxal line on basal abdominal ventrite rounded throughout, extended to apical margin of ventrite at middle, then broadly forward, ventrite with sparse, short pubescence and dense, coarse punctures; ventrites 2-4 sparsely pubescent throughout, punctures large, dense; 5th ventrite depressed medially in apical 1/3, densely, coarsely punctured in basal 2/3, sparsely punctured in apical 1/3, patch of pubescence at apex, without tubercle on each side of middle, apical margin broadly emarginate, surface sparsely punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly,

deeply emarginate, sparsely pubescent on each side of median depression, surface densely punctured. Apical tergite coarsely, densely punctured, pubescent, apex weakly rounded. Genitalia with basal lobe 3/4 length of paramere, asymmetrical, narrowed from base to oblique apex, ventral surface with rounded projection on each side; paramere *Unm*, straight, ventral margin produced, rounded, apex rounded (Fig. 23, 24); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, narrow, apex truncate, outer arm wider, longer than inner arm, with accessory piece, basal border straight (Fig. 25, 26).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; (Brazil), Sta. Catarina, Lüderwaldt, Korschevsky Collection 1952. (USNM).

**Remarks.** This species is similar to *D. phyllis* in elytral color pattern, but is much larger, with the male pronotum having as a large, basomedian black macula, metaventrite with large setal tuft, and completely different male genitalia.

### 6. *Dilatitibialis norma* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 2.8 mm, width 2.3 mm; body rounded, slightly elongate, convex. Dorsal surface mostly shiny, lacking alutaceous sculpture except head with weakly alutaceous background. Color yellow except pronotum with basal 1/2 bordered with black, black area broadly expanded anteriorly at middle, narrowed at each outer end; elytron yellow with sutural border narrowly black, black area narrow posterior to scutellum, becoming gradually wider toward apex, lateral and apical margins narrowly black, 3 small, brown spots present medially in outer 1/2, inner spot on disc, spot laterad of inner spot a short, somewhat broken vitta anterior to middle, outer spot on lateral border, small, irregularly triangular (Fig. 27); ventral surface with head, prosternum, meso- and metaventrites black, posterior 2/3 of metafemur brown; abdomen mostly dark brown medially, yellowish brown in lateral 1/4, ventrites 5, 6 yellow. Head punctures small, separated by about a diameter, slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by less than to twice a diameter; elytral punctures slightly larger than on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than on abdomen, separated by about a diameter medially, coarser and separated by less than a diameter toward lateral margin. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, strongly angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin straight, basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia weakly flanged, flange about 1/2 width of remainder of protibia, outer margin rounded, smooth, sponda distinct, extended slightly beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite with large, dense setal tuft. Basal abdominal ventrite with dense, long setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, slightly indenting apical margin of 4th ventrite; postcoxal line on basal abdominal ventrite rounded throughout, ventrite with sparse, long pubescence and sparse punctures; ventrites 2-4 pubescent throughout, punctures small, sparse medially, becoming denser toward lateral margin; 5th ventrite depressed medially in apical 1/2, patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface weakly punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, surface feebly punctured. Apical tergite coarsely, densely punctured, pubescent, apex feebly emarginate. Genitalia with basal lobe shorter than paramere, slightly asymmetrical, narrowed from base to rounded apex; paramere *Unm*, straight, narrowed toward rounded apex (Fig. 28, 29); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm narrow, apically truncate, outer arm

wider and slightly longer than inner arm, with accessory piece, basal border broadly emarginate (Fig. 30, 31).

**Female.** Similar to male except head dark brown with yellowish red spot on frons and another on vertex, pronotum with median black area extended to anterior margin. Genitalia with spermathecal capsule short, wide, cornu not widened; bursal cap oval, with 2 outer arms, apical strut long, slender, weakly spatulate at apex in lateral view (Fig. 32).

**Variation.** Length 2.8 to 3.4 mm, width 2.3 to 2.6 mm. Size and shape of elytral spots varies, slightly, lateral spot on border subject to size reduction and perhaps disappearance.

**Type material.** Holotype male; Colombia, Las Tibayas, unt. Bogotá. (ZMHB). Paratypes; 2, Colombia, Las Tibayas, unt. Bogotá, O. Thieme (ZMHB).

**Remarks.** The dorsal color pattern of *D. norma* is unique to this species, not similar to any other known species in the genus.

### 7. *Dilatitibialis hybridula* (Crotch), new combination

*Hyperaspis hybridula* Crotch, 1874: 218; Korschefsky 1931: 190; Blackwelder 1945: 447; Gordon 1987: 27.

*Cyra hybridula*: Milléo et al. 1997: 398.

**Description. Male.** Length 4.0 mm, width 3.3 mm; body rounded, convex. Dorsal surface shiny, lacking alutaceous sculpture except head alutaceous, dull. Color yellow except pronotum with 7 brown spots, 1 small, round spot on each side in lateral 1/4, 1 small, round, basomedian spot anterior to scutellum, 1 triangular basal spot on each side of middle anterior to scutellum, 1 elongate spot medially on each side of middle; elytron with 7 brown spots, suture narrowly bordered with brown macula, macula widened anterior to middle, 1 triangular spot near suture laterad of scutellum, 1 short, elongate spot near suture in apical 1/2, 1 elongate spot on apical declivity near suture, 1 long, irregular spot extended from humeral callus toward suture, then posteriorly onto apical declivity, 1 triangular spot on apical declivity near lateral margin (Fig. 33); ventral surface with prosternum, meso- and metaventrites dark brown; abdomen mostly yellow. Head punctures small, separated by less than to a diameter, as large as or slightly larger than an eye facet; pronotal punctures slightly larger than head punctures, separated by a diameter or less; elytral punctures as large as those on pronotum, separated by less than to twice a diameter; metaventral punctures larger than those on pronotum, separated by a diameter or less medially, becoming larger and separated by less than a diameter toward lateral margin. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin feebly curved, basal margin without bordering line. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange as wide as remainder of protibia, outer margin rounded, smooth, sponda represented by diagonal ridge across flange. Carinae on prosternal process widely separated at apex, nearly parallel to basal 1/3, joined at basal 1/3 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite with sparse setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of ventrite 4; postcoxal line on basal abdominal ventrite rounded, extended to apical margin of ventrite at middle, slightly flattened along margin, then broadly forward, ventrite with sparse, long pubescence and dense, sparse punctures medially; ventrites 2-4 sparsely pubescent throughout, punctures small, sparse; 5th ventrite depressed medially at apex, sparse patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface densely punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, surface nearly impunctate. Apical tergite densely punctured, pubescent, apical border rounded. Genitalia with basal lobe shorter than paramere, asymmetrical, slender, narrowed from base to oblique

apex; paramere *Unm*, widest at middle, apex rounded (Fig. 34, 35); siphon robust, strongly curved in basal 3/4, basal capsule large, inner arm short, narrow, apically obliquely truncate, outer arm wider than inner arm, slightly longer than inner arm, with large accessory piece, basal border widely emarginate (Fig. 36, 37).

**Female.** Similar to male except head with small, triangular brown spot on frons. Genitalia with spermathecal capsule short, wide, cornu not widened; bursal cap widely rounded, with 3 distinct arms, apical strut long, spatulate at apex in lateral view (Fig. 38).

**Variation.** Length 3.6 to 4.0 mm, width 3.0 to 3.3 mm. Elytron with brown spot extended from humeral callus onto apical declivity, may have spot disconnected laterad of callus, giving elytron 8 brown spots instead of 7.

**Type locality.** Brazil.

**Type depository.** UMZC (holotype, examined).

**Geographical distribution.** Argentina, Brazil.

**Specimens examined.** 6. **Argentina.** Misiones. **Brazil.** Santa Catarina, Nova Teutonia. (BMNH) (JEBC) (UMZC) (USNM).

**Remarks.** The strikingly vittate appearance of the dorsal color pattern distinguishes *D. hybridula*. See remarks under *D. glyphica*.

Milléo et al. (1997) correctly transferred this species from Hyperaspidini to Brachiacanthini, placing it in *Cyra*. Because it has obvious primary abdominal pores, we transfer *C. hybridula* to *Dilatitibialis*.

### 8. *Dilatitibialis glyphica* (Mulsant), new combination

*Cleothera glyphica* Mulsant, 1850: 585.

*Hyperaspis glyphica*: Crotch 1874: 220; Korschefsky 1931: 189; Blackwelder 1945: 447.

*Cyra glyphica*: Milléo et al. 1997: 402.

**Description. Male.** Length 3.6 mm, width 2.8 mm; body rounded, convex. Dorsal surface shiny, lacking alutaceous sculpture except head alutaceous, dull. Color yellow except pronotum with 7 brown spots, 1 small, round spot on each side in lateral 1/4, 1 small, round, basomedian spot anterior to scutellum, 1 triangular basal spot on each side of middle anterior to scutellum, 1 triangular spot medially on each side of middle; elytron with 9 small brown spots, basal row with 2 spots, discal and apical declivity with rows of 3 spots each, 1 apical spot (Fig. 39); ventral surface with prosternum, meso- and metaventrites black; abdomen mostly dark brown except ventrites 5-6 brownish yellow. Head punctures small, separated by a diameter or less, as large as or slightly larger than an eye facet; pronotal punctures slightly larger than head punctures, separated by a diameter or less; elytral punctures as large as on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than on pronotum, separated by a diameter or less medially, becoming larger and separated by less than a diameter toward lateral margin. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, straight, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin feebly curved, basal margin without bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange as wide as remainder of protibia, outer margin rounded, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent to basal 1/4, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite with dense, long setal tuft. Basal abdominal ventrite with dense, long setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of ventrite 4; postcoxal line on basal abdominal ventrite rounded, extended to apical margin of ventrite at middle, flattened along margin, then broadly

forward, ventrite with sparse, long pubescence and dense, sparse punctures medially; ventrites 2-4 sparsely pubescent throughout, punctures small, dense; 5th ventrite depressed medially at apex, dense patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface nearly impunctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, surface nearly impunctate. Apical tergite densely punctured, pubescent, apical border rounded. Genitalia with basal lobe shorter than paramere, asymmetrical, slightly narrowed from base to oblique apex; paramere *Unm*, straight, ventrally narrowed before apex (Fig. 40, 41); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, narrow, apically obliquely truncate, outer arm wider than inner arm, slightly longer than inner arm, with large accessory piece, basal border widely emarginate (Fig. 42, 43).

**Female.** Similar to male except head with small, triangular brown spot widest on clypeus, narrowed to median portion of frons. Genitalia with spermathecal capsule short, wide, narrowed at middle; bursal cap rounded, with 2 distinct outer arms, apical strut long, strongly spatulate at apex in lateral view (Fig. 44).

**Variation.** Length 2.6 to 3.9 mm, width 2.3 to 2.9 mm. Dorsal brown spots vary from pale brown to nearly black; pronotal spots may be partially connected, forming a mediobasal loop with small, elongate yellow spot in middle; brown spot on female head varies from that described above to very small, present only on anterior 1/2 of frons.

**Type locality.** Brazil.

**Type depository.** ZMHB (lectotype here designated).

**Geographical distribution.** Brazil.

**Specimens examined.** 58. **Brazil.** Distributed throughout much of eastern Brazil. (BMNH) (CMNH) (MZSP) (USNM) (ZMHB).

**Remarks.** *Dilatitibialis glyphica* is recognized by the distinctive dorsal color pattern, although it has a superficial resemblance to *D. hybridula*. In addition to superficial color differences, *D. glyphica* is distinguished from *D. hybridula* by slightly smaller size and males with dense, long setal tufts on both metaventrite and basal abdominal ventrite.

The lectotype is a male labeled "ZMHUB - "55688/glyphica Muls. Bras (handwritten)/ Zool. Mus. Berlin (yellow paper)/ Hist. Coll. (Coleoptera), Nr. 55688, *Psyllobora glyphica* Muls., Brasil, Zool. Mus. Berlin (dark green paper)." Mulsant (1850) had specimens from the Dupont, Germar and Schaum, and Paris Museum collections.

Milléo et al. (1997) correctly transferred this species from Hyperaspidini to Brachiacanthini, placing it in *Cyra*. Because it has obvious primary abdominal pores, we transfer *C. glyphica* to *Dilatitibialis*.

## 9. *Dilatitibialis paula* Canepari and Gordon, new species

**Description. Male** holotype. Length 3.2 mm, width 2.6 mm; body rounded, slightly elongate, convex. Dorsal surface mostly shiny, lacking alutaceous sculpture except head alutaceous, dull, pronotum slightly alutaceous, shiny. Color yellow except head with black clypeus; pronotum with narrow, dark brown basal border, small, irregularly rounded brown spot on each side of middle in apical 1/2; elytron with 5 small, irregular brown spots, 1 spot inside humeral callus, 1 triangular spot on anterior 1/2 of disc, 1 rectangular spot near lateral margin anterior to middle, 1 triangular spot near suture on apical declivity, 1 faint, very irregular pale brown spot on lateral margin of apical declivity (Fig. 45); ventral surface with head, prosternum, meso- and metaventrites, trochanters black, femur of leg 1 with basal 1/3 black, leg 2 with femur mostly dark brown, leg 3 with femur entirely dark brown except apex narrowly yellow; abdomen yellowish brown. Head punctures small, separated by about a diameter, slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger

than on pronotum, separated by less than to twice a diameter; metaventral punctures as large as on abdomen, separated by about twice a diameter medially, slightly coarser and separated by a diameter toward lateral margin. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus small, about 4 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin with faint trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia weakly flanged, flange about 1/2 width of remainder of protibia, outer margin rounded, smooth, sponda extended slightly beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventricle with large, dense setal tuft. Basal abdominal ventrite with sparse, long setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite flattened along posterior margin of ventrite, then forward, ventrite with sparse, long pubescence and sparse punctures; ventrites 2-4 pubescent throughout, punctures small, dense medially, becoming denser toward lateral margin; 5th ventrite depressed medially in apical 1/2, patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface weakly punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle acutely abrupt, surface feebly punctured. Apical tergite coarsely, densely punctured, pubescent, apex deeply, abruptly emarginate. Genitalia with basal lobe shorter than paramere, asymmetrical, lateral margins sinuate; paramere *Unm*, dorsal surface widely arcuate, giving a "humpbacked" appearance, apex rounded (Fig. 46, 47); siphon robust, strongly curved in basal 2/3, basal capsule large, inner arm short, apex irregular, outer arm wider and slightly longer than inner arm, with accessory piece, basal border broadly emarginate (Fig. 48, 49).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Venezuela, Aragua, Cer. Choroni, 1600m, Feb. 26, 1971, H. and A. Howden. (USNM).

**Remarks.** This is a distinctive species because of the unique dorsal color pattern, black clypeus, femora at least partially dark brown or black, and dorsally "humped" paramere of the male genitalia.

### 11. *Dilatitibialis mulsanti* (Kirsch), new combination

*Cleothera mulsanti* Kirsch, 1876: 119.

*Hyperaspis mulsanti*: Korschefsky 1931: 192; Blackwelder 1945: 447.

**Description. Male.** Length 3.3 mm, width 2.7 mm; body rounded, slightly elongate, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color yellow except pronotum with single, small, round, brown spot on each side of middle slightly anterior to posterior margin; elytron with sutural and lateral margins narrowly bordered with brown, 5 small, irregular brown spots present, 1 elongate, narrow, humeral spot angled from callus toward lateral margin, 1 irregularly triangular spot anterior to discal area near suture, 1 elongate, slender, median vitta extended from center of disc onto apical declivity, 1 irregularly rounded spot on apical declivity near suture, 1 irregularly rounded spot on apical declivity near lateral margin (Fig. 50); ventral surface with prosternum, meso- and metaventriles dark brown; abdomen brownish yellow. Head punctures small, separated by about a diameter, slightly larger than an eye facet; pronotal punctures slightly larger than head punctures, separated by 1-2 times a diameter; elytral punctures larger than on pronotum, separated by 1-3 times a diameter; metaventral punctures larger than on abdomen, widely separated medially, larger and separated by less than a diameter toward lateral margin. Clypeus faintly emarginate apically, nearly truncate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus small, about 4 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded,



basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia strongly flanged, flange slightly wider than remainder of protibia, outer margin rounded, smooth, sponda extended slightly beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded throughout, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2-4 pubescent throughout, punctures small, dense, becoming denser toward lateral margin; 5th ventrite slightly depressed medially in apical 1/2, without tubercle on each side of middle, depressed by primary pore laterally, apical margin broadly emarginate, surface weakly punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite coarsely, densely punctured, pubescent, apex weakly rounded. Genitalia with basal lobe slightly shorter than paramere, asymmetrical, slightly narrowed from base to obliquely truncate apex; paramere weakly *Psc*, nearly straight, apex slightly rounded, small, angulate median projection present on dorsal surface, small apical projection of lower margin present (setae absent at apex of one paramere in illustration) (Fig. 51, 52); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, apex obliquely truncate, outer arm wider and slightly longer than inner arm, with accessory piece, basal border strongly emarginate (Fig. 53, 54).

**Female.** Similar to male except pronotum with 4 dark brown, slightly triangular median spots, 1 spot near base on each side of middle, 1 median spot on each side of middle. Genitalia with spermathecal capsule short, wide, narrowed from base to apex, cornu with apical rounded “beak”; bursal cap oval, with 3 arms, inner arm short, faint, apical strut long, laterally sinuate (Fig. 55).

**Variation.** Length 3.2 to 3.7 mm, width 2.5 to 2.8 mm. Elytral color pattern varies from that described above to having the anterior discal spots enlarged and connected at suture, forming a single large spot, or with all spots subject to enlargement or reduction to very small traces, a single specimen from Brazil in the CAS collection exhibits extreme variation by having the elytral spots enlarged into a nearly continuous pattern forming a color pattern best described as “dark background with 5 yellow spots arranged in 2 rows of 2 spots each plus an apical spot.” Some elytral spots are subject to being narrowly connected, rather than completely discrete, but are still counted as being discrete.

**Type locality.** Peru.

**Type depository.** SNSD (lectotype here designated).

**Geographical distribution.** Brazil, Colombia, Ecuador, Peru.

**Specimens examined.** 58. **Brazil.** Amazonas, Tabatinga, 50m. **Colombia.** Leticia, Amazonas, 700'. **Ecuador.** Napo, vic. Misahualli; Orellana, Payamino Research Stations, 300m. **Peru.** Huanuco, Tingo Maria; Loreto, San Jose, Allpahuayo, 150m; San Martin, Alto Mayo, Aguas Verdes, 1100m; Satipo. (BMNH) (CAS) (CSCA) (DZUP) (GGC) (MKRB) (SNSD) (USNM) (UNMSM) (ZMHB).

**Remarks.** This is another species of *Dilatitibialis* with a distinctive dorsal color pattern, although it bears some similarity to *D. paula*. The female spermathecal capsule with an apical “beak” is highly distinctive because it is rarely seen elsewhere in the genus. Although highly variable throughout its range in spot size and shape, all specimens examined retained the same basic dorsal spot pattern. It has been frequently collected, especially in Andean countries from Peru to Colombia.

SNSD type specimens were examined, and a female labeled “Poznzn Coll Kirsch (green paper)/mulsanti Kirsch (handwritten)/Hyperaspis mulsanti Kirsch (blue paper, handwritten)/Typus (red paper)/Hinda mulsanti Kirsch (handwritten) det. R. Korschefsky 1944/ Staatl. Museum für Tierkunde, Dresden” is designated the lectotype. Two paralectotypes are also designated bearing the same labels as the lectotype except the handwritten Korschefsky det. label.

**11. *Dilatitibialis poortmani* (Mulsant), new combination**

*Cleothera poortmanni* Mulsant, 1850: 572.

*Hyperaspis poortmanni*: Crotch 1874: 218; Korschefsky 1931: 194; Blackwelder 1945: 448.

**Description. Male.** Length 3.0 mm, width 2.6 mm; body rounded, slightly elongate, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color yellow except pronotum with large, dark brown, basomedian macula deeply emarginate with yellow medially, anterolateral angle weakly emarginate, small, elongate brown spot on each side adjacent to median macula; elytron bordered with brown on sutural, lateral and apical margins, sutural border wide in median 5/6, lateral border narrow, apical border wide, surface with 4 large, brown spots, 2 in anterior 1/2, 2 on apical declivity, humeral spot irregularly rectangular, anterior sutural spot elongate oval, outer border emarginate, posterolateral spot irregularly rectangular, posteromedian spot broadly triangular (Fig. 56) ; ventral surface with prosternum, meso- and metaventrites dark brown; abdomen dark brown medially, lateral margins and ventrites 5-6 brownish yellow. Head punctures small, separated by about a diameter, each puncture as large as 1-2 eye facets; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by less than to twice a diameter; metaventral punctures large, dense, separated by a diameter or less medially, separated by less than a diameter toward lateral margin. Clypeus emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia strongly flanged, flange wider than remainder of protibia, outer margin rounded, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/3 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite with long, sparse setae medially. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, slightly flattened along posterior ventrite margin, ventrite with sparse, long pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly rounded. Genitalia with basal lobe about as long as paramere, asymmetrical, straight, narrowed at apical 2/3, apex slightly rounded, nearly truncate; paramere broadly, weakly *Psc*, apex with small ventral projection, dorsal margin broadly rounded (Fig. 57, 58); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm slender, slightly sinuate, narrowly rounded, outer arm wider and slightly longer than inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 59, 60).

**Female.** Head with vertex brown, brown area extended anteriorly onto frons at base of eye. Genitalia with spermathecal capsule short, wide, widened from base to apex, anterior 1/4 of cornu extended into a slender, round "beak"; bursal cap broadly oval, with 2 outer sclerotized arms, apical strut long, slender, apex flattened in lateral view (Fig. 61).

**Variation.** Length 2.6 to 3.4 mm, width 2.3 to 2.6 mm. Dorsal spots vary from brown to nearly black, pronotal maculae vary from the pattern described above to completely fused with only the lateral and anterolateral angle yellow, elytron with anterior inner and outer spots often incompletely fused medially.

**Type locality.** Brazil.

**Type depository.** MNHL (lectotype here designated).

**Geographical distribution.** Brazil.

**Specimens examined.** 25. **Brazil.** Distributed over much of eastern Brazil. (BMNH) (CMNH) (DZUP) (MNHL) (USNM) (ZMHB).

**Remarks.** *Dilatitibialis poortmanni* is a frequently collected species defined by the dorsal spot pattern. Sicard (1912) described *Cleothera poortmanni* var. *bistrimaculata*, type not found, that is almost certainly a description of the form having anterior elytral spots incompletely fused.

A specimen in the Dejean collection, MNHL, labeled "Brasilia" is here designated the lectotype of *D. poortmanni*. A female in the BMNH labeled "Syntype (blue bordered disc)/5771 (blue disc)/Poortmanni Muls. Bresil (handwritten, green paper)/Named by Mulsant." is designated a paralectotype.

## 12. *Dilatitibialis diana* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 3.0 mm, width 2.3 mm; body rounded, slightly elongate, convex. Dorsal surface mostly shiny, lacking alutaceous sculpture except pronotum slightly alutaceous, shiny. Color black except pronotum with anterior 1/6 and lateral 1/5 yellow; elytron with 3 yellow spots, 1 irregularly triangular spot on anterolateral angle outside of humerus, 1 obliquely oval, sutural spot near scutellum, 1 transversely oval spot on apical declivity near apical margin (Fig. 62); ventral surface with head, prosternum, meso- and metaventrites black; abdomen dark brown, slightly paler near lateral margin. Head punctures small, separated by about a diameter, 2-3 times larger than an eye facet; pronotal punctures slightly larger than head punctures, separated less than to twice a diameter; elytral punctures slightly larger than on pronotum, separated by less than to 3 times a diameter; metaventral punctures larger than on abdomen medially, separated by less than a diameter, much coarser and nearly contiguous toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia broadly flanged, flange as wide as remainder of protibia, outer margin rounded, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/6 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior margin of ventrite, ventrite with sparse, short pubescence and dense, coarse punctures; ventrites 2-4 pubescent throughout, punctures small, dense medially, becoming denser toward lateral margin; 5th ventrite depressed medially in apical 1/2, patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface weakly punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite coarsely, densely punctured, pubescent, apex weakly rounded. Genitalia with basal lobe as long as paramere, asymmetrical, abruptly narrowed at apical 2/3, apex weakly rounded; paramere *Psc*, dorsal surface narrowly arcuate, apex rounded (Fig. 63, 64); siphon robust, strongly curved in basal 2/3, basal capsule large, inner arm long, slender, apex truncate, outer arm wider and slightly longer than inner arm, with accessory piece, basal border deeply, broadly emarginate (Fig. 65, 66).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; (Brazil) Brasilien, Nova Teutonia, 27° 11' B, 52° 23' L, 28.11.1937, Fritz Plaumann (DZUP).

**Remarks.** This unique holotype is recognized by the black elytron with 3 small, yellow spots. However, the genitalia are strikingly similar to those of *D. poortmanni*. The genitalia of *D. diana* differ from those of *D. poortmanni* primarily by the narrow paramere which is slender in comparison with the latter species.

Of course the dorsal color patterns differ greatly, and *D. diana* is noticeably more slender and elongate than *D. poortmanni*.

### 13. *Dilatitibialis suzannae* (Crotch), new combination

*Hyperaspis suzannae* Crotch, 1874: 219; Korschefsky 1931: 197; Blackwelder 1945: 448; Gordon 1987: 27.

*Hyperaspis pulcherrima* Mader, 1954: 127. (NEW SYNONYM).

**Description. Male.** Length 2.6 mm, width 2.2 mm; body rounded, slightly elongate, convex. Dorsal surface shiny, lacking alutaceous sculpture except head and pronotum slightly alutaceous. Color yellow except pronotum with narrow, basomedian, dark brown band widened at each end, 1 triangular, light brown spot medially on each side of middle; elytron narrowly bordered with light brown, sutural border slightly widened on disc, 2 large black spots present medially, anterior spot irregularly transversely rectangular with apical border weakly emarginate, posterior spot on apical declivity irregularly transversely oval with posterior border weakly emarginate (Fig. 67); ventral surface with head, prosternum, meso- and metaventrites reddish brown; abdomen reddish brown. Head punctures small, separated by about a diameter, each puncture as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by less than to twice a diameter; elytral punctures larger than those on pronotum, separated by 1-3 times a diameter; metaventral punctures slightly larger than on abdomen medially, larger and separated by less than a diameter toward lateral margin. Clypeus deeply emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia strongly flanged, flange wider than remainder of protibia, outer margin rounded, smooth, sponda extended slightly beyond protibial flange (Fig. 68). Carinae on prosternal process widely separated at apex, weakly convergent toward base, joined at basal 1/6 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, flattened along posterior ventrite margin, weakly extended forward, ventrite with sparse, long pubescence and small, sparse punctures; ventrites 2-4 pubescent throughout, punctures small, dense, becoming denser toward lateral margin; 5th ventrite slightly depressed medially in apical 1/2, depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly emarginate, surface weakly punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite coarsely, densely punctured, pubescent, apex weakly rounded. Genitalia with basal lobe slightly shorter than paramere, asymmetrical, slightly narrowed from base to weakly triangular apex; paramere weakly *Psc*, apex with small, ventral projection, dorsal surface broadly, strongly rounded (Fig. 69, 70); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm slender, slightly sinuate, apex narrowly rounded, outer arm wider and slightly longer than inner arm, with accessory piece, basal border broadly emarginate (Fig. 71, 72).

**Female.** Similar to male except clypeus brown. Genitalia with spermathecal capsule short, wide, widened from base to apex, cornu widened at apex; bursal cap narrowly oval, with 3 arms, inner arm short, faint, apical strut long, apex flattened in lateral view (Fig. 73).

**Variation.** Length 1.6 to 3.0 mm, width 1.5 to 2.3 mm.

**Type locality.** Of *suzannae*, (Venezuela), Cumana; of *pulcherrima*, Venezuela.

**Type depository.** Of *suzannae*, UMZC (lectotype designated by Gordon 1987); of *pulcherrima*, (NHMV) (holotype, examined).

**Geographical distribution.** Trinidad, Venezuela.

**Specimens examined.** 9. **Tobago.** Plymouth Rd. **Trinidad.** “Trinidad.” **Venezuela.** Aragua, Rancho Grande, 1100m.; Caracas Valley; Cerama(?), Edo., Carabobo; Estado Aragua, P. Nac. Henri Pittier, Maracay/Occumare km 36, La Trilla, 300m.; Prov. Cumana, Sucre; Estado Aragua, P. Nac. Henri Pittier, Campo Experimental CENIAP, Pozo del Diablo, 400m.; San Esteban, nr. Puerto Cabello. (BMNH) (NHMV) (UMZC) (USNM).

**Remarks.** *Dilatitibialis suzannae* has a unique dorsal color pattern by which it may be recognized within the genus.

Type material of *Hyperaspis pulcherrima* (NHMV) was examined and found to be conspecific with the lectotype of *D. suzannae*. In addition to the holotype of *D. pulcherrima*, there are 2 paratypes in the NHMV collection bearing identical labels. Mader’s male holotype is labeled “D’Moritz 1858 Venezuela/ Holotype Hyperaspis pulcherrima m (pink paper, handwritten)/ Coll. Muls. Vindob.”

#### 14. *Dilatitibialis carolinae* (Crotch), new combination

*Hyperaspis carolinae* Crotch, 1874: 220; Korschefsky 1931: 186; Blackwelder 1945: 446; Gordon 1987: 27. *Cleothera boliviana* Weise, 1910a: 52. (**NEW SYNONYM**).

*Hyperaspis boliviana*: Korschefsky 1931: 185; Blackwelder 1945: 446.

**Description. Male.** Length 2.6 mm, width 2.2 mm; body rounded, slightly elongate, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color yellow except pronotum with 5 small, triangular black spots, 2 narrowly separated spots at middle, 1 basal spot at middle anterior to scutellum, and a basal spot on each side of middle; elytron narrowly bordered with brown on sutural, lateral and apical margins, sutural border widened on anterior portion of disc, surface with 6 discrete brown spots (Fig. 74); ventral surface with prosternum, meso- and metaventrites dark brown; abdomen dark brown medially, paler reddish brown in lateral 1/3. Head punctures small, separated by about a diameter, each puncture as large as 1-2 eye facets; pronotal punctures slightly larger than head punctures, separated by less than twice a diameter; elytral punctures as large as on pronotum, separated by 1-3 times a diameter; metaventral punctures slightly larger than on abdomen medially, separated by about a diameter, larger and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia strongly flanged, flange slightly wider than remainder of protibia, outer margin rounded, smooth, sponda not extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/3 with single carina extended to basal margin of prosternum. Metaventrite with setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, slightly flattened along posterior ventrite margin, weakly extended forward, ventrite with sparse, long pubescence and small, sparse punctures; ventrites 2-4 pubescent throughout, punctures small, dense, becoming denser toward lateral margin; 5th ventrite depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly emarginate, surface weakly punctate; 6th ventrite short, narrow, not depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle rounded, surface feebly punctured. Apical tergite coarsely, densely punctured, pubescent, apex rounded. Genitalia with basal lobe as long as paramere, sides nearly parallel, slightly narrowed in apical 1/6; paramere *Psc*, dorsal surface strongly raised, apex with ventral margin slightly projecting apically (Fig. 75, 76); siphon robust, curved in basal 1/2, inner arm slender, uneven, apex obliquely truncate, outer arm wider and slightly longer than inner arm, base weakly emarginate (Fig. 77, 78).

**Female.** Genitalia with spermathecal capsule long, slender, widened from base to apex, cornu weakly widened at apex; bursal cap narrowly oval, without sclerotized arms, apical strut long, slender, apex flattened in lateral view (Fig. 79).

**Variation.** Length 2.0 to 2.7 mm, width 1.7 to 2.4 mm. Dorsal spots vary from brown to nearly black, and the pronotum often has a small, additional spot near lateral margin; elytron may have 7 dark spots, the additional spot a result of median lateral spot dividing into 2 parts, elytron may also have the humeral and posterior 3 spots fused, and posterior 2 spots fused, forming 2 irregular, dark brown spots as seen in 3 specimens from AM, Tapuruquara, Brazil.

**Type locality.** Of *carolinae*, (Brazil), Bahia; of *boliviana*, Bolivia, Mapiri (lectotype here designated).

**Type depository.** Of *carolinae*, UMZC (lectotype designated by Gordon 1987); of *boliviana*, ZMHB (lectotype here designated).

**Geographical distribution.** Brazil, Peru, Trinidad, Venezuela.

**Specimens examined.** 37. **Brazil.** "Amazona."; AM, Tapuruquara; Corumba; Faz. Aceiro, Jatai, Goiás; Marra do Tapirapé, Mato Grosso; Mato Grosso; Rib. Vaozinho, GO; Santarem; Tapuruquara, Rio Negro, AM; Utiariti, Rio Papagaio, Mt. **Peru.** Avispos, Dept. Madre de Dios; Loreto, Almendra, 100m.; Satipo. **Trinidad.** "Trinidad." **Venezuela.** Territ. Amazonas, Upper Cunucunuma. (BMNH) (CMNH) (DZUP) (GGC) (UMZC) (USNM) (ZMHB).

**Remarks.** This is a widespread, variable species recognized by the unique elytral spot patterns. Specimens from Brazil tend to be smaller on average than those from Peru and Venezuela.

Crotch (1874) described *H. carolinae* on page 220, then used the same name again on page 223 for species currently placed in *Cyra*. Harold (1875) provided a replacement name, *crotchi*, for the homonym on page 223.

Type specimen comparison showed that *Cleothera boliviana* Weise and *Hyperaspis carolinae* are conspecific. A male specimen in the ZMHB labeled "Mapiri, Bolivia (green paper, handwritten)/*Cleothera boliviana* m. (handwritten)/SYNTYPUS *Cleothera boliviana* Weise, 1910 labeled by MNHUB 2004." is designated the lectotype, and 2 specimens bearing identical labels are designated paralectotypes.

### 15. *Dilatitibialis annie* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.8 mm, width 2.4 mm; body rounded, slightly elongate, convex. Dorsal surface mostly shiny, lacking alutaceous sculpture except head slightly alutaceous, shiny. Color yellow except pronotum with narrow basomedian macula angulate on each end, 1 small, pale brown spot medially on each side of middle; elytron with suture narrowly dark brown, brown area slightly widened on disc and on apical declivity, 2 irregular, angulate, transverse, dark brown vittae present, 1 unevenly extended from suture laterally across callus to lateral margin of elytron, 1 irregularly extended from suture laterally across apical declivity to lateral margin of elytron (Fig. 80); ventral surface with head, prosternum, meso- and metaventrites black; abdomen black medially, dark brown in lateral 1/4 except apex of ventrite 5 and entire ventrite 6 yellowish brown. Head punctures small, separated by a diameter or less, slightly larger than an eye facet; pronotal punctures slightly larger than head punctures, separated by less than to twice a diameter; elytral punctures slightly larger than on pronotum, separated by 2-4 times a diameter; metaventral punctures larger than on abdomen medially, separated by less than to about a diameter, coarser and separated by less than a diameter toward lateral margin. Clypeus distinctly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange not as wide as remainder of protibia, outer margin irregular, smooth, sponda slightly extended beyond protibial flange (Fig. 81). Carinae on prosternal

process widely separated at apex, convergent toward base, joined at basal 1/3 with single carina extended to basal margin of prosternum. Metaventricle with sparse setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior margin of ventrite, extended forward, ventrite with sparse, short pubescence and dense, coarse punctures; ventrites 2-4 pubescent throughout, punctures small, dense medially, becoming denser toward lateral margin; 5th ventrite depressed medially in apical 1/2, patch of long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface weakly punctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite coarsely, densely punctured, pubescent, apex weakly rounded. Genitalia with basal lobe as long as paramere, sides nearly parallel, slightly narrowed in apical 1/6, apex weakly notched on one side; paramere *Psc*, dorsal surface strongly raised, apex with ventral margin slightly projecting apically (Fig. 82, 83); siphon robust, curved in basal 1/2, inner arm slender, uneven, apex obliquely truncate, outer arm wider and slightly longer than inner arm, base weakly emarginate (Fig. 84, 85).

**Female.** Unknown.

**Variation.** Length 2.8 to 3.2 mm, width 2.4 to 2.6 mm. Both transverse elytral vittae are subject to brief disconnection, either medially or near suture.

**Type material.** Holotype male; Venezuela, Carabobo, Montalban, 180m., 25.III.1968, J. and B. Bechyne leg. (MIZA). Paratypes; 2, same data as holotype (MIZA).

**Other specimen.** 1. Venezuela, Aragua, Rancho Grande, Feb. 18-19, 1971, H. and A. Howden. (USNM).

**Remarks.** These specimens have a seemingly very different color pattern from that of *D. carolinae*, but male genitalia differ very little between the two. The basal lobe of *D. annie* has a small apical notch on one side and paramere more slender, more strongly curved, which are the discernable difference between genitalia of these species. In spite of striking dorsal color pattern differences, it is conceivable that both represent the same species.

The specimen listed under "Other specimen" has a male phallosome nearly identical to that of the holotype, but differs by having a dark pronotal pattern consisting of a narrow basomedian spot extended anteriorly at middle to apical 3/4 of pronotum, dark areas on elytron broader, more pronounced, and a siphon with the basal capsule heavily sclerotized and outer arm long, slender, and sinuate.

## 16. *Dilatitibialis gravabilis* (Brèthes), new combination

*Hyperaspis gravabilis* Brèthes, 1925a: 12; Korschefsky 1931: 190; Blackwelder 1945: 447.

**Description. Male.** Length 2.4 mm, width 1.8 mm; body rounded, slightly elongate, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color black except pronotum with large, irregular, yellow anterolateral angle, apex with median 1/5 yellow with deep, slender, yellow emargination of median black area; elytron with 6 yellow spots arranged in rows of 2, 3, plus an apical spot, median spot on disc small, irregularly oval, mediolateral spot strongly projected inward, apical spot irregularly transverse, apical border emarginate (Fig. 86); ventral surface with head, prosternum, meso- and metaventriles black; abdomen with basal 3 ventrites dark brown medially, lateral margins and ventrites 4-6 brownish yellow to entirely yellow. Head punctures small, separated by a diameter or less, each puncture as large as 2 eye facets; pronotal punctures slightly larger than head punctures, separated by a diameter or less; elytral punctures as large as on pronotum, separated by 1-2 times a diameter; metaventral punctures fine, sparse medially, separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, almost truncate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering

line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia weakly flanged, flange narrower than remainder of protibia, outer margin straight, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/3 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line rounded, not flattened along posterior ventrite margin, extended forward, ventrite with sparse, long pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 1/3, apical 2/3 depressed, densely, finely punctured, depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly rounded. Genitalia with basal lobe slightly shorter than paramere, asymmetrical, narrowed from base to apex, apex obliquely truncate, sinuate in lateral view; paramere slender, strongly *Psc*, apex with small, ventral projection, dorsal margin broadly rounded (Fig. 87, 88); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm wide, sides weakly narrowed, apex slightly emarginate between small lateral projections, outer arm as wide as and slightly longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 89, 90).

**Female.** Similar to male except head with clypeus and narrow border next to eye black, pronotum with black area extended to apical margin medially, without median yellow emargination. Genitalia with spermathecal capsule short, wide basally, narrowed to nearly acute apex of cornu; bursal cap narrowly oval, with 3 arms, apical strut long, slender, apex slightly flattened in lateral view (Fig. 91).

**Variation.** Length 2.4 to 2.8 mm, width 1.8 to 2.4 mm. Elytron often with humeral and mediolateral spots narrowly connected along lateral margin of elytron, spot size subject to minor variation in shape.

**Type locality.** Brazil, Alto da Serra, Sao Paulo.

**Type depository.** BMNH (lectotype here designated).

**Geographical distribution.** Brazil.

**Specimens examined.** 12. **Brazil.** Biol. Boracea, Salesopolis, SP; Espiritu Santo; Rio de Janeiro; Serra do Caraca, Minas Gerais; Vila Monte Verde, Minas Gerais. (BMNH) (CNC) (DZUP) (MZSP) (ZMHB).

**Remarks.** This species has a unique dorsal color pattern with 6 yellow spots on a black background, and the mediolateral spot projected inward. A pattern with 5 yellow spots on each elytron is relatively common, but *D. gravabilis* has an extra spot present medially on the discal area of each elytron. See comparative remarks concerning male genitalia under *D. lillian*.

A female type in the BMNH labeled "Type (orange bordered circle)/type (handwritten)/Alto da Serra, Sao Paulo, Brazil. G. E. Bryant. 29.II.1912/Syntype (blue bordered circle)/*Hyperaspis gravabilis* Brethes (handwritten)." is designated as the lectotype. A second male specimen, bearing identical labels except an orange bordered "Type" label, is designated a paralectotype.

### 17. *Dilatitibialis lillian* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 2.6 mm, width 2.0 mm; body rounded, slightly elongate, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color dark brown except pronotum with large, yellow anterolateral angle, apex with median 1/4 yellow with small, yellow emargination of median dark area; elytron with 5 yellow spots arranged in rows of 2, plus an apical spot, mediolateral spot strongly projected inward with tendency to fuse with posterior discal spot, apical spot narrowly transverse, anterior border nearly straight (Fig. 92); ventral surface with head, prosternum, meso- and metaventrites



dark brown, remainder of surface yellow; abdomen yellowish brown except lateral 1/4 and apical 1/4 of ventrites 4-5, ventrite 6 yellow. Head punctures small, separated by a diameter or less, each puncture as large as 2 eye facets; pronotal punctures slightly larger than head punctures, separated by a diameter or less; elytral punctures as large as on pronotum, separated by 1-2 times a diameter; metaventral punctures fine, sparse medially, separated by less than a diameter toward lateral margin. Clypeus truncate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin curved, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/5 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, long pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 1/3, apical 2/3 depressed, densely, finely punctured, depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex truncate. Genitalia with basal lobe 4/5 length of paramere, asymmetrical, sides nearly parallel, narrowed in apical 1/5, apex weakly rounded; paramere slender, *Psc*, apex with small, ventral projection, dorsal margin broadly rounded (Fig. 93, 94); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm slender, sides weakly narrowed, apex obliquely truncate, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 95, 96).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Paraguay, Sa. Trinidad, IX.1913. (USNM).

**Remarks.** This species is most similar to *D. gravabilis* in external appearance, but has only 5 spots on each elytron. Male genitalia are also similar, although those of *D. lillian* have a shorter basal lobe not narrowed from base to apex, wider than basal lobe of *D. gravabilis*, not sinuate in lateral view; and inner arm of basal lobe obliquely truncate. It is possible that *D. lillian* is synonymous with *D. gravabilis*, but is considered a valid species based on dorsal color and genital differences.

#### 18. *Dilatitibialis tropicalis* (Mulsant), new combination.

*Cleothera tropicalis* Mulsant, 1850: 1038.

*Hyperaspis tropicalis*: Korschevsky 1931: 198; Blackwelder 1945: 448.

**Description. Male** holotype. Length 3.1 mm, width 2.3 mm; body rounded, convex. Color yellow; pronotum with large, basomedian, dark brown macula, macula wide across base, narrowed anteriorly; elytron dark brown with 5 yellow spots arranged as in Fig. 97; ventral surface with head, prosternum, meso- and metaventrites dark reddish yellow; abdomen dark yellowish brown medially, yellow laterally. Head punctures separated by about a diameter, each puncture 2 or 3 times larger than eye facet; pronotal punctures same size as head punctures, separated by a diameter or less, elytral punctures larger than on pronotum, separated by 1-3 times a diameter; metaventral punctures 3 or 4 times as large as on pronotum, separated by a diameter or more medially, becoming larger and contiguous toward lateral margin. Clypeus feebly emarginate apically, lateral angle rounded, clypeus and frons with sparse, long pubescence. Eye

canthus elongate, about 8 eye facets long, slightly angled forward, apically acute, reddish yellow. Pronotum narrowed from base to apex, basal angle abruptly rounded, anterior angle evenly rounded, basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia not flanged, outer margin narrowly oblique, smooth. Carinae on prosternal process wide at apex, convergent toward base, acutely joined at base with single carina extended to basal margin of prosternum. Metaventricle without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, deeply indenting apical margin of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, extended to apical margin of ventrite at middle, then broadly forward, ventrite with sparse, long pubescence and dense, sparse punctures medially; ventrites 2-4 sparsely pubescent throughout, punctures small, dense, becoming denser toward lateral margin; 5th ventrite slightly depressed medially, apical margin deeply emarginate, surface densely punctate in basal 1/2, apical 1/2 impunctate; 6th ventrite depressed in apical 1/2, apical margin deeply emarginate, angle on each side of median depression pronounced, abruptly rounded, surface impunctate. Apical tergite finely, indistinctly punctured. Genitalia with basal lobe slightly shorter than paramere, asymmetrical, wide, narrowed and bent in apical 1/6; paramere *Psc*, slender, strongly curved (Fig. 98, 99); siphon robust, strongly curved in basal 2/3, basal capsule large, inner arm short, wide, dorsally truncate, outer arm wide, slightly longer than inner arm, with small accessory piece, basal border deeply emarginate (Fig. 100, 101).

**Female.** Unknown.

**Variation.** Unknown.

**Type locality.** Brazil.

**Type depository.** ZMUC (holotype, examined).

**Geographical distribution.** Known only from the Brazilian.

**Specimens examined.** The holotype.

**Remarks.** The dorsal color pattern is similar to that of several other species of *Dilatitibialis*, but male genitalia are distinctive.

Mulsant (1850) had only one example of this species, the holotype male labeled "Brasil. Tropicalis Muls. (handwritten)/HOLOTYPE *Cleothera tropicalis* Mulsant (red paper)."

### 19. *Dilatitibialis emily* Canepari and Gordon, new species

**Description. Male** holotype. Length 3.0 mm, width 2.3 mm; body rounded, slightly elongate, convex. Dorsal surface shiny except head alutaceous, dull, pronotum weakly alutaceous, shiny. Color black except pronotum with large, yellow anterolateral angle, apex with median 1/3 yellow with small, yellow emargination of median dark area; elytron with 5 yellow spots arranged in rows of 2, plus an apical spot, mediolateral spot irregularly oval, apical spot transversely oval (Fig. 102); ventral surface with head, prosternum, meso- and metaventriles black, remainder of surface yellow; abdomen yellowish brown. Head punctures small, separated by a diameter or less, each puncture as large as 2 eye facets; pronotal punctures larger than head punctures, separated by less than to twice a diameter; elytral punctures larger than on pronotum, separated by 1-2 times a diameter; metaventral punctures larger than on elytron, separated by less than a diameter, larger toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus 6-7 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin curved, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/5 with single carina extended to basal margin of prosternum. Metaventricle without setal tuft.

Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, long pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, densely, finely punctured, slightly depressed by primary pore laterally, without tubercle on each side of middle, broadly emarginate apically; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex rounded. Genitalia with basal lobe 3/4 length of paramere, asymmetrical, sides parallel, apex obliquely rounded; paramere wide, *Psc*, apex nearly truncate, with small, ventral projection, dorsal margin nearly straight (Fig. 103, 104); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, slender, sides convergent, apex rounded, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 105, 106).

**Female.** Unknown.

**Variation.** Length 2.7 to 3.0 mm, width 2.0 to 2.3 mm. Pronotum with size of mediobasal black area slightly variable, apex of black area entire or feebly emarginate with yellow.

**Type material.** Holotype male; (Brazil), Fry Rio Jano (Rio de Janeiro), Fry Coll. 1905. 100., standing as *gacognii* Mls, det. R.G. Booth 2008. (BMNH). Paratypes ; 2, 1 same data as holotype; 1, St Paul Braz (São Paulo, Brazil) (blue disc), *Cleothera gacognii* Muls. (BMNH).

**Remarks.** Recognized primarily by the distinctive male genitalia, *D. emily* has a dorsal color pattern similar to that of several other species of *Dilatitibialis*.

## 20. *Dilatitibialis robin* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.0 mm, width 1.6 mm; body rounded, slightly elongate, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color black except pronotum with large, yellow rectangular anterolateral angle, apex with median 1/5 yellow with faint, yellow emargination of median dark area; elytron with 5 large, yellow spots arranged in rows of 2, plus an apical spot, mediolateral spot strongly projected inward, apical spot broadly transverse, anterior border straight (Fig. 107); ventral surface with head, prosternum, meso- and metaventrites black to dark brown, remainder of surface yellow; abdomen yellowish brown. Head punctures small, separated by a diameter or less, each puncture as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by a diameter or less; metaventral punctures fine, sparse medially, separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange slightly wider than remainder of protibia, outer margin curved, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/5 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded throughout, extended forward, ventrite with sparse, long pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, densely, finely punctured, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punc-

tured, pubescent, apex rounded. Genitalia with basal lobe as long as paramere, asymmetrical, sides weakly convergent from base to apex, apex weakly notched; paramere slender, *Psc*, apex with small, ventral projection, dorsal margin strongly rounded (Fig. 108-110); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm slender, apex rounded, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 111,112).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Venezuela, Aragua, Cer. Choroni, 1600m., Feb. 26, 1971, H. and A. Howden. (USNM).

**Remarks.** Small size, large yellow spots on elytron, and male genitalia distinguish this species from *D. lillian*, a species with the same general dorsal color pattern.

### 21. *Dilatitibialis peggy Canepari and Gordon, new species*

**Description. Male** holotype. Length 3.0 mm, width 2.5 mm; body rounded, slightly elongate, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, somewhat shiny, elytron lacking alutaceous sculpture, shiny. Color light brown except pronotum with large, yellow rectangular anterolateral angle, apex with median 1/4 yellow with deep, yellow emargination of median dark area; elytron with 5 large yellow spots arranged in rows of 2, plus an apical spot, mediolateral spot slightly projected inward, apical spot irregularly triangular (Fig. 113); ventral surface with head, prosternum, meso- and metaventrites black to dark brown, remainder of surface yellow; abdomen yellowish brown. Head punctures small, separated by a diameter or less, each puncture as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by a diameter or less; elytral punctures about as large as on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or less medially, coarser, separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin curved, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined slightly anterior to midpoint with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward, ventrite with sparse, long pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, densely, finely punctured, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex truncate. Genitalia with basal lobe slightly longer than paramere, asymmetrical, sides weakly convergent from base to apex, apex feebly rounded; paramere wide, *Psc*, apex with small, ventral projection, dorsal margin rounded (Fig. 114, 115); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, curved, apex rounded, outer arm wider and about as long as inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 116, 117).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Brazil, Espr. Santo (Espírito Santo), Korschefsky Collection 1952. (USNM).

**Remarks.** As usual in this group of species having a dark dorsal surface with 5 yellow spots, male genitalia are the best criteria for species identification. *Dilatitibialis peggy* is no exception with the long, slightly tapered basal lobe. This species is also distinguished from *D. robin* by the larger size, and from *D. lillian* by the pronotal color pattern having a basal dark area strongly indented apically by a yellow emargination.

## 22. *Dilatitibialis crystal* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.4 mm, width 1.7 mm; body rounded, convex. Dorsal surface shiny with head and pronotum weakly alutaceous. Color yellow; pronotum with small, narrow, light brown basomedian macula, macula triangularly extended anteriorly at each end, 1 small, pale brown, triangular median spot on each side of middle at center of pronotum; elytron with 4 irregular, light brown spots in rows of 2 each, humeral spot indistinctly connected to discal spot and to lateral margin, posterolateral spot reaching lateral margin (Fig. 118); ventral surface with head, prosternum, meso- and metaventrites light brown; abdomen brownish yellow medially, yellow in lateral 1/4. Head punctures separated by about a diameter, each puncture about as large as an eye facet; pronotal punctures larger than head punctures, separated by less than to twice a diameter, elytral punctures larger than on pronotum, separated by less than to 3 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or more medially, becoming larger and separated by less than a diameter toward lateral margin. Clypeus feebly emarginate apically, lateral angle rounded, clypeus with sparse, long pubescence. Eye canthus elongate, about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal angle abruptly rounded, anterior angle evenly rounded, lateral margin slightly curved, basal margin without bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, outer margin arcuate, smooth. Carinae on prosternal process wide at apex, convergent toward base, acutely joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded, flattened along posterior margin of ventrite, then broadly forward, ventrite with sparse, long pubescence and dense punctures medially; ventrites 2-4 sparsely pubescent throughout, punctures large, dense, becoming denser toward lateral margin; 5th ventrite depressed in apical 1/3, apical margin broadly emarginate, surface densely punctate in basal 1/2, apical 1/2 nearly impunctate; 6th ventrite depressed medially, apical margin shallowly emarginate, angle on each side of median depression pronounced, abruptly rounded, surface impunctate. Apical tergite densely punctured, apex rounded. Genitalia with basal lobe slightly shorter than paramere, asymmetrical, wide, apex irregularly triangular; paramere weakly *Psc*, slender, weakly curved, apically rounded (Fig. 119, 120); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, apically rounded, outer arm wider and slightly longer than inner arm, with accessory piece, basal border deeply emarginate (Fig. 121, 122).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Colombia, Cnd. (Cundinamarca), Anapoima, 14 Aug 1965, J.A. Ramos Collector. (USNM).

**Remarks.** The dorsal color pattern of this species is distinctive within *Dilatitibialis*. Male genitalia with a triangular basal lobe apex are similar to those of *D. florifera*, but the parameres differ in that those of *D. florifera* are strongly *Psc*, while parameres of *D. crystal* are much less so.

**23. *Dilatitibialis silvani* (Crotch), new combination**

*Hyperaspis silvani* Crotch, 1874: 214; Korschefsky 1931: 197; Blackwelder 1945: 448; Gordon 1987: 27.

**Description. Male.** Length 2.7 mm, width 2.3 mm; body rounded, convex. Dorsal surface shiny, lacking alutaceous sculpture. Color yellow except pronotum with narrow, basomedian, dark brown macula extended anteriorly beyond middle of pronotum on each side; elytron with suture and 4 spots dark brown, dark area along suture widened slightly on apical declivity, discal spot rectangular, connected to suture, humeral spot irregularly round, inner spot on apical declivity narrow, elongately oval, lateral spot on apical declivity narrow, elongate, irregularly oval (Fig. 123); ventral surface with head, prosternum, meso- and metaventrites dark brown; abdomen mostly yellowish brown except lateral 1/4 paler brownish yellow. Head punctures small, separated by a diameter or less, as large as or slightly larger than an eye facet; pronotal punctures slightly larger than head punctures, separated by less than to twice a diameter; elytral punctures as large as on pronotum, separated by less than to twice a diameter; metaventral punctures larger than on elytron, separated by less than a diameter medially, becoming larger and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, curved, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin straight, basal margin without bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin weakly rounded, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent nearly to base, joined just before base with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of ventrite 4; postcoxal line on abdominal ventrite rounded, extended to apical margin of ventrite at middle, slightly flattened along margin, then broadly forward, ventrite with sparse, long pubescence and dense, coarse punctures medially; ventrites 2-4 sparsely pubescent throughout, punctures small, dense; 5th ventrite depressed medially at apex, long pubescence on each side of median depression, without tubercle on each side of middle, apical margin broadly emarginate, surface nearly impunctate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, surface nearly impunctate. Apical tergite densely punctured, pubescent, apical border weakly rounded. Genitalia with basal lobe 5/6 as long as paramere, asymmetrical, triangular in outline, apex bluntly rounded; paramere *Psc*, similar to the scimitar-like paramere typical of *Brachiacantha* species, narrowed (Fig. 124, 125); siphon robust, strongly curved in basal 2/3, basal capsule large, inner arm short, narrowed at middle, apex feebly emarginate with lateral projections, outer arm as wide as inner arm, slightly longer than inner arm, with accessory piece, basal border widely emarginate (Fig. 126, 127).

**Female.** Similar to male except head with vertex dark brown on each side at base of eye, pronotum with basomedian macula large, extended medially nearly to anterior pronotal margin, deeply, narrowly emarginate with yellow at middle. Genitalia with spermathecal capsule short, wide, narrowed in apical 1/2; bursal cap narrowly oval, with 3 distinct arms, apical strut long, robust (Fig. 128).

**Variation.** Length 2.0 to 2.8 mm, width 1.6 to 2.4 mm. Elytral color pattern varies from the typical described above to having all dark spots narrowly connected, forming 2 transverse, very irregular bands, or further fused forming a nearly all dark surface with scattered, small yellow spots

**Type locality.** Brazil.

**Type depository.** UMZC (holotype, examined).

**Geographical distribution.** Brazil.

**Specimens examined.** 53. **Brazil.** Distributed throughout much of southern and eastern Brazil. (CAS) (CMNH) (DZUP) (GGC) (USNM).

**Remarks.** Specimens of *D. silvani* are easily recognized if they possess the typical dorsal color pattern. If that pattern is suffused into a mostly dark surface with small, yellow spots, then genitalia must be used to aid in recognition.

This is a highly variable species. For example, most of a series from Ilha da Vitória, Sao Paulo, Brazil, has a dark elytral background with small, scattered yellow spots. However, some specimens in that series exhibit the typical *D. silvani* color pattern.

#### 24. *Dilatitibialis gladys* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.4 mm, width 1.8 mm; body rounded, convex. Dorsal surface weakly alutaceous, shiny. Color yellow; pronotum with 6 small, brown spots, 1 triangular basomedian spot on each side of middle, 1 triangular spot on each side at middle of pronotum, and 1 irregular oval spot on each side near lateral margin; elytron with suture narrowly brown, 4 brown spots in rows of 2 each, humeral spot irregularly rounded, discal spot narrowly elongate, outer spot on apical declivity elongately triangular, inner spot on apical declivity elongate oval (Fig. 129); ventral surface with head, prosternum, meso- and metaventrites dark brown; abdomen with median area of ventrites 1-3 dark brown medially, ventrites 1-3 laterally and ventrites 4-5 yellowish brown. Head punctures separated by less than to twice a diameter, each puncture as large as 1-2 eye facets; pronotal punctures larger than head punctures, separated by less than to about a diameter, elytral punctures larger than on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or less medially, becoming larger and separated by less than a diameter toward lateral margin. Clypeus feebly emarginate apically, lateral angle rounded, clypeus with sparse, long pubescence. Eye canthus elongate, about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal angle abruptly rounded, anterior angle abruptly rounded, lateral margin straight, basal margin without bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin slightly arcuate, smooth, sponda slightly extended beyond flange. Carinae on prosternal process widely separated at apex, convergent toward base, acutely joined at basal 1/3 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded throughout, extended forward, ventrite with sparse, long pubescence and dense punctures medially; ventrites 2-4 sparsely pubescent throughout, punctures large, dense, becoming denser toward lateral margin; 5th ventrite depressed in apical 1/2, apical margin broadly emarginate, surface densely punctate in basal 1/2, apical 1/2 nearly impunctate; 6th ventrite depressed medially, apical margin shallowly emarginate, angle on each side of median depression pronounced, abruptly rounded, surface impunctate. Apical tergite densely punctured, apex rounded. Genitalia with basal lobe 3/4 as long as paramere, asymmetrical, narrow, triangular from base to apex, apex rounded; paramere *Psc*, slender, weakly curved (Fig. 130, 131); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, apically truncate, outer arm slightly wider and longer than inner arm, with accessory piece, basal border widely emarginate (Fig. 132, 133).

**Female.** Similar to male except clypeus and apex of frons brown, pronotal spots slightly larger than in male. Genitalia with spermathecal capsule short, wide in basal 1/2, abruptly narrowed in apical 1/2; bursal cap oval, with 3 arms, apical strut short, slender, slightly widened at apex (Fig. 134).

**Variation.** Length 2.3 to 2.4 mm. Size and shape of dark pronotal and elytral spots slightly variable.

**Type material.** Holotype male; Brazil, San Antonio, No. 306, Montevideo So Amer Paras Lab, Date 5.23.43, Host, Berry. (USNM). Paratypes; 3, Brazil, Sao Paulo, Campos do Jordao, VII.1957, K. Lenko (CMNH).

**Remarks.** This is another species with a unique dorsal color pattern, although slightly reminiscent of *D. poortmanni*.

The holotype was collected in Brazil by a member (Berry) of a U.S. Department of Agriculture parasite laboratory then located in Montevideo, Uruguay.

### 25. *Dilatitibialis rita* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 2.0 mm, width 1.6 mm; body rounded, slightly elongate, convex. Dorsal surface with head shiny, pronotum and elytron weakly alutaceous, shiny. Color black except pronotum with anterolateral angle broadly yellow, anterior 1/7 yellow; elytron with 3 small, yellow spots, humeral spot triangular, scutellar spot irregularly rounded, apical spot irregularly triangular (Fig. 135); ventral surface with antenna, mouthparts, prothoracic hypomerion, legs yellow; abdomen yellowish brown. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by less than to twice a diameter; elytral punctures larger than on pronotum, separated by less than to twice diameter; metaventral punctures larger than on elytron, separated by a diameter or less medially, coarser, separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange as wide as remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/7 with single carina extended to basal margin of prosternum. Metaventricle without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward, ventrite with sparse, long pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly emarginate. Genitalia with basal lobe short, wide, 3/4 as long as paramere, asymmetrical, sides weakly convergent near apex, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 136, 137); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, apex obliquely truncate, outer arm wider and about as long as inner arm, with accessory piece, basal border broadly emarginate (Fig. 138, 139).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; (Brazil), Espiritu Santo. (ZMHB).

**Remarks.** *Dilatitibialis rita* is distinguished by the unusual elytral spot pattern and male genitalia. The male holotype has 3 small, yellow spots on each elytron, a pattern that may indicate that the female has only 2 spots, lacking the humeral spot. This species has the same basic color pattern as *D. diana*, but male genitalia place these 2 species in different parts of the genus.

### 26. *Dilatitibialis dawn* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 2.0 mm, width 1.6 mm; body rounded, slightly elongate, convex. Dorsal surface with head, pronotum weakly alutaceous, shiny, elytron smooth, shiny. Color dark brown except head yellow with narrowly brown clypeal apex, pronotum with lateral 1/5 and apical 1/3 yellow;



elytron with 5 large, yellow spots arranged in rows of 2 each plus apical spot, mediolateral spot projected inward (Fig. 140); ventral surface with mouthparts, prothoracic hypomeron, and legs yellow; abdomen yellowish brown. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by less than to twice a diameter; elytral punctures larger than on pronotum, separated by less than to 3 times a diameter; metaventral punctures as large as on elytron, separated by about 3 times a diameter medially, coarser, separated by less than to twice a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange not as wide as remainder of protibia, outer margin curved, smooth, sponda strongly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, sparse punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite lost. Genitalia with basal lobe short, wide, 3/4 as long as paramere, asymmetrical, sides parallel, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection, trabes sinuate (Fig. 141, 142); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, weakly curved, apex rounded, outer arm wider and about as long as inner arm, with accessory piece, basal border broadly emarginate (Fig. 143, 144).

**Female.** Similar to male except head entirely brown, pronotum brown except lateral 1/4 irregularly yellow. Genitalia with spermathecal capsule short, wide, curved medially, cornu slightly widened; bursal cap oval with 2 outer arms, apical strut short, widened from base to rounded apex (Fig. 145).

**Variation.** Length 2.0 to 2.4 mm, width 1.6 to 1.8 mm. Discal spot on each elytron varies slightly from nearly round to somewhat elongate.

**Type material.** Holotype male; Brazil, Manaós, July 1935, B.V. Vredenburg, Brit. Mus 1935-615. (BMNH). Paratypes; 4, Brazil, Chapada, Acc. No. 2966, Nov. (CMNH).

**Remarks.** *Dilatitibialis dawn* is another small species with 5 spots on each elytron. Male genitalia with a short, wide basal lobe place it in a group with *D. rita* and other species, but the clypeus with narrow, brown apex, smooth brown elytron, and male genitalia will serve to distinguish it.

## 27. *Dilatitibialis scenica* (Mulsant), new combination

*Cleothera scenica* Mulsant, 1850: 580.

*Hyperaspis scenica*: Crotch 1874: 220; Korschefsky 1931: 195; Blackwelder 1945: 448.

*Cleothera retigera* Mulsant, 1850: 583. (**NEW SYNONYM**).

*Hyperaspis retigera*: Crotch 1874: 214; Korschefsky 1931: 195; Blackwelder 1945: 448.

**Description. Male.** Length 3.0 mm, width 2.6 mm; body rounded, slightly elongate, convex. Dorsal surface smooth, shiny. Color brown except pronotum yellow with mediobasal spot extended to anterior 2/3 of pronotum, spot deeply emarginate medially with “anchor” shaped yellow area; elytron with 8 small, yellow spots, humeral spot oval, scutellar spot oval with posterolateral angle emarginate, mediolateral spot projected inward, apical spot irregularly triangular with anterolateral angle connected to small

sutural spot (Fig. 146) ; ventral surface with antenna, mouthparts, prothoracic hypomerion, legs yellow; abdomen brown medially, lateral 1/4 and ventrites 5-6 brownish yellow. Head punctures small, separated by about a diameter, each puncture about as large as an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron, separated by a diameter or less medially, coarser, separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange slightly wider than remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventricle without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly convex. Genitalia with basal lobe short, wide, 3/4 as long as paramere, asymmetrical, sides parallel in basal 1/2, obliquely truncate laterally in apical 1/2, apex rounded; paramere wide, curved, *Psc*, apex with small ventral projection (Fig. 147, 148); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, wide, apex obliquely truncate, outer arm wider and slightly longer than inner arm, with accessory piece, basal border broadly emarginate (Fig. 149, 150).

**Female.** Similar to male except pronotal color pattern as in male or median area with 2 longitudinal brown vittae, or entirely dark, elytron with humeral spot present. Genitalia with spermathecal capsule elongate, cornu slightly widened; bursal cap without sclerotized arms, apical strut long, slender, widened in apical 1/2 (Fig. 151).

**Variation.** Length 2.4 to 3.0 mm, width 2.3 to 2.6 mm. Dorsal color pattern highly variable, background color varies from light brown to black, specimens have 5 to 8 spots on each elytron, small, elongate spot sometimes present in lateral 1/2 between mediolateral spot and apical spot, apical spot sometimes separated from its anterolateral extension forming 2 spots, inner portion of mediolateral spot sometimes discrete, mediolateral and apical spots often narrowly connected along lateral margin.

**Type locality.** Colombia.

**Type depository.** Of *scenica*, MNHL (lectotype here designated) of *retigera*, BMNH (lectotype here designated).

**Geographical distribution.** Colombia.

**Specimens examined.** 30. **Colombia.** A frequently collected Colombian species. (BMNH) (MNHL) (USNM) (ZMHB)

**Remarks.** This species usually has a distinctive dorsal color pattern, but some specimens are darker than typical and have spots on each elytron reduced to 5. However, the unique pronotal pattern and shape of the sutural spot on each elytron will usually enable identification. The median “anchor” shaped yellow pronotal spot is distinctive as is the posterior emargination of the basal scutellar spot. Examination of types of both species names indicates that they are synonymous.

A specimen in the Dejean collection (MNHL) labeled “Colombia, Lebas” is designated as the lectotype of *D. scenica*. A male in the BMNH labeled “Type (orange bordered disc)/57 71 (blue disc)/Retigera

Muls. Bresil (handwritten) (green paper/Named by Mulsant.” is designated the lectotype of *D. retigera*.

## 28. *Dilatitibialis connie* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 2.6 mm, width 2.2 mm; body rounded, slightly elongate, convex. Dorsal surface smooth, shiny except pronotum feebly alutaceous, shiny. Color dark brown except head yellow, pronotum with dark brown, basomedian macula extended almost 2/3 distance to anterior margin, apex of macula broadly, weakly emarginate with yellow; elytron with 5 small, yellow spots arranged in rows of 2 each plus apical spot, sutural spot triangularly elongate, apical spot transversely oval (Fig. 152); ventral surface with mouthparts, prothoracic hypomeron, and legs yellow; abdomen with basal 3 ventrites dark brown medially, yellowish brown near lateral margin, remaining ventrites brownish yellow. Head punctures small, separated by a diameter or less, each puncture about as large as 2 eye facets; pronotal punctures larger than head punctures, separated by less than to twice a diameter; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron, separated by a diameter medially, coarser, separated by less than a diameter toward lateral margin. Clypeus apically truncate or nearly so, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin curved, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 1/3, apical 2/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite with apex weakly rounded. Genitalia with basal lobe short, wide, 2/3 as long as paramere, asymmetrical, sides parallel, apex rounded; paramere wide, curved, *Psc*, apex somewhat truncate, with small, ventral projection, trabes straight (Fig. 153, 154); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, nearly straight, apex rounded, outer arm about as long as inner arm, with accessory piece, basal border broadly emarginate (Fig. 155, 156).

**Female.** Unknown.

**Variation.** Length 2.4 to 2.6 mm, width 2.0 to 2.2 mm. Dorsal background color varies from dark brown to black.

**Type material.** Holotype male; Peru, Tingo Maria, IX-10 44, EJ Hambleton. (USNM). Paratype; 1, same data as holotype (USNM).

**Other specimens.** 2. Brazil, Chapada, Brazil, Acc. No. 2966; horto flor ITCLS Paulo, 14.IX 1959, J. Halik, 13131, Halik Collection 1966. (CMNH) (USNM).

**Remarks.** *Dilatitibialis connie* is distinguished from other species in this by an elytron with 5 yellow spots, sutural spot elongately triangular, apical spot transversely oval, and a Peruvian type locality. It bears a spot pattern similar to those of *D. edna* and *D. florence*, but has male genitalia with a more or less truncate parameral apex while the parameral apices of the other two species are rounded.

**29. *Dilatitibialis florence* Canepari and Gordon, new species**

**Description.** **Male** holotype. Length 2.5 mm, width 2.0 mm; body rounded, slightly elongate, convex. Dorsal surface smooth, shiny except pronotum feebly alutaceous, shiny. Color black except head yellow, pronotum with black basomedian macula extended 2/3 distance to anterior margin, apex of macula deeply, narrowly emarginate with yellow; elytron with 4 small, yellow spots, 2 basal spots, 1 discal, 1 lateral spot narrowed medially, scutellar spot irregularly rounded, discal spot irregularly triangular on both ends (Fig. 157); ventral surface with antenna, mouthparts, prothoracic hypomeron and legs yellow; abdomen yellowish brown medially, lateral 1/4 and ventrites 5-6 brownish yellow. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by 1-2 times a diameter; elytral punctures as large as on pronotum, separated by 1 to 4 times a diameter; metaventral punctures lacking medially, smaller than elytral punctures near middle, separated by twice a diameter, coarser, separated by about a diameter toward lateral margin. Clypeus apically truncate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin with trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin curved, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite with apex weakly rounded. Genitalia with basal lobe short, wide, 3/4 as long as paramere, asymmetrical, sides weakly rounded, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection, trabes straight (Fig. 158, 159); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, sinuate, apex rounded, outer arm about as long as inner arm, with accessory piece, basal border broadly, weakly emarginate (Fig. 160, 161).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Peru, Satipo, XI, 1942, Paprzycki. (USNM).

**Remarks.** *Dilatitibialis connie* and *D. florence* are similar in nearly all regards except for differing dorsal color patterns. The latter species is also distinguished by a metaventrite impunctate medially, and with punctures in lateral 1/2 small, separated by about a diameter. The elytron of *D. florence* has a long, narrow lateral spot in the apical 1/2, but this spot probably represents a connection of the mediolateral and apical spots. These species may be synonymous, but are here treated as valid because of these differences, see remarks under *D. connie*.

This species named for Claudio Canepari's wife, Florence, in recognition of her long standing patience with entomological matters.

**30. *Dilatitibialis tracy* Canepari and Gordon, new species**

**Description.** **Male** holotype. Length 2.5 mm, width 1.7 mm; body elongate, convex. Dorsal surface with head smooth, shiny, pronotum and elytron weakly alutaceous, shiny. Color black except head yellow,

pronotum with lateral 1/4 and anterior 1/6 yellow, apex of black median macula entire, not emarginate with yellow; elytron with 3 small, yellow spots, 2 basal spots, 1 discal, without lateral spot, scutellar spot irregularly triangular, discal spot irregularly obliquely oval, apical spot transversely oval (Fig. 162); ventral surface with antenna, mouthparts, prothoracic hypomeron, and legs yellow; abdomen brown medially, lateral 1/4 and ventrites 5-6 yellowish brown. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by 1-2 times a diameter; elytral punctures as large as those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron medially, separated by 1 to 2 times a diameter, becoming coarser, separated by less than a diameter laterally. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 4 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange as wide as remainder of protibia, outer margin curved, smooth, sponda feebly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, sparse punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense laterally, becoming denser toward lateral margin; 5th ventrite coarsely, sparsely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite with apex weakly rounded. Genitalia with basal lobe short, wide, 3/4 as long as paramere, asymmetrical, sides weakly rounded, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection, trabes straight (Fig. 163, 164); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, apex rounded, outer arm slightly longer than inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 165, 166).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Brazil, Serra Caraca - 1380m, MG-Brasil - XI - 961, Kloss, Lenko, Martins & Silva col. (MZSP).

**Other specimens.** 3. (Brazil) Espiritu Santo; Rio de Janeiro. (BMNH) (ZMHB)

**Remarks.** This species is superficially similar to the preceding 2, but the body is more, elongate, it has 4 yellow spots on each elytron, and the eye canthus is short, as long as 4 eye facets. Male genitalia of all 3 species are extremely similar, but external characters differ as stated. Specimens listed under "Other specimens" agree well with the holotype of *D. tracy* in external appearance, but male genitalia differ slightly.

### 31. *Dilatitibialis edna* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.5 mm, width 1.7 mm; body elongate, convex. Dorsal surface smooth, shiny except pronotum feebly alutaceous, shiny. Color black except head yellow, pronotum with black, basomedian macula extended 2/3 distance to anterior margin, apex of macula weakly, narrowly emarginate with yellow; elytron with 4 large, yellow spots, humeral spot elongate along lateral margin, narrowly connected to mediolateral spot, scutellar spot irregularly oval, discal spot with inner margin straight, outer margin curved, apical spot triangularly oval (Fig. 167); ventral surface with antenna,

mouthparts, prothoracic hypomeron, and legs yellow; abdomen yellowish brown medially, lateral 1/4 and ventrites 5-6 brownish yellow. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by 1-3 times a diameter; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron medially, separated by less than a diameter, coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex weakly rounded. Genitalia with basal lobe short, wide, 2/3 as long as paramere, asymmetrical, sides weakly rounded, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 168, 169); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, wide, curved, apex rounded, outer arm about as long as inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 170, 171).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Brasil, Faz. Pau d'Alho, Itú, 9-IX-961, Col.: U. Martins. (MZSP).

**Other specimen.** 1. Argentina, Misiones, Dep. Concep., Sta. Maria, XI.1958, M. J. Viana, ex Coleccion M. Viana Arg. 033165, Coleccion J.E. Barriga, CHILE 076922. (JEBC).

**Remarks.** *Dilatitibialis connie*, *D. florence*, and *D. edna* have similar male genitalia as well as overall size and dorsal color patterns. Differences are somewhat minor, but they are here considered valid species based on differences in size of eye canthus, differing ventral punctation, and dorsal color patterns. See remarks under *D. connie*.

One specimen from Misiones, Argentina, matches the holotype of *D. edna* in both dorsal color pattern and male genitalia, and is recorded as "Other specimen."

### 32. *Dilatitibialis tiffany* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 2.8 mm, width 2.3 mm; body rounded, slightly elongate, convex. Dorsal surface smooth, shiny except pronotum feebly alutaceous, shiny. Color yellow except pronotum with large, dark brown, irregularly triangular mediobasal spot on each side of middle, spots narrowly connected at basal pronotal margin; elytron with 3 large, dark brown spots, humeral spot irregularly rounded, discal spot on sutural margin irregularly elongate, connected to mate on opposite elytron, median spot on apical declivity large, irregularly rectangular (Fig. 172); ventral surface with head, prosternum, meso- and metaventrite black; abdomen with ventrites 1-4 dark brown medially, yellowish brown in lateral 1/4, and ventrites 5-6 yellow. Head punctures small, separated by a diameter, each puncture about as large as an eye facet; pronotal punctures slightly larger than head punctures, sepa-

rated by 1 to 2 times a diameter; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures slightly larger than those on elytron medially, separated by less than a diameter, coarser and separated by a diameter or less toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond protibial flange (Fig. 173). Carinae on prosternal process short, narrowly separated at apex, convergent toward base, joined at middle of prosternum, without carina extended to basal margin of prosternum. Metaventrite with sparse setal tuft. Basal abdominal ventrite with sparse setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large; ventrite 5 coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; ventrite 6 short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex weakly rounded. Genitalia with basal lobe short, wide, 3/5 as long as paramere, asymmetrical, sides straight, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 174, 175); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, curved, apex rounded, outer arm as long as inner arm, with accessory piece, basal border broadly, deeply emarginate. (Fig. 176, 177).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; (Argentina), Arg., Misiones, Piñalito, 1-1975, M. Viana, ex Coleccion M. Viana Arg. 035068, Coleccion J.E. Barriga, CHILE 076773. (JIBC).

**Remarks.** In addition to a distinctive elytral color pattern, *D. tiffany* may be recognized by the short prosternal carina extended only to midpoint of prosternum, not connected to the prosternal base by a carina.

### 33. *Dilatitibialis carmen* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.6 mm, width 2.0 mm; body rounded, slightly elongate, convex. Dorsal surface weakly alutaceous, shiny. Color yellow except pronotum with large, narrow, light brown mediobasal spot, spot extended nearly 3/4 distance to anterior pronotal margin, narrowly, deeply emarginate with yellow medially; elytron with 3 large, light brown spots and apical margin narrowly brown, humeral spot irregularly rectangular, spot on sutural margin extended from basal 1/5 to apex, narrowed from base to apex, connected to mate on opposite elytron, spot on apical declivity irregularly obliquely oval (Fig. 178); ventral surface with head, prosternum, meso- and metaventrite pale reddish yellow, legs yellow; abdomen pale reddish yellow. Head punctures small, separated by less than a diameter, each puncture about as large as an eye facet; pronotal punctures as large as head punctures, separated by 2 to 4 times a diameter; elytral punctures as large as on pronotum, separated by 2 to 4 times a diameter; metaventral punctures slightly larger than those on elytron medially, separated by less than a diameter, coarser and separated by a diameter or less toward lateral margin. Clypeus truncate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond

protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 5/6, with carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of ventrite 4; postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, weakly extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large; ventrite 5 coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; ventrite 6 short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex weakly rounded. Genitalia with basal lobe short, wide, 3/4 as long as paramere, asymmetrical, sides straight, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 179, 180); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, narrowed medially, apex obliquely truncate, outer arm slightly longer than inner arm, with accessory piece, basal border broadly, weakly emarginate (Fig. 181, 182).

**Female.** Similar to male except head with clypeus brown, frons and vertex pale brown adjacent to eye. Genitalia with spermathecal capsule short, wide, curved medially; bursal cap with 3 faintly defined arms, apical strut long, widened from base to laterally flattened apex (Fig. 183).

**Variation.** Length 2.5 to 2.6 mm, width 1.9 to 2.0 mm. Elytral spots vary slightly in size.

**Type material.** Holotype male; (Venezuela), Petare-Guarenas. 3-18-'38, Venez#58, CHBallou, Miller. (USNM). Paratypes; 2, 1, same data as holotype (USNM); 1, Venezuela, Aragua, Ocumare De La Costa 2kmN, 12 June 1976, A. S. Menke&D. Vincent (USNM).

**Remarks.** The dorsal color pattern is distinctive for this species. In addition, the basal abdominal ventrite has a postcoxal line with apex extremely short, indistinct.

### 34. *Dilatitibialis rosa Canepari* and Gordon, new species

**Description. Male** holotype. Length 2.1 mm, width 1.7 mm; body rounded, slightly elongate, convex. Dorsal surface weakly alutaceous, shiny. Color yellow except pronotum with large, dark brown, oval mediobasal macula extended about 2/3 distance to anterior pronotal margin, macula with small, obliquely triangular yellow spot on each side of middle; elytron with 2 dark brown spots and sutural margin irregularly brown from scutellum to apex, anterior discal spot large, irregularly round, narrowly connected to sutural margin and to lateral margin, apical spot irregularly oval, narrowly connected to sutural margin and anterior discal spot (Fig. 184); ventral surface with head, prosternum hypomeron, prosternum, meso- and metaventrite brownish yellow; abdomen brownish yellow medially, with lateral 1/4 and ventrites 5-6 yellow. Head punctures small, separated by about a diameter, each puncture as large as an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron medially, separated by less than a diameter, coarser and separated by a diameter or less toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/6, with single carina extended to basal margin of prosternum. Metaventrite without sparse setal tuft. Basal abdominal ventrite without sparse setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and



large, dense punctures; ventrites 2-4 pubescent throughout, punctures large; ventrite 5 coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; ventrite 6 short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex truncate. Genitalia with basal lobe short, wide, 3/5 as long as paramere, asymmetrical, sides weakly convergent from base to apex, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 185, 186); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, apex rounded, outer arm slightly longer than inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 187, 188).

**Female.** Similar to male except frons and vertex entirely brown, apex of brown area on frons triangularly projected. Spermathecal capsule, short, wide, slightly curved; bursal cap narrowly oval, with 2 arms, apical strut long, apex slightly widened (Fig. 189).

**Variation.** Length 2.0 to 2.1 mm, width 1.6 to 1.7 mm. Elytral spots somewhat variable in size and shape.

**Type material.** Holotype male; (Trinidad), Dept. Agr. grounds, Port-of-Spain Trin, Oct. 31, 1918. A-840. Harold Morrison. (USNM). Paratypes; 6, 1, 'Abadie', Trinidad, Oct. 15, 1918. A-763. Harold Morrison (USNM); 2, 6 1/2. Post, Maracas Bay, Trinidad, W.I. Aug. 11, 22, 1969, H. & A. Howden (USNM); 1, Palo Seco, Trinidad, Oct. 20, 1918. A796, Harold Morrison (USNM); 1, Simla, 5mi. N. Arima, Trinidad, W.I. Aug. 20, 1969, H. & A. Howden (USNM); 1, Trinidad, St. George Co., Morne Bleu, 1950ft. 10°43'N 61°18'W. 14 Sep 1996, E. Fuller, beating: 2 forest. (CMNH) (USNM).

**Remarks.** This little species is recognized by the dorsal color pattern which is similar only to that of *Cyra distinguenda* (Mulsant), also known from Trinidad, but not to any other species of *Dilatitibialis*.

### 35. *Dilatitibialis grace* Canepari and Gordon, new species

**Description. Male** holotype. Length 2.3 mm, width 1.8 mm; body elongate, convex. Dorsal surface smooth, shiny. Color black except head yellow, pronotum with black basomedian macula extended 3/4 distance to anterior margin, apex of macula irregularly entire; elytron with 2 pale spots, humeral spot small, yellow, triangular, discal spot large, reddish yellow, oval (Fig. 190); ventral surface with antenna, mouthparts, prothoracic hypomeron, and legs yellow; abdomen yellowish brown. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron medially, separated by a diameter or less, coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin slightly curved, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/7 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of

median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex broadly emarginate. Genitalia with basal lobe short, wide, 3/4 as long as paramere, asymmetrical, sides convergent from near base to apex, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 191, 192); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, wide, apex rounded, outer arm longer than inner arm, outer margin sinuate, with accessory piece, basal border broadly emarginate (Fig. 192, 193).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Bolivia, Santa Cruz Dept., 3.7 km SSE Buena Vista, Hotel Flora y Fauna - 400m, 17° 29'S 63° 33'W, A. Cline & J. Wappes, FIT in sandy forest. (CSCA).

**Remarks.** *Dilatitibialis grace* is recognized by the small size, 2 pale spots on each elytron, humeral spot yellow, large discal spot reddish yellow, elongate, and sinuate outer margin of siphonal capsule.

### 36. *Dilatitibialis oseryi* (Mulsant), new combination

*Cleothera oseryi* Mulsant, 1850: 559.

*Hyperaspis oseryi*: Crotch 1874: 224; Korchevsky 1931: 193; Blackwelder 1945: 448; Gordon 1987: 28.

**Description. Male.** Length 2.7 mm, width 2.2 mm; body rounded, slightly elongate, convex. Dorsal surface smooth, shiny except pronotum feebly alutaceous, shiny. Color yellow except pronotum with black mediobasal macula as wide as basal pronotal margin, extended to anterior 3/4 of pronotum, apex of macula emarginate medially and on each side of middle with yellow; elytron reddish yellow except humeral angle with small, yellow spot, suture bordered with black vitta, vitta widened on disc and connected apically with black, transversely oval apical spot, 1 short, black vitta extended from base posteriorly across humeral callus (Fig. 194); ventral surface with head, prosternum, meso- and metaventrite dark brown; abdomen brown medially, lateral 1/4 and ventrites 5-6 yellowish brown. Head punctures large, separated by a diameter or less, each puncture about as large as 2 eye facets; pronotal punctures smaller than head punctures, separated by less than to 3 times a diameter; elytral punctures slightly larger than on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than on elytron, separated by less than to 3 times a diameter medially, coarser, separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, nearly truncate, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/5 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large medially, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, strongly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly convex, nearly truncate. Genitalia with basal lobe short, wide, 2/3 as long as paramere, asymmetrical, sides convergent from base to apex, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 195, 196); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, slender, narrowed medially, apex

obliquely truncate, outer arm wider and longer than inner arm, with accessory piece, basal border broadly emarginate (Fig. 197, 198).

**Female.** Similar to male except head black, black pronotal macula extended to apical margin of pronotum. Genitalia with spermathecal capsule short, wide, narrowed from base to apex, cornu slightly widened; bursal cap with 3 arms, apical strut long, slender, slightly widened at apex (Fig. 199).

**Variation.** Length 2.2 to 2.7 mm, width 1.6 to 2.2 mm. Elytron with black maculae somewhat variable in size, humeral spot sometimes not extended to base of elytron.

**Type locality.** Brazil.

**Type depository.** UMZC (lectotype designated by Gordon 1987).

**Geographical distribution.** Brazil.

**Specimens examined.** 9. **Brazil.** Minas Gerais, Serra Caraca; Minas Gerais, Vila Monteverde. (MZSP) (USNM).

**Remarks.** This is another species with a distinctive dorsal color pattern by which it may be recognized.

### 37. *Dilatitibialis jucunda* (Mulsant)

*Cleothera jucunda* Mulsant, 1850: 608.

*Hyperaspis jucunda*: Crotch 1874: 214; Korschefsky, 1931: 190; Blackwelder 1945: 447.

*Dilatitibialis jucunda*: Duverger 2001: 226.

**Description. Male** lectotype. Length 3.2 mm, width 3.0 mm; body oval, convex. Dorsal surface shiny. Color black except head yellow, pronotum yellow with black basomedian spot, apex of spot deeply emarginate with yellow; elytron black with 5 yellow spots arranged in rows of 2 plus an apical spot, spot outside of humeral callus semicircular, scutellar spot round, periscutellar, not reaching elytral base or suture, discal spot irregularly round, apical spot kidney shaped (Fig. 200); ventral surface with antenna, mouthparts, pronotal hypomeron, and legs yellow; abdomen black. Head punctures small, separated by less than a diameter, each puncture as large as 1 eye facet; pronotal punctures larger than on head, separated by about a diameter; elytral punctures as large as on pronotum, separated by 4-5 times a diameter; metaventral punctures larger than on elytron, sparse medially, becoming dense laterally. Clypeus emarginate apically, lateral angle abruptly rounded, surface with dense, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, sides feebly rounded, basal and anterior angles rounded, basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia flanged, flange arcuate, outer margin smooth. Carinae on prosternal process feebly convergent, extended to pronotal base. Metaventricle without median setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of ventrite 4; postcoxal line on basal abdominal ventrite straight in basal 1/3, extended to apical margin of ventrite at middle, flattened medially, extended forward; ventrites 1-4 with sparse, short pubescence and dense, coarse punctures, 5th ventrite not depressed medially, depressed in apical 1/2, apical margin broadly, deeply emarginate, surface densely, coarsely punctate; 6th ventrite short, narrow, depressed in apical 1/2, apical margin broadly, weakly emarginate, lateral angle of emargination projecting, abruptly rounded, surface densely punctured. Apical tergite densely punctured. Genitalia with basal lobe about as long as paramere, asymmetrical, slender, apex evenly rounded; paramere *Psc*, wide (Fig. 201, 202); siphon slender, strongly curved in basal 1/2, basal capsule lightly sclerotized, inner arm long, slender, curved, outer arm as long as inner arm, wide, with small accessory piece, basal border broadly emarginate (Fig. 203, 204).

**Female:** Unknown.

**Variation:** Unknown.

**Type locality.** Colombia.

**Type depository.** MNHL (lectotype here designated).

**Geographical distribution. Colombia.** Known only from the lectotype.

**Remarks.** *Dilatitibialis jucunda* was designated the type of this genus by Duverger (2001). Unfortunately no specimens other than the lectotype have been recognized as *D. jucunda*. It may be reliably distinguished from those species with similar color patterns only by examination of male genitalia which is very slender before apex; apex slightly rounded; and basal lobe about as long as paramere.

The type specimen is a male in the MNHL labeled "Cayenne, Lacordaire jucunda," here designated as the lectotype. Mulsant (1850) had specimens from other collections, but he specifically stated that the specimen in the Dejean collection was the type.

### 38. *Dilatitibialis fallax* Canepari and Gordon, new species

**Description. Male** holotype. Length 3.5 mm, width 2.8 mm; body oval, convex. Color yellow except pronotum with small, irregular, basomedian black macula deeply emarginate apically; elytron black with 5 large yellow spots arranged as in (Fig. 205); ventral surface with meso-, metaventrite reddish brown, abdomen brownish yellow. Head punctures small, separated by less than a diameter, each puncture as large as 3 eye facets; pronotal punctures larger than on head, separated by less than to twice a diameter; elytral punctures slightly larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures 3 or 4 times as large as those on elytron, separated by less than a diameter medially, becoming larger and contiguous toward lateral margin. Clypeus emarginate apically, lateral angle abruptly rounded, surface with dense, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, sides feebly rounded, basal and anterior angles rounded, basal margin without bordering line. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange evenly arcuate, wider than remainder of protibia, outer margin smooth (Fig. 206); sponda deep, slightly wider than flange. Carinae on prosternal process nearly absent, consisting of single short carina from apex to basal 1/5. Metaventrite without median setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, occupying apical 1/3 of ventrite 4, forming distinct depression on ventrite 5; postcoxal line on basal abdominal ventrite straight in basal 1/3, extended to apical margin of ventrite at middle, rounded in apical 2/3, extended forward; ventrites 1-4 with sparse, short pubescence and dense, coarse punctures, 5th ventrite not depressed medially, depressed in apical 1/2, apical margin broadly, deeply emarginate, surface densely, coarsely punctate; 6th ventrite short, narrow, depressed in apical 1/2, apical margin broadly, deeply, bisinuate emarginate, lateral angle of emargination projecting, abruptly rounded, surface densely punctured. Apical tergite densely punctured, with shallow median groove. Genitalia with basal lobe about as long as paramere, asymmetrical, slender, apex evenly rounded; paramere *Psc*, wide (Fig. 207, 208); siphon slender, strongly curved in basal 1/2, basal capsule lightly sclerotized, inner arm long, slender, curved, outer arm as long as inner arm, wide, with small accessory piece, basal border broadly emarginate (Fig. 209, 210).

**Female:** Similar to male except genitalia with spermathecal capsule abruptly curved in apical 1/2; bursal cap with 3 arms, median arm short, apical strut long, slender, apically spatulate in lateral view (Fig. 211).

**Variation:** Length 3.0 to 3.5 mm, width 2.6 to 2.8 mm.

**Type material.** Holotype male.; Brazil, Santar. (Santarem), Type (crossed out), jucunda (on reverse of "type" label. (UMZC). Paratypes; 6, 1, Brasil, *Hyperaspis jucunda* Muls.; 5, Cay. (Cayenne, French Guiana) (UMZC).

**Remarks.** This is one of several *Dilatitibialis* species having a dorsal color pattern consisting of yellow spots on a black background. The elytral spots are larger than normal, and the pronotum is mostly yellow, characters that help to separate it from other *Dilatitibialis* species, but male genitalia must be examined to ensure a correct identification. Five paratypes labeled “Cay.” (French Guiana) are present in the Crotch collection under the name “jucunda.”

**Etymology.** The specific name is from the Latin *falsus*, meaning deceive, referring to the similar color patterns of this species and *D. jucunda*.

### 39. *Dilatitibialis wendy* Canepari and Gordon, new species

**Description. Male** holotype. Length 3.4 mm, width 2.7 mm; body elongate, convex. Dorsal surface with head alutaceous, weakly shiny, pronotum weakly alutaceous, shiny, elytron smooth, shiny. Color black except head yellow, pronotum with black basomedian macula extended 4/5 distance to anterior margin, apex of macula weakly emarginate with yellow medially; elytron with 5 small, yellow spots arranged in rows of 2 each plus apical spot (Fig. 212); ventral surface with antenna, mouthparts, prothoracic hypomeron, and legs yellow; abdomen yellowish brown with lateral 1/4 and ventrites 5-6 slightly paler. Head punctures small, separated by a diameter or less, each puncture about as large as 2 eye facets; pronotal punctures slightly larger than head punctures, separated by 1 to 2 times a diameter; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron medially, separated by 1 to 2 times a diameter, coarser and separated by less than a diameter toward lateral margin. Clypeus deeply emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin with trace of bordering line medially. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange slightly wider than remainder of protibia, outer margin nearly straight, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin weakly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex slightly convex. Genitalia with basal lobe slender, 3/4 as long as paramere, asymmetrical, sides parallel, apex obliquely truncate; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 213, 214); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, wide, apex rounded, outer arm short, wide, longer than inner arm, with accessory piece, basal border broadly, weakly emarginate (Fig. 215, 216).

**Female.** Similar to male except head black, pronotum with median macula extended to anterior pronotal margin. Genitalia with spermathecal capsule, short, wide, widened from base to broad cornu; bursal cap without sclerotized arms, apical strut short, narrow (Fig. 217).

**Variation.** Length 3.3 to 3.5 mm, width 2.4 to 2.7 mm. Elytral spots may be slightly larger or smaller than on the holotype.

**Type material.** Holotype male; (Brazil), 3600, Fry Rio Jan, Fry Coll. 1905. 100., Cleothera gacognii Muls, Brasilia. (BMNH). Paratypes; 4, 1, (Brazil), Fry Rio Jan, Fry coll. 1905.100. (BMNH); 2, Brazil,

Rio de Jan., Acc. No. 2966, Oct., Nov. (CMNH); 1, Brazil, Est. Biol. Boracea Salesopolis, SP, XII-17-26-1969, JM & BA Campbell (CNC).

**Remarks.** This species is similar to several others in external appearance, although larger than most, but male genitalia are distinctively different from those of any other known species of *Dilatitibialis*.

#### 40. *Dilatitibialis dilatata* (Crotch), new combination

*Hyperaspis dilatata* Crotch, 1874: 213; Korschefsky 1931: 187; Blackwelder 1945: 446; Gordon 1987: 27.

**Description. Male.** Length 4.4 mm, width 3.7 mm; body round, slightly elongate, convex. Dorsal surface smooth, shiny. Color yellow, pronotum with faint, mediobasal, more or less M-shaped, darker yellow macula; elytron reddish yellow with small, triangular spot at humeral angle (Fig. 218); ventral surface with head, prosternum, meso- and metaventrites dark brown; abdomen dark brown medially, brownish yellow in lateral 1/4 and ventrites 4-6. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by 1 to 2 times a diameter; elytral punctures larger than on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than on elytron medially, separated by about a diameter, coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, nearly truncate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, curved outward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line medially. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange much wider than remainder of protibia, outer margin curved, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, slightly convergent toward base, not joined, each carina ended before midpoint of prosternal process. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded throughout, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin weakly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex slightly emarginate. Genitalia with basal lobe slender, as long as paramere, asymmetrical, sides parallel, apex obliquely truncate; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 219, 220); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, wide, apex rounded, outer arm elongate, rather slender, longer than inner arm, with narrow, elongate projection at apex, with accessory piece, basal border broadly, weakly emarginate (Fig. 221, 222).

**Female.** Similar to male except spermathecal capsule elongate, widened from base to apical 5/6, apical 1/6 slender, round; bursal cap oval with 2 sclerotized arms, apical strut short, laterally flattened in apical 1/2 (Fig. 223).

**Variation.** Length 3.8 to 4.4 mm, width 2.9 to 3.7 mm.

**Type locality.** Brazil, Ega (Amazonas, Tefe).

**Type depository.** UMZC (lectotype designated by Gordon 1987).

**Geographical distribution.** Brazil.

**Specimens examined.** 6. **Brazil.** Amaz (Amazonas), St. Paul; Ega; Santarem. (BMNH) UMZC).

**Remarks.** *Dilatitibialis dilatata* is distinctive within the genus because of the large size, nearly all yellow dorsal surface, short, incomplete prosternal carinae, and male genitalia with basal lobe long, slender; paramere apically rounded, not truncate; outer arm of siphonal capsule elongate, not as wide as in the similar appearing *D. luteola*.

The lectotype is a female, but there is little doubt it is the same species as the male described above.

#### 41. *Dilatitibialis edith* Canepari and Gordon, new species

**Description. Male** holotype. Length 3.3 mm, width 2.7 mm; body round, slightly elongate, convex. Dorsal surface smooth, shiny. Color yellow, pronotum with small, slender, sinuate, black basomedian macula in basal 1/3; elytron with scutellum and suture narrowly bordered with black vitta, vitta widened from apex of scutellum to apical 1/8, then narrowed to apex, large, transversely rectangular dark brown macula extended from humeral callus toward suture, macula appears to be made up of partially joined, short vittae, apical declivity with transversely elongate, kidney shaped dark brown macula tenuously reaching sutural vitta (Fig. 224); ventral surface with prosternum, meso- and metaventrite dark brown; abdomen yellow except median 1/3 of ventrites 1-3 yellowish brown. Head punctures small, separated by less than a diameter, each puncture about as large as an eye facet; pronotal punctures slightly larger than head punctures, separated by a diameter or less; elytral punctures slightly larger than those on pronotum, separated by about a diameter; metaventral punctures larger than those on elytron, absent on midline, separated by 1 to 2 times a diameter laterad of midline, coarser and separated by a diameter or less toward lateral margin. Clypeus deeply emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin slightly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange as wide as remainder of protibia, outer margin gently curved, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent for short distance, then closely parallel, joined at basal 1/6 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded throughout, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin weakly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex weakly emarginate. Genitalia with basal lobe slender, about as long as paramere, asymmetrical, sides weakly convergent from base toward apex, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 225, 226); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, slender, tapered to rounded apex, outer arm short, wide, longer than inner arm, with accessory piece, basal border broadly, weakly emarginate (Fig. 227, 228).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Peru, Satipo, XI, 1942, Paprzycki. (USNM).

**Remarks.** This species is somewhat similar in dorsal appearance to one of the variations of *D. semicineta*, but male genitalia place it in this group of species. The dorsal color pattern is distinctive and will serve to identify *D. edith*.

**42. *Dilatitibialis kim* Canepari and Gordon, new species**

**Description. Male** holotype. Length 2.8 mm, width 2.4 mm; body round, slightly elongate, convex. Dorsal surface with head smooth, shiny, pronotum, elytron weakly alutaceous, shiny. Color black except head yellow, pronotum yellow with large, black basomedian macula extended 2/3 distance to anterior margin, apex of macula weakly emarginate with yellow medially; elytron with 3 small, yellow spots, humeral spot small, triangular, discal spot large, ovate, apical spot large, irregularly triangular (Fig. 229); ventral surface with antenna, mouthparts, prothoracic hypomerion, legs yellow; abdomen dark brown except ventrites 5-6 yellowish brown. Head punctures small, separated by a diameter or less, each puncture as large as an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than those on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than those on elytron medially, separated by less than a diameter, coarser and separated by a diameter or less toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin with trace of bordering line medially. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange slightly wider than remainder of protibia, outer margin curved, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/6 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin weakly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex slightly convex. Genitalia with basal lobe slender, about as long as paramere, asymmetrical, sides parallel, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 230, 231); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, curved, apex rounded, outer arm wide, shorter than inner arm, with accessory piece, basal border broadly, weakly emarginate (Fig. 232, 233).

**Female.** Similar to male except head dark brown, pronotum with median macula extended to anterior pronotal margin, elytron without humeral spot. Genitalia with spermathecal capsule long, slender, weakly widened from base to apex; bursal capsule without sclerotized arms, apical strut long, curved, enlarged in apical 1/2 (Fig. 234).

**Variation.** Length 2.7 to 3.3 mm, width 2.4 to 2.8 mm. Elytral spots may vary in size, a single paratype has discal and apical spots weakly connected.

**Type material.** Holotype male; (Brazil), Fry, RioJan, Fry Coll. 1905. 100. 17831. (BMNH). Paratypes; 8, 2, same data as holotype (BMNH); 1, 57 71, quadrisignatata Dej. Cayen. Bresil (green label, handwritten) (BMNH); 1, Bras, Sammlung Cl. Müller (CAS); 2, Brazil, Chapada, Acc.No.2966, Nov. (CMNH); 2, Brazil, Rio de Jan., Acc.No.2966, Oct., Nov. (CMNH).

**Remarks.** *Dilatitibialis kim* is somewhat similar to *D. grace* in dorsal color pattern, but *D. kim* has an apical spot on each elytron, is much larger, and male genitalia are not at all similar.

**43. *Dilatitibialis sherry* Canepari and Gordon, new species**

**Description. Male** holotype. Length 2.6 mm, width 2.2 mm; body round, slightly elongate, convex. Dorsal surface smooth, shiny. Color black except head yellow, pronotum with large, black basomedian



macula, lateral 1/5 and apical 1/5 yellow, apex of black macula entire; elytron with 2 small, pale spots, humeral spot triangular, reddish yellow spot on apical declivity irregularly rounded (Fig. 235); ventral surface with antenna, mouthparts, prothoracic hypomeron, and legs yellow; abdomen with median 1/2 of ventrites 1-3 dark brown, lateral 1/4 and ventrites 4-6 yellowish brown. Head punctures small, separated by a diameter or less, each puncture as large as an eye facet; pronotal punctures larger than head punctures, separated by 1 to 2 times a diameter; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron medially, separated by about a diameter, coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin with trace of bordering line medially. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange slightly wider than remainder of protibia, outer margin curved, smooth, sponda distinctly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/6 with single carina extended to basal margin of prosternum. Metaventrite with sparse setal tuft. Basal abdominal ventrite with sparse setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, weakly depressed medially, weakly emarginate apically, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex slightly emarginate. Genitalia with basal lobe slender, as long as paramere, asymmetrical, sides parallel, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 236, 237); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, curved, apex rounded, outer arm as long as inner arm, slender, with accessory piece, basal border broadly, weakly emarginate (Fig. 238, 239).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Brazil, Rio de Janeiro, Murundu, Campos, VIII.1978, M. Alvarenga. (CMNH).

**Remarks.** This nearly all black taxon is unique within this group of species having a long, slender basal lobe of the male genitalia. Similar to *D. lois*, *D. sherry* is distinguished from that species by smaller size and yellow legs, as well as different male genitalia.

#### 44. *Dilatitibialis cognata* (Mulsant), new combination

*Cleothera cognata* Mulsant, 1850: 545.

*Hyperaspis cognata*: Crotch 1874: 214; Korschefsky 1931: 186; Blackwelder 1945: 27; Gordon 1987: 27.

**Description. Male.** Length 4.0 mm, width 3.25 mm; body oval, convex. Color bright orange except pronotum irregularly black in basal 1/2; elytron with suture narrowly black except black area dilated anterior to middle, lateral and apical borders narrowly black, irregular black vitta present from behind humeral callus to apical 1/3 (Fig. 240); ventral surface with head, prosternum, meso- and metaventrites black, proleg yellow, meso- and metalegs with femur dark brown in basal 2/3, tibia yellow, abdomen dark brown. Head punctures small, separated by less than a diameter, each puncture as large as 3 eye facets; pronotal punctures same size as on head, separated by less than to twice a diameter; elytral punctures smaller than on pronotum, separated by 2 to 4 times a diameter; metaventral punctures 3 or 4 times as large as on pronotum, separated by a diameter medially, becoming larger and contiguous toward lateral

margin. Clypeus very slightly emarginate apically, nearly truncate, lateral angle broadly rounded, surface with dense, long pubescence. Eye canthus about 4 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, sides feebly rounded, basal and anterior angles rounded, basal margin without bordering line. Epipleuron narrow, grooved, descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange evenly arcuate, narrower than remainder of protibia, outer margin smooth (Fig. 241); sponda slightly wider than flange. Carinae on prosternal process pronounced, narrowly spaced apically, convergent toward base, joined at basal 2/3 of prosternum, connected to prosternal base by single carina. Metaventrite without median setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, occupying apical 1/3 of ventrite 4, forming slight depression on ventrite 5; postcoxal line on basal abdominal ventrite straight in basal 1/3, extended to apical margin of ventrite at middle, rounded in apical 2/3, extended forward; ventrites 2-4 with sparse, short pubescence and dense, fine punctures, 5th ventrite not depressed medially, unmodified, apical margin broadly, weakly emarginate, surface densely punctate; 6th ventrite short, narrow, depressed in apical 1/2, apical margin broadly, weakly emarginate, lateral angle of emargination projecting, widely rounded, surface densely punctured. Apical tergite densely punctured, with shallow median groove. Genitalia with basal lobe about as long as paramere, asymmetrical, slender, apex obliquely truncate; paramere *Psc*, wide (Fig. 242, 243); siphon slender, strongly curved in basal 1/2, basal capsule lightly sclerotized, inner arm short, narrowed in apical 1/2, outer arm longer than inner arm, wide, with large accessory piece, basal border broadly emarginate (Fig. 244, 245).

**Female.** Unknown.

**Variation.** Unknown.

**Type locality.** Brazil.

**Type depository.** MNHP (lectotype here designated).

**Geographical distribution.** Brazil.

**Specimens examined.** 1. **Brazil.** No further data. (MNHP) (UMZC).

**Remarks.** The dorsal color pattern is extremely distinctive, and along with the large size, will serve to distinguish *D. cognata* from its congeners.

Mulsant (1850) stated that the female type was in the MNHP collection. That lectotype was examined in 1971, but is not presently available, so the description above is from a single specimen in the UMZC that matches the original description quite well. The lectotype is labeled "Museum Paris, Ouest Capit des Mines, 147, *Cleothera cognata* Muls., auct. det." That specimen also bears a 1971 lectotype label that is here validated.

#### 45. *Dilatitibialis sylvia* Canepari and Gordon, new species

**Description. Male** holotype. Length 3.6 mm, width 2.9 mm; body round, slightly elongate, convex. Dorsal surface with head, pronotum slightly alutaceous, somewhat dull, elytron, smooth, shiny. Color yellow except pronotum with large, black basomedian macula extended more than 1/2 distance to anterior margin, apex of macula emarginate with yellow medially, and broadly emarginate with yellow at anterolateral angle; elytron with sutural margin narrowly bordered with black, black border abruptly widened anterior to middle, large, black, median macula present in lateral 2/3 of elytron from humeral callus posteriorly to apical 1/6 (Fig. 246); ventral surface with head, prosternum, meso- and metaventrite, and posterior femur dark brown; abdomen with ventrites 1-4 dark brown medially and yellowish brown in lateral 1/4, ventrites 5-6 brownish yellow. Head punctures small, separated by less than a diameter, each puncture about as large as 2 eye facets; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures smaller than those on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than those on elytron medially, separated by less than a diam-

eter, slightly coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum slightly narrowed from base to apex, basal and anterior angles abrupt, lateral margin feebly rounded, nearly straight, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange slightly narrower than remainder of protibia, outer margin weakly curved, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent to middle of prosternal process, then narrowly parallel to prosternal base. Metaventricle without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite obliquely flattened along posterior ventrite margin, extended forward, ventrite with short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures dense, small; 5th ventrite, densely, finely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin weakly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex weakly emarginate. Genitalia with basal lobe slender, as long as paramere, asymmetrical, sides convergent from base to apex, apex nearly truncate; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 247, 248); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, slender, inner border emarginate, apex acute, outer arm longer and wider than inner arm, with accessory piece, basal border deeply, rectangularly emarginate (Fig. 249, 250).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Brazil, (second line of label illegible), S. Paulo, X.961, Werner, ex Coleccion M. Viana Arg. 028734, Coleccion J.E. Barriga, CHILE 077253. (JEBC).

**Remarks.** *Dilatitibialis sylvia* is strikingly similar to *D. cognata* in dorsal color pattern but male genitalia of the 2 species are dissimilar in that the basal lobe of *D. cognata* is not angulate to one side at apex and the paramere is wide medially. *Dilatitibialis sylvia* has elytral punctures smaller than pronotal punctures; the prosternal carinae not joined before the prosternal base; basal lobe of male genitalia angulate to one side at apex, and the paramere is slender medially.

#### 46. *Dilatitibialis luteola* (Mulsant), new combination

*Cleothera luteola* Mulsant, 1850: 563.

*Hyperaspis luteola*: Crotch 1874: 216; Korschefsky 1931: 192; Blackwelder 1945: 447; Gordon 1987: 27.

**Description. Male.** Length 3.0 mm, width 2.4 mm; body rounded, slightly elongate, convex. Dorsal surface smooth, shiny. Color yellow except pronotum with faint, darker yellow, M-shaped basomedian macula; elytron darker yellow except humeral angle with small, triangular, yellow spot (Fig. 251); ventral surface with meso- and metaventricle pale brownish yellow. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures as large as those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron, separated by about a diameter medially, coarser, separated by a diameter or less toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin curved, smooth,

sponda weakly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/3 with single carina extended to basal margin of prosternum. Metaventrite with small setal tuft. Basal abdominal ventrite with small setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large medially, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, strongly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly convex. Genitalia with basal lobe long, slender, nearly as long as paramere, asymmetrical, sides parallel from base to apex, apex rounded; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 252, 253); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, apex rounded, outer arm wider and slightly longer than inner arm, with accessory piece, basal border broadly emarginate (Fig. 254, 255).

**Female.** Similar to male except genitalia with spermathecal capsule short, wide, widened from base to apex; bursal cap without sclerotized arms, apical strut short, slender (Fig. 256).

**Variation.** Length 2.0 to 3.0 mm, width 1.7 to 2.4 mm.

**Type locality.** Colombia.

**Type depository.** DEI (lectotype here designated).

**Geographical distribution.** Costa Rica, Panama, Brazil, Colombia, Ecuador, Peru, Venezuela.

**Specimens examined.** 43. **Costa Rica.** Turrialba. **Panama.** Canal Zone, Summit, Gamboa; El Cermeno; Limon Plantation, Chagres River. **Brazil.** Tapuruquara, Rio Negro. **Colombia.** Bonda; Cacagualito, Rio Frio. **Ecuador.** Sucumbios, 9 km SE Lumbaqui. **Peru.** Madre de Dios, Rio Tambopata Reserve, SW Maldonado. **Venezuela.** Aragua, El Limon; Aragua, P. Nac. Henri Pittier; Zulia, El Tucuco. (BMNH) (CAS) (CSCA) (CMNH) (DZUP) (USNM) (ZMHB).

**Remarks.** This species resembles only *D. dilatata* in external coloration. Both are entirely yellow or reddish yellow dorsally, but *D. luteola* is much smaller and male genitalia are diagnostic for both species, see remarks under *D. dilatata*.

A female type specimen in the DEI labeled "Coll. Haag/Columb. Schaum (handwritten)/ Syntypus (pink paper)/ luteola Mls Typ (handwritten)/coll. DEI Müncheberg" is designated the lectotype. One other specimen labeled as from Brasil bears a "Syntypus" label, but this cannot be correct because Mulsant (1850) stated that all of his material was from Colombia. The lectotype should be in the ZMHB, but no type specimens are there, so we designate the lectotype as a DEI specimen that was obviously part of the Germar and Schaum collection.

#### 47. *Dilatitibialis florifera* (Vogel), new combination

*Cleothera florifera* Vogel, 1865: 233.

*Hyperaspis florifera*: Korschefsky 1931: 189; Blackwelder 1945: 447.

**Description. Male.** Length 2.5 mm, width 2.0 mm; body round, slightly oval, convex. Dorsal surface with head, pronotum faintly alutaceous, shiny, elytron smooth, shiny. Color light brown except pronotum yellow with irregular, basomedian M-shaped macula; elytron with 5 large, yellow spots in rows of 2 each plus apical spot, humeral spot triangular, mediolateral spot projected inward, apical spot deeply emarginate on apical margin (Fig. 257); ventral surface with prosternum, meso- and metaventrites pale reddish yellow; abdomen yellow. Head punctures small, separated by a diameter or less, each puncture as large as

an eye facet; pronotal punctures larger than on head, separated by 1 to 2 times a diameter; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on pronotum, separated by about a diameter medially, becoming larger and separated by a diameter or less toward lateral margin. Clypeus very slightly emarginate apically, nearly truncate, lateral angle broadly rounded, surface with dense, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, sides feebly rounded, basal and anterior angles rounded, basal margin without bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange arcuate, wider than remainder of protibia, outer margin smooth; sponda slightly wider than flange. Carinae on prosternal process narrowly spaced apically, convergent toward base, joined at apical 1/4 of prosternum, connected to prosternal base by single carina. Metaventrite without median setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, occupying apical 1/3 of ventrite 4, forming slight depression on ventrite 5; postcoxal line on basal abdominal ventrite flattened along basal margin of ventrite in median 1/3, rounded in apical 2/3, extended forward; ventrites 2-4 with sparse, short pubescence and dense, coarse punctures, 5th ventrite not depressed medially, unmodified, apical margin broadly, weakly emarginate, surface densely punctate; 6th ventrite short, narrow, depressed in apical 1/2, apical margin broadly, weakly emarginate, lateral angle of emargination projecting, widely rounded, surface densely punctured. Apical tergite densely punctured, with shallow median groove, apex weakly emarginate. Genitalia with basal lobe about as long as paramere, asymmetrical, slender, sides slightly divergent from base to apex, apex triangular; paramere *Psc*, wide, lower margin at apex slightly produced (Fig. 258, 259); siphon slender, strongly curved in basal 1/2, basal capsule large, inner arm long, wide, inner margin sinuate, apex obliquely truncate, outer arm longer than inner arm, wide, with large accessory piece, basal border broadly, deeply emarginate (Fig. 260, 261).

**Female.** Unknown.

**Variation.** Length 2.4 to 2.5 mm. Elytron with discal and apical spots sometimes narrowly connected along sutural margin.

**Type locality.** Colombia.

**Type depository.** DEI (lectotype here designated).

**Geographical distribution.** Colombia.

**Specimens examined.** 8. **Colombia.** Cundinamarca, Pacho; Pandi. (USNM) (ZMHB).

**Remarks.** The dorsal color pattern consists of 5 yellow spots on a darker background, a common pattern in this genus, but the pale brown background and apical spot on each elytron with deeply emarginate anterior margin renders this species somewhat recognizable. Male genitalia are diagnostic, but it is possible to recognize *D. florifera* from external appearance alone. See remarks under *D. crystal*.

A male type labeled “neu Granada (handwritten)/ Schaufuss 1932/ Syntypus (red paper)/coll. DEI Müncheberg” is here designated the lectotype. Two paralectotypes bear the same labels except one has an illegible, handwritten label and the other bears an additional label “*Hyperaspis florifera* Vog. Det. R Korschefsky 1945.” The lectotype should be in the ZMHB but is not there, so we designate the lectotype and 2 paralectotypes from DEI specimens that were obviously among those seen by Vogel (1865).

#### 48. *Dilatitibialis fuscomaculata* (Mulsant), new combination

*Cleothera fuscomaculata* Mulsant, 1850: 569.

*Hyperaspis fuscomaculata*: Crotch 1874: 218; Korschefsky 1931: 189; Blackwelder 1945: 44.

**Description. Male.** Length 3.1 mm, width 2.6 mm; body rounded, slightly elongate, convex. Dorsal surface slightly alutaceous, shiny. Color yellow except pronotum with 7 brown spots, 2 spots medially on disc, 2 spots on basal margin on each side of middle, 1 spot at middle on basal margin, 2 spots laterally near lateral pronotal margin; elytron with 5 elongate, brown spots, 3 spots on apical 1/2, 2 spots on apical declivity (Fig. 262); ventral surface with head, prosternum, meso- and metaventrite dark brown; abdomen with median 1/3 of ventrites 1-4 dark brown, lateral 1/3 and ventrites 5-6 yellowish brown. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures smaller than head punctures, separated by a diameter or less; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron, separated by a diameter or less medially, coarser, separated by less than a diameter toward lateral margin. Clypeus emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange slightly wider than remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/3 with single carina extended to basal margin of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 2/3 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large medially, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, strongly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly convex, nearly truncate. Genitalia with basal lobe long, slender, as long as paramere, asymmetrical, sides convergent from base to apex, apex truncate; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 263, 264); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, slender, curved, apex obliquely rounded, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 265, 266).

**Female.** Similar to male except head with clypeus and short, narrow macula on frons at base of eye brown. Genitalia with spermathecal capsule short, narrowed from wide base to narrow apex; bursal cap oval, wide, with 2 lateral arms, apical strut long, slender in basal 1/2, apical 1/2 wide, flattened laterally (Fig. 267).

**Variation.** Length 2.6 to 3.1 mm, width 2.1 to 2.6 mm.

**Type locality.** Brazil.

**Type depository.** MNHL (lectotype here designated).

**Geographical distribution.** Brazil.

**Specimens examined.** 41. **Brazil.** Frequently found in southeastern Brazil. (BMNH) (CMNH) (DEI) (DZUP) (MNHL) (USNM) (ZMHB).

**Remarks.** Apparently a rather common species in southeastern Brazil, *D. fuscomaculata* is found in many collections. It has a dorsal color pattern unique within *Dilatitibialis* by which it may be recognized.

Mulsant (1850) specified that the type was in the Dejean collection (MNHL), therefore the single type specimen in that collection labeled "Brasilia, Bahia, Van Winthiem." is designated the lectotype. One female type in the ZMHB labeled "55687/fuscomaculata Muls. Bras. (handwritten)/Hist. Coll. (Coleoptera), Nr. 55687, *Psyllobora fuscomaculata* Muls., Brasil, Zool. Mus. Berlin (dark green paper)" is

designated a paralectotype, and a male type in the DEI labeled "Brasil Schaum (handwritten)/Coll. Haag/Paratypus (red paper)/fuscomaculata Mls. Typ." is designated another paralectotype.

#### 49. *Dilatitibialis guttipennis* (Weise), new combination

*Hinda guttipennis* Weise, 1922: 33; Korschefsky 1931: 177; Blackwelder 1945: 446.

**Description. Male.** Length 3.0 mm, width 2.4 mm; body rounded, slightly elongate, convex. Dorsal surface weakly alutaceous, shiny. Color brown except head yellow, pronotum with black mediobasal macula in median 1/3, macula deeply, widely emarginate with yellow at apex; elytron with 5 yellow spots, scutellar and spot at apical declivity round, mediolateral spot projected inward (Fig. 268); ventral surface with antenna, mouthparts, prothoracic hypomerion, and legs yellow; abdomen brown medially, lateral 1/4 and ventrites 5-6 yellowish brown. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than those on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than those on elytron, separated by a diameter or less medially, coarser, separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, nearly truncate, basal margin without trace of bordering line. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin curved, smooth, sponda weakly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventricle without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large medially, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, shallowly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly emarginate. Genitalia with basal lobe long, slender, as long as paramere, asymmetrical, sides convergent from base to apical 1/3, then weakly constricted, apex weakly rounded, nearly truncate; paramere wide, curved, *Psc*, apex with small, ventral projection (Fig. 269, 270); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, curved, apex abruptly rounded, outer arm wider and about as long as inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 271, 272).

**Female.** Similar to male except head brown, black pronotal macula occupying all of pronotum except lateral 1/4. Genitalia with spermathecal capsule short, widened from wide base to narrow apex; bursal cap oval, wide, with 2 lateral arms, apical strut long, slender in basal 1/2, apical 1/2 wide, flattened laterally (Fig. 273).

**Variation.** Length 2.2 to 3.3 mm, width 1.7 to 2.5 mm. Elytral spots vary slightly in size and shape.

**Type locality.** Argentina, Misiones.

**Type depository.** MBR (lectotype here designated).

**Geographical distribution.** Argentina, Brazil, Guyana, Trinidad.

**Specimens examined.** 76. This is a frequently found species occurring from Trinidad and Guyana south to Argentina. (BMNH) (CAS) (CMNH) (DZUP) (JEBC) (MBR) (USNM) (ZMHB).

**Remarks.** *Dilatitibialis guttipennis* was originally described as a member of *Hinda* by Weise (1922). Examination of type specimens revealed that this species belongs in *Dilatitibialis* because, although it has a widely flanged protibia, it lacks protibial teeth and has an asymmetrical basal lobe of the male genitalia. Although it has a dorsal color pattern similar to several other species, *D. guttipennis* is usually recognized by a combination of large size, brown elytral surface with 5 yellow spots on each elytron, and widely flanged protibia. This is a commonly occurring species over much of eastern South America, examples of which are found in most collections.

The lectotype is labeled "Misiones/TYPUS/*Hinda guttipennis* Ws." A second type specimen labeled "Rep. Argentina, Gob. Misiones, 190, C. Bruch/TYPUS" is designated a paralectotype.

#### 50. *Dilatitibialis josephine* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 2.8 mm, width 2.3 mm; body round, slightly elongate, convex. Dorsal surface smooth, shiny. Color black except pronotum yellow with large, black, basomedian macula deeply, broadly emarginate with yellow at apex and anterolateral angle; elytron with 5 large, yellow spots arranged in rows of 2 each plus apical spot, humeral spot rectangular, posterior spot shortly rectangular with anterior border emarginate, all other spots more or less round (Fig. 274); ventral surface with antenna, mouthparts, prothoracic hypomerion, legs yellow; abdomen with ventrites 1-4 dark brown medially and yellowish brown in lateral 1/4, ventrites 5-6 brownish yellow. Head punctures small, separated by a diameter or less, each puncture as large as an eye facet; pronotal punctures larger than head punctures, separated by 1 to 2 times a diameter; elytral punctures smaller than on pronotum, separated by less than to 3 times a diameter; metaventral punctures larger than on elytron medially, dense, separated by less than a diameter medially, slightly coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin straight, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange slightly narrower than remainder of protibia, outer margin weakly curved, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent to basal 1/3 with single carina extended to pronotal base. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite weakly flattened along posterior ventrite margin, extended forward, ventrite with short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures dense, small; 5th ventrite densely, finely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical border weakly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex weakly emarginate. Genitalia with basal lobe slender, as long as paramere, asymmetrical, sides slightly convergent from base to anterior 2/3, anterior 1/3 widened, strongly bent upward to apex, apex weakly rounded; paramere wide, almost straight, *Psc*, apex with small, ventral projection (Fig. 275, 276); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm long, slender, weakly curved, apex abruptly rounded, outer arm longer and wider than inner arm, with accessory piece, basal border deeply emarginate (Fig. 277, 278).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Bolivia, La Paz N. Yungas, Cruze Loma, IV-4-78, C. R. Ward. (USNM).

**Remarks.** *Dilatitibialis josephine* is similar to several other species with 5 yellow elytral spots on a dark background, and difficult to distinguish from them except by examination of male genitalia, which are similar to those of *D. jucunda* and *D. fallax*. The pronotum has a basal macula deeply emarginate with



yellow at apex and anterolateral angle, the metaventrite is densely, coarsely punctured medially, and it has a Bolivian distribution. These characters will aid in identification, but male genitalia must be examined to accurately distinguish this species.

#### 51. *Dilatitibialis thelma* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 3.3 mm, width 2.7 mm; body round, slightly elongate, convex. Dorsal surface smooth, shiny. Color yellow except pronotum with 4 spots, 2 small, black, triangular spots at middle of surface, 1 black, mediobasal spot narrowly extended entirely across base of pronotum, with short, angulate projection on each side of middle, and 1 small, brown spot at middle of base; elytron narrowly bordered with black margin except border lacking from base to humeral callus, border slightly widened from scutellum to apex of disc, 4 small, black spots on elytron, humeral spot irregularly oval, mediolateral spot connected to lateral margin, discal spot irregularly transverse, narrowly connected to humeral spot, spot on apical declivity irregularly, transversely oval (Fig. 279); ventral surface with head, prosternum, meso- and metaventrite black; abdomen with ventrites 1-4 dark brown medially and yellowish brown in lateral 1/4, ventrites 5-6 brownish yellow. Head punctures small, separated by a diameter or less, each puncture as large as an eye facet; pronotal punctures larger than head punctures, separated by less than to twice a diameter; elytral punctures smaller than on pronotum, separated by less than to twice a diameter; metaventral punctures slightly larger than on elytron medially, sparse, separated by 1 to 3 times a diameter, coarser and separated by less than a diameter toward lateral margin. Clypeus emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 4 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin straight, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia without flange. Carinae on prosternal process narrowly separated at apex, nearly parallel to basal 1/8 with single carina extended to pronotal base. Metaventrite without setal tuft. Basal abdominal ventrite with setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite weakly flattened along posterior ventrite margin, extended forward, ventrite with short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures dense, small; 5th ventrite densely, coarsely punctured, depressed medially, deeply depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, deeply emarginate; 6th ventrite short, narrow, depressed medially, apical margin deeply emarginate, densely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex deeply, broadly emarginate, lateral angle strongly projected. Genitalia with basal lobe slender, about 1/2 length of paramere, asymmetrical, sides slightly convergent from base to apex, apex obliquely truncate; paramere straight, apex *Pem*, deeply emarginate medially (Fig. 280, 281); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, wide, sides sinuate, apex truncate, outer arm longer and slightly wider than inner arm, with accessory piece, basal border deeply, shallowly emarginate (Fig. 282, 283).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; (Peru), Paltaybamba, 5000 ft., 6 August, 1911, Yale Peruv Exp. (USNM).

**Remarks.** This is one of 4 *Dilatitibialis* species having male genitalia with an apically emarginate paramere of the male genitalia. The dorsal color pattern is unique to this species and will distinguish it from other members of this group as well as other species of *Dilatitibialis*.

**52. *Dilatitibialis shannon* Canepari and Gordon, new species**

**Description. Male** holotype. Length 2.6 mm, width 2.2 mm; body round, slightly elongate, convex. Dorsal surface smooth, shiny. Color black except head yellow, pronotum with apical 1/6 and lateral 1/4 yellow, black mediobasal macula broadly emarginate with yellow at anterolateral angle; elytron with 3 yellow spots, humeral spot small, triangular, discal spot large, narrowly oval, apical spot small, transversely oval (Fig. 284); ventral surface with head, prosternum, meso- and metaventrites black; abdomen with ventrites 1-4 dark brown medially and brownish yellow in lateral 1/4, ventrites 5-6 brownish yellow. Head punctures small, separated by a diameter or less, each puncture slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by a diameter or less; metaventral punctures slightly larger than on elytron, separated by a diameter or less medially, coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia with narrow flange, flange about as wide as remainder of protibia. Carinae on prosternal process narrowly separated at apex, convergent to basal 1/6, with single carina extended to pronotal base. Metaventrite without setal tuft. Basal abdominal ventrite with setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/2 of 4th ventrite; postcoxal line on basal abdominal ventrite weakly flattened along posterior ventrite margin, extended forward, ventrite with short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures dense, large; 5th ventrite, densely, coarsely punctured, depressed medially, deeply depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, deeply emarginate; 6th ventrite short, narrow, depressed medially, apical margin deeply emarginate, densely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex deeply, broadly emarginate, lateral angle strongly projected. Genitalia with basal lobe slender, about 2/3 length of paramere, asymmetrical, sides constricted medially, apex feebly rounded, nearly truncate; paramere straight, *Pem*, apex deeply emarginate medially (Fig. 285, 286); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, wide, sides sinuate, apex obliquely truncate, outer arm longer and slightly wider than inner arm, with accessory piece, basal border deeply, shallowly emarginate (Fig. 287, 288).

**Female.** Similar to male except head black, pronotum entirely black except anterolateral angle narrowly yellow, elytron without humeral spot. Genitalia with bursal cap oval, with 2 lateral arms, basally with 2 small, curved sclerites, apical strut short, apex abruptly flattened in lateral view (Fig. 289).

**Variation.** Length 2.5 to 2.6 mm.

**Type material.** Holotype male; Peru, Satipo, XI, 1942, Paprzycki. (USNM). Paratypes; 4, 3, same data as holotype (USNM); 1, Peru, Satipo, IX-X, 1942, Paprzycki (USNM).

**Other specimens.** 4. Brazil, Corumba, Acc.No.2966 March; Taperina, Acc.No.2966; Utinga, Belém, 10.X.1962, J.Bechyné col. (CMNH) (MZSP).

**Remarks.** The dorsal color pattern will distinguish this species from all others except *D. grace* and *D. kim*, both of which have mostly unmodified male apical tergites and male genitalia with parameres not apically emarginate.

Specimens not designated as types have male genitalia apparently identical to the types, but all are from Brazil and all lack the apical spot on each elytron.

**53. *Dilatitibialis sheila* Canepari and Gordon, new species**

**Description. Male** holotype. Length 3.0 mm, width 2.6 mm; body round, slightly elongate, convex. Dorsal surface smooth, shiny. Color black except head yellow, pronotum with apical 1/3 and lateral 1/3 yellow, black mediobasal macula deeply emarginate with yellow at middle of apical margin; elytron with 5 large yellow spots in rows of 2 each plus apical spot, humeral spot triangular, almost connected to scutellar spot, all spots narrowly separated (Fig. 290); ventral surface with head, prosternum, meso- and metaventrites brown; abdomen with ventrites 1-4 brown medially and yellow in lateral 1/4, ventrites 5-6 yellow. Head punctures small, separated by a diameter or less, each puncture slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by a diameter or less; metaventral punctures sparse, nearly absent medially, separated by a diameter or less medially, sparse, larger than elytral punctures toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia with narrow flange, flange about as wide as remainder of protibia. Carinae on prosternal process widely separated at apex, parallel to middle, not connected to prosternal base. Metaventrite without sparse setal tuft. Basal abdominal ventrite with median setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite weakly flattened along posterior ventrite margin, extended forward, ventrite with short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures dense, large; 5th ventrite, densely, coarsely punctured, depressed medially, deeply depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, deeply emarginate; 6th ventrite short, narrow, depressed medially, apical margin deeply emarginate, densely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex deeply, broadly emarginate, lateral angle strongly projected. Genitalia with basal lobe slender, about 1/2 length of paramere, asymmetrical, sides convergent from base to apex, apex obliquely truncate; paramere with ventral margin arcuate, *Pem*, apex deeply emarginate medially (Fig. 291, 292); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, wide, sides sinuate, apex obliquely truncate, outer arm longer and slightly wider than inner arm, with accessory piece, basal border deeply, shallowly emarginate (Fig. 293, 294).

**Female.** Similar to male except head with vertex and upper surface of frons brown, elytron with humeral spot broadly connected to apical spot along lateral margin of elytron. Genitalia with spermathecal capsule long, slender, cornu slightly enlarged; bursal cap small, oval, with 2 outer arms and 1 faint median arm, apical strut long, heavily sclerotized, curved, apex abruptly flattened in lateral view (Fig. 295).

**Variation.** None observed.

**Type material.** Holotype male; Colombia, 6500' nr. Saladito, Valle, July 20, 1970, H & A. Howden. (USNM).

**Other specimen.** 1. Colombia, Manizales, Cas., 22-25 Jun 1965. (USNM).

**Remarks.** The dorsal color pattern is quite similar to that of several other *Dilatitibialis* species, but the yellow spots on each elytron are very large, narrowly separated, and the pronotum is mostly yellow with a small, basomedian black macula. These characters will aid in recognizing this species, but males must be examined to assure an accurate identification.

The specimen listed under "other specimen" above differs from the type in having the lateral elytral spots broadly connected along the elytral border, and prosternal carinae connected to the prosternal base. It is a female and the genitalia are described under "female" above, but whether or not it is actually *D. sheila* is in doubt.

**54. *Dilatitibialis ethel* Canepari and Gordon, new species**

**Description. Male** holotype. Length 3.0 mm, width 2.5 mm; body round, slightly elongate, convex. Dorsal surface with head alutaceous, dull, pronotum and elytron smooth, shiny. Color black except head yellow, pronotum yellow with small black basomedian vitta extended 1/2 distance to anterior pronotal margin, apex of macula broadly, shallowly emarginate with yellow; elytron with single, wide, medially constricted yellow median vitta and lateral border broadly yellow (Fig. 296); ventral surface with head, prosternum, meso- and metaventrites black; abdomen with ventrites 1-4 dark brown medially and brownish yellow in lateral 1/4, ventrites 5-6 yellowish brown. Head punctures small, separated by less than a diameter, each puncture about as large as 2 eye facets; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by 1 to 2 times a diameter; metaventral punctures slightly larger than on elytron medially, separated by a diameter or less, coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 4 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia with narrow flange, flange about as wide as remainder of protibia. Carinae on prosternal process narrowly separated at apex, convergent to basal 1/8 with single carina extended to pronotal base. Metaventrite without setal tuft. Basal abdominal ventrite with sparse median setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of 4th ventrite; postcoxal line on basal abdominal ventrite weakly flattened along posterior ventrite margin, extended forward, ventrite with short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures dense, large; 5th ventrite, densely, coarsely punctured, depressed medially, deeply depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, deeply emarginate; 6th ventrite short, narrow, depressed medially, apical margin deeply emarginate, densely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex deeply, broadly emarginate, lateral angle strongly projected. Genitalia with basal lobe slender, about 1/2 length of paramere, asymmetrical, sides constricted medially, apex obliquely truncate; paramere straight, *Pem*, apex deeply emarginate medially (Fig. 297, 298); siphon robust, strongly curved in basal 1/2, basal capsule lost (Fig. 299, 300).

**Female.** Similar to male except head black with yellowish brown clypeus, pronotum entirely black except anterolateral angle narrowly yellow, elytron with lateral yellow border short, extended from humeral angle 1/3 distance to apex of elytron. Genitalia with spermatheca long, slender, cornu feebly widened; bursal cap broadly oval, with 2 lateral arms and faint median arm, with small, curved sclerite between lateral and median arms, apical strut short, widened from base to apex (Fig. 301).

**Variation.** Length 3.30 to 3.4 mm. Elytron with median vitta weakly constricted medially, or widened from middle to apex.

**Type material.** Holotype male; Ecuador, Los Rios, Rio Palenque, 47 km S Sto. Domingo, 220m, VIII-26-1997, Fred G. Andrews. (CSCA). Paratype; 1, Ecuador, Esmeraldas, 31.7 km NW Lita, 62° Om 0 59.21N/78° 35.15 W, VIII-23-1997, Fred G. Andrews (CSCA).

**Remarks.** The dorsal color pattern is unique within the genus, and will serve to identify this species.

**55. *Dilatitibialis ellen* Canepari and Gordon, new species**

**Description. Male** holotype. Length 2.7 mm, width 2.3 mm; body round, slightly elongate, convex. Dorsal surface smooth, shiny. Color black except head yellow, pronotum yellow with large, black basomedian macula extended to anterior 4/5 of pronotum, anterolateral angle of macula broadly emarginate with yellow; elytron with 5 small yellow spots in rows of 2 plus apical spot, humeral spot triangular, discal spot irregularly oval, apical spot transversely oval (Fig. 302); ventral surface with antenna,

mouthparts, prothoracic hypomerion, legs yellow; abdomen with ventrites 1-4 dark brown medially and brownish yellow in lateral 1/4, ventrites 5-6 brownish yellow. Head punctures small, separated by a diameter or less, each puncture slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by less than to twice a diameter; metaventral punctures slightly larger than on elytron medially, separated by about a diameter, coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia with wide flange, flange slightly wider than remainder of protibia. Carinae on prosternal process widely separated at apex, convergent to basal 1/6 with single carina extended to pronotal base. Metaventrite without setal tuft. Basal abdominal ventrite with median setal tuft. Abdomen with primary pores laterally between ventrites 4-5 large, extended under apical 2/3 of 4th ventrite; postcoxal line on basal abdominal ventrite weakly flattened along posterior ventrite margin, extended forward, ventrite with short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures dense, large; 5th ventrite, densely, coarsely punctured, depressed medially, deeply depressed by primary pore laterally, without tubercle on each side of middle, apical margin broadly, deeply emarginate; 6th ventrite short, narrow, depressed medially, apical margin deeply emarginate, densely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex deeply, broadly emarginate, lateral angle strongly projected. Genitalia with basal lobe slender, about 2/3 length of paramere, asymmetrical, sides constricted medially, apex feebly rounded; paramere straight, apex *Pem.*, abruptly emarginate in dorsal 1/2 (Fig. 303, 304); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, wide, sides sinuate, apex obliquely truncate, outer arm longer and slightly wider than inner arm, with accessory piece, basal border deeply, shallowly emarginate (Fig. 305, 306).

**Female.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; Peru, Satipo, XI, 1942, Paprzycki. (USNM).

**Remarks.** The dorsal color pattern of *D. ellen* is essentially identical to several other species in the genus, but unique within this group. It differs slightly from other group members because the male paramere is not apically emarginate, rather it is abruptly narrowed in apical 1/4 having lost the upper 1/2 of the apical emargination. Males may be identified by examination of abdominal sterna and genitalia, but females will be nearly impossible to recognize.

#### 56. *Dilatitibialis ceciliae* (Crotch), new combination

*Hyperaspis ceciliae* Crotch, 1874: 218; Korschefsky 1931: 186; Blackwelder 1945: 446; Gordon 1987: 27.

**Description. Male.** Length 3.4 mm, width 2.5 mm; body elongate, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, weakly shiny, elytron smooth, shiny. Color yellow except head with 5 slightly darker yellow spots, 1 spot on each side of middle on frons posterior to clypeus, 1 spot on each side of middle on anterior portion of frons, and 1 large, transverse spot at top of frons and vertex, pronotum yellow with 7 brown spots, 1 triangular, light brown spot on each side at middle of pronotum, 1 dark brown spot on each side of middle on basal pronotal border, 1 light brown spot at base of pronotum anterior to scutellum, and 1 light brown, angulate spot near lateral margin of pronotum; elytron with 7 dark brown spots, basal 1/2 of elytron with 4 vittae, apical declivity with elongate, irregularly triangular spot near lateral margin, 1 small, irregularly triangular spot at middle, and 1 short, narrow spot on sutural margin (Fig. 307); ventral surface entirely light brown. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures larger

than head punctures, separated by a diameter or less; elytral punctures larger than on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or less medially, coarser, separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin straight, smooth, sponda weakly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 with single carina extended to basal margin of prosternum. Metaventricle without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward, ventrite with sparse, short pubescence and large punctures medially; ventrites 2-4 pubescent throughout, punctures large medially, small, dense, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, with nonciliate tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface feebly punctured. Apical tergite finely, densely punctured, pubescent, apex weakly convex. Genitalia with basal lobe long, slender, longer than paramere, asymmetrical, sides convergent from base nearly to apex, apex abruptly hooked to one side; paramere abruptly widened in apical 1/2, apex rounded, lunulate (Fig. 308, 309); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, wide, apex obliquely truncate, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, weakly emarginate (Fig. 310, 311).

**Female.** Similar to male except head with upper 1/2 of median portion of frons light brown, pronotum with middle portion entirely, narrowly, light brown from base to apex. Genitalia with spermathecal capsule long, slender, cornu abruptly widened, bulbous; bursal cap with 3 sclerotized arms, apical strut long, slender, straight, widened at apex (Fig. 312).

**Variation.** Length 3.3 to 3.4 mm, width 2.5 to 2.6 mm. Vittae on apical portion of elytron may be narrowly connected, outer 2 vittae particularly prone to be narrowly connected at anterior ends.

**Type locality.** Brazil.

**Type depository.** UMZC (holotype, examined).

**Geographical distribution.** Argentina, Brazil, Paraguay.

**Specimens examined.** 6. **Argentina.** Misiones, Dep. Concep. Sta Maria. **Brazil.** Nova Teutonia. **Paraguay.** Alto-Parana, Hohenau. (BMNH) (JEBC) (USNM).

**Remarks.** This species has a distinctive color pattern with mostly vittate elytra. In spite of its large size and distinctive appearance, *D. ceciliae* seems to be a relatively infrequently collected species.

### 57. *Dilatitibialis elaine* Canepari and Gordon, new species

**Description.** **Male** holotype. Length 3.0 mm, width 2.4 mm; body rounded, slightly elongate, convex. Dorsal surface weakly alutaceous, somewhat shiny. Color brown except head yellow, pronotum with brown, basomedian macula extended 3/4 distance to anterior margin, apex of macula weakly, narrowly emarginate with yellow; elytron with 5 small yellow spots, humeral spot obliquely oval, mediolateral spot projected inward, apical spot transversely oval (Fig. 313); ventral surface with antenna, mouthparts, prothoracic hypomeron, and legs except trochanters yellow; abdomen brownish yellow. Head punctures small, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures

slightly larger than head punctures, separated by a diameter of less; elytral punctures larger than on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than on elytron medially, separated by a diameter, coarser and separated by less than a diameter toward lateral margin. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin nearly straight, sponda distinctly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/6 with single carina extended to basal margin of prosternum. Metaventricle without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite rounded throughout, extended forward, ventrite with sparse, short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures large, becoming denser toward lateral margin; 5th ventrite coarsely, densely punctured in basal 2/3, apical 1/3 depressed, feebly depressed by primary pore laterally, with nonciliate tubercle on each side of middle, apical margin broadly, weakly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate, sparsely pubescent on each side of median depression, lateral angle abruptly rounded, surface densely punctured. Apical tergite with apex weakly emarginate. Genitalia with basal lobe long, slender, as long as paramere, asymmetrical, sides parallel, apex bent to one side; paramere narrowed medially, dorsal margin broadly emarginate, apex rounded (Fig. 314, 315); siphon robust, strongly curved in basal 1/2, basal capsule large, inner arm short, wide, curved, apex truncate, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 316, 317).

**Female.** Unknown.

**Variation.** None observed.

**Type material.** Holotype male; (Brasil), Cantareira, Sao Paulo, 17.II.1962, J. Halik, 19011, BRASIL, Halik 1966 Collection. (USNM). Paratype; 1, (Brazil), Macaé de Sima-1500m, Nova Friburgo, Rio de Janeiro - Brasil, 1-15/I/2006, P. Grossi, col, Armadilha Interceptadora de Vôo (FIT) (DZUP).

**Remarks.** *Dilatitibialis elaine* has the same dorsal color pattern as do several other *Dilatitibialis* species, but the presence of tubercles on the male 5th ventrite and male genitalia with a long, apically bent basal lobe immediately distinguish it from all others.

## Females unassociated with males

### 58. *Dilatitibialis cruciferae* (Mulsant), new combination

*Cleothera cruciferae* Mulsant, 1850: 565.

*Hyperaspis cruciferae*: Crotch 1874: 217; Korschefsky 1931: 187; Gordon 1987: 27.

**Description. Female** lectotype. Length 3.1 mm, width 2.6 mm; body oval, convex. Color reddish yellow except pronotum mostly black with anterior border, irregular area in lateral 1/4, and small, elongate, median spot yellow; elytron with basal and sutural margins dark brown, sutural border widened medially, with 4 large, dark brown spots arranged in two rows, first row in basal 1/2, second row on apical declivity (Fig. 318); ventral surface with prosternum, meso- and metaventriles dark brown; abdomen brown medially, yellowish brown laterally. Head punctures small, separated by less than a diameter, each puncture as large as 2 eye facets; pronotal punctures larger than head punctures, separated by less than a diameter; elytral punctures larger than on pronotum, separated by a diameter or less; metaventral punctures 3 or 4 times as large as on pronotum, separated by a diameter medially, becoming larger and nearly contiguous toward lateral margin. Clypeus very slightly emarginate apically, nearly truncate, lateral angle broadly rounded, surface with dense, long pubescence. Eye canthus about 5 eye facets long,

angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, sides straight, basal and anterior angles abruptly rounded, basal margin without bordering line. Epipleuron wide, grooved, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange evenly arcuate, narrower than remainder of protibia, outer margin smooth; sponda deep, slightly wider than flange. Carinae on prosternal process pronounced, narrowly spaced apically, weakly convergent toward base, joined at basal 1/8 of prosternum, connected to prosternal base by single carina. Abdomen with primary pores laterally between ventrites 4-5 large, occupying apical 1/3 of ventrite 4, forming large, deep depression on ventrite 5; postcoxal line on basal abdominal ventrite straight in basal 1/3, extended to apical margin of ventrite at middle, rounded in apical 2/3, extended forward; ventrites 1-4 with dense, moderately long pubescence, densely punctured throughout, punctures contiguous or nearly so, coarse medially and fine laterally; 5th ventrite densely, finely punctured, apical margin weakly emarginate; 6th ventrite finely, densely punctured, apical margin weakly arcuate. Genitalia with spermathecal capsule short; bursal cap with 3 arms, median arm weak, apical strut long, slender (Fig. 319).

**Male.** Unknown.

**Variation.** Unknown.

**Type locality.** Brazil.

**Type depository.** UMZC (lectotype designated by Gordon 1987).

**Geographical distribution.** Brazil.

**Specimens examined.** The lectotype.

**Remarks.** This is a distinctive species distinguished by dorsal color pattern, pronotum with straight lateral margins, and dense dorsal and ventral punctation.

### 59. *Dilatitibialis gaynoni* (Mulsant), new combination

*Cleothera gaynoni* Mulsant, 1850: 615.

*Hyperaspis gaynoni*: Crotch 1874: 221; Korschefsky 1931: 189; Blackwelder 1945: 447.

**Description. Female** lectotype. Length 2.4 mm, width 1.7 mm; body oval, convex, pronotum narrower than elytra at base, pronotum and elytra discontinuous in outline. Dorsal surface with head slightly alutaceous, feebly shiny, pronotum slightly alutaceous, shiny, abdomen smooth, shiny, lacking alutaceous sculpture. Color reddish yellow except pronotum black with anterolateral angle reddish yellow; elytron black with 5 reddish yellow spots (Fig. 320); ventral surface with venter of head, prosternum, meso-, and metaventrites dark brown, abdomen reddish brown. Head punctures small, separated by less than a diameter, each puncture as large as 3 eye facets; pronotal punctures larger than head punctures, separated by less than to twice a diameter; elytral punctures larger than on pronotum, separated by less than to 3 times a diameter; metaventral punctures sparse, smaller than elytral punctures in median 1/2, larger and separated by a diameter or less in lateral 1/2. Clypeus weakly emarginate apically, lateral angle broadly rounded, surface with dense, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, brown. Pronotum narrowed from base to apex, sides straight, basal and anterior angles abruptly rounded, basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange straight, narrower than remainder of protibia, outer margin smooth; sponda deep, slightly wider than flange. Carinae on prosternal process widely spaced apically, convergent toward base, joined in basal 1/4 of prosternum, connected to prosternal base by single stem. Abdomen with primary pores laterally between ventrites 4-5 large, occupying apical 1/3 of ventrite 4, forming large, deep depression on ventrite 5; postcoxal line on basal abdominal ventrite straight in basal 1/3, rounded along apical margin of ventrite at middle, angulate in apical 2/3, extended forward; ventrites 1-6 with sparse, moderately long pubescence, basal ventrite



with large punctures in median 1/3 separated by a diameter or less, remaining ventrites with punctures fine, dense, separated by less than a diameter; 5th ventrite with apical border weakly emarginate; 6th ventrite with apical margin strongly arcuate. Genitalia with spermathecal capsule short, weakly curved, enlarged in apical 1/2, bursa lost (Fig. 321).

**Male.** Unknown.

**Variation.** Unknown.

**Type locality.** Brazil.

**Type depository.** BMNH (lectotype here designated).

**Geographical distribution.** Brazil.

**Specimens examined.** The lectotype.

**Remarks.** A combination of dorsal color pattern and narrow pronotum creating a discontinuous outline of pronotum and elytra is distinctive for this species.

The female lectotype is labeled "5171 (blue disc)/Syntype (blue bordered disc/Gaynoni Muls. Bresil (green paper)."

#### 60. *Dilatitibialis laterinotata* (Brèthes), new combination

*Hyperaspis laterinotata* Brèthes, 1925b: 6; Korschevsky 1931: 191; Blackwelder 1945: 447.

**Description. Female** holotype. Length 2.6 mm, width 2.1 mm; body oval, convex. Dorsal surface shiny with feeble alutaceous sculpture throughout. Color black; head yellow; pronotum with anterior 7/8 and anterolateral 1/4 yellow; elytron with large, yellow, triangular macula, macula projected inward from lateral margin slightly more than 1/2 distance to sutural margin (Fig. 322); ventral surface with mouthparts, legs, epipleuron yellow; abdomen with median 1/3 of ventrites 1-3 dark brown, outer portion of ventrites 1-3 and remaining ventrites yellowish brown. Head punctures small, separated by less than a diameter, each puncture as large as 1 eye facet; pronotal punctures as large as on head, separated by a diameter or less; elytral punctures as large as on pronotum, separated by 1 to 2 times a diameter; metaventral punctures large, coarse, separated by less than a diameter medially, larger and denser laterally. Clypeus very slightly emarginate apically, nearly truncate, lateral angle broadly rounded. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, sides straight, basal and anterior angles abruptly rounded, basal margin with trace of bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia weakly flanged, flange slightly arcuate, 1/2 as wide as remainder of protibia, outer margin smooth; sponda projecting slightly beyond flange. Carinae on prosternal process narrowly separated at apex, weakly convergent, joined at basal 1/4 of prosternum, connected to base by short stem. Metaventrite without setal tuft. Basal abdominal ventrite without median setal tuft. Primary pores laterally between ventrites 4-5 large, extended under apical 1/3 of ventrite 4, forming large, deep depression on ventrite 5; postcoxal line on basal abdominal ventrite straight in basal 1/3, extended to apical margin of ventrite at middle, curved along basal margin, rounded in apical 2/3, extended forward; Abdominal ventrites 1-4 with short, sparse pubescence, punctures on basal 3 ventrites large, separated by less than to twice a diameter, becoming smaller and dense laterally, ventrites 4-6 densely punctured throughout. Genitalia with spermathecal capsule short, curved at basal 1/3, strongly widened from base to apex; bursal cap rectangular, with 3 arms, apical strut long, "pinched" medially, apex wide, spatulate in lateral view (Fig. 323).

**Male.** Unknown.

**Variation.** Unknown.

**Type locality.** Brazil, Rio de Janeiro.

**Type depository.** BMNH (holotype, examined).

**Geographical distribution.** Brazil.

**Remarks.** This species has an elytral color pattern unlike any as yet seen in *Dilatitibialis*. The basically black color, and large, inwardly projecting yellow macula on the lateral margin of each elytron are diagnostic for *D. laterinotata*.

The female holotype in the BMNH is labeled "Type (orange bordered disc)/ 60174 (handwritten)/ Brasilia Rio Jan (handwritten)/type (handwritten)/ Fry Coll. 1905.100./Hyperaspis laterinotata Brethes (handwritten)."

### 61. *Dilatitibialis marjorie* Canepari and Gordon, new species

**Description. Female** holotype. Length 3.0 mm, width 2.4 mm; body round, slightly elongate, convex. Dorsal surface with head, pronotum alutaceous, weakly shiny, elytron slightly alutaceous, shiny. Color yellow except head with median brown macula on frons, macula wide at base of eye, narrowed in apical 3/4, pronotum with 4 large, dark brown median maculae, 2 wide, somewhat triangular macula in apical 1/2, narrowly connected to basal margin at middle, 1 dark brown, triangular spot on each side of middle on basal margin; elytron with 5 brown vittae, sutural vitta narrowly separated from suture except contacting suture at apex, extended from scutellum to apical 1/10, discal vitta in apical 1/2 short, extended from near base to middle of disc, median vitta on apical declivity short, triangular, outer 2 vittae extended from humeral callus to apical 1/6, connected at base, narrowly separated medially, weakly connected in apical 1/2 (Fig. 324); ventral surface with head, prosternum, meso- and metaventrites light brown; abdomen brownish yellow. Head punctures large, separated by less than a diameter, each puncture as large as 3 eye facets; pronotal punctures smaller than head punctures, separated by less than to 3 times a diameter; elytral punctures as large as on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than on elytron medially, separated by about a diameter, slightly coarser and separated by a diameter or less toward lateral margin. Clypeus weakly emarginate apically, nearly truncate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, angled forward, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin straight, basal margin without trace of bordering line. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia not flanged, outer margin straight, smooth, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent to basal 1/3 with single carina extended to pronotal base. Abdomen with primary pores laterally between ventrites 4-5 small, extended under apical 1/4 of 4th ventrite; postcoxal line on basal abdominal ventrite weakly flattened along posterior ventrite margin, extended forward, ventrite with short pubescence and large, dense punctures; ventrites 2-4 pubescent throughout, punctures dense, small; 5th ventrite, densely, finely punctured in basal 2/3, apex straight; 6th ventrite with apex arcuate. Genitalia with spermathecal capsule short, slender, cornu widened; bursal cap oval, with 3 arms, median arm faint, apical strut short, apex enlarged (Fig. 325).

**Male.** Unknown.

**Variation.** Unknown.

**Type material.** Holotype male; (Brazil), Espiritu Santo, Cleothera ceciliae? Geographica W., ex. Coll. J. Weise. (ZMHB).

**Remarks.** This female specimen has a dorsal color pattern composed of brown vittae on a yellow background, as do certain other species, but the only closely similar *Dilatitibialis* species is *D. hybridula* which has a different arrangement of dorsal vittae.

## Acknowledgments

Collections curators and other individuals listed below have made preparation of this publication possible.

We are indebted to Roger Booth (BMNH), Lothar Zerche (DEI), Lúcia Massutti de Almeida (DZUP), Axel Bachmann (MBR), Mario Elgueta (MNHS), Heinrich Schönmann (NHMV), Olaf Jaeger (SNSD), William Foster and Russell Stebbings (UMZC), Bernd Jaeger and Manfred Uhlig (ZMHB), Ole Martin and Alexey Solodovnikov (ZMUC), and Nikolai Nikitskii and Boris Korotyaev, Zoological Institute Russian Academy of Science, for the loan of type specimens.

We thank L. David and Joël Clary (MNHL) for allowing an examination of the Dejean collection; Guillermo González (GGC), Santiago, Chile, for bringing together holdings of several South American private collectors and making all available for study. For additional loan of specimens we are indebted to Roger Booth and Max Barclay (BMNH), David Kavanaugh and Jere Schweikert (CAS), Charles Bellamy and Andrew Cline (CSCA), Eric Rickey, (CNC), Robert Davidson (CMNH), Natalia Vandenberg (USNM), and Bernd Jaeger and Manfred Uhlig (ZMHB). For manuscript review we thank J. Poorani, National Bureau of Agriculturally Important Insects, Bangalore, Karnataka, India, and J. A. Giorgi, University Federal do Pará, Altamira, PA, Brazil.

Claudio Canepari prepared the pen and ink illustrations, and Guy Hanley provided the color habitus views.

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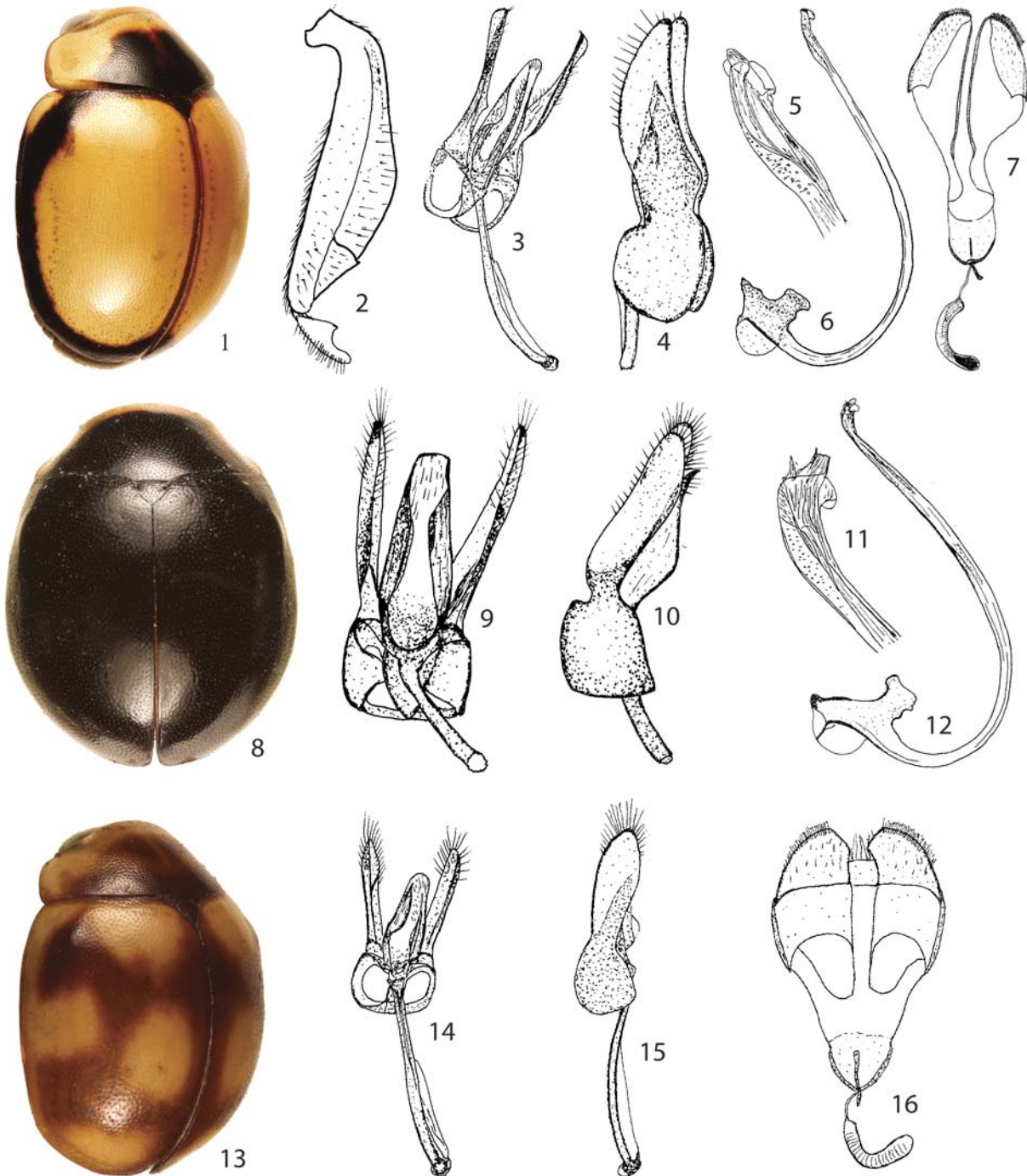
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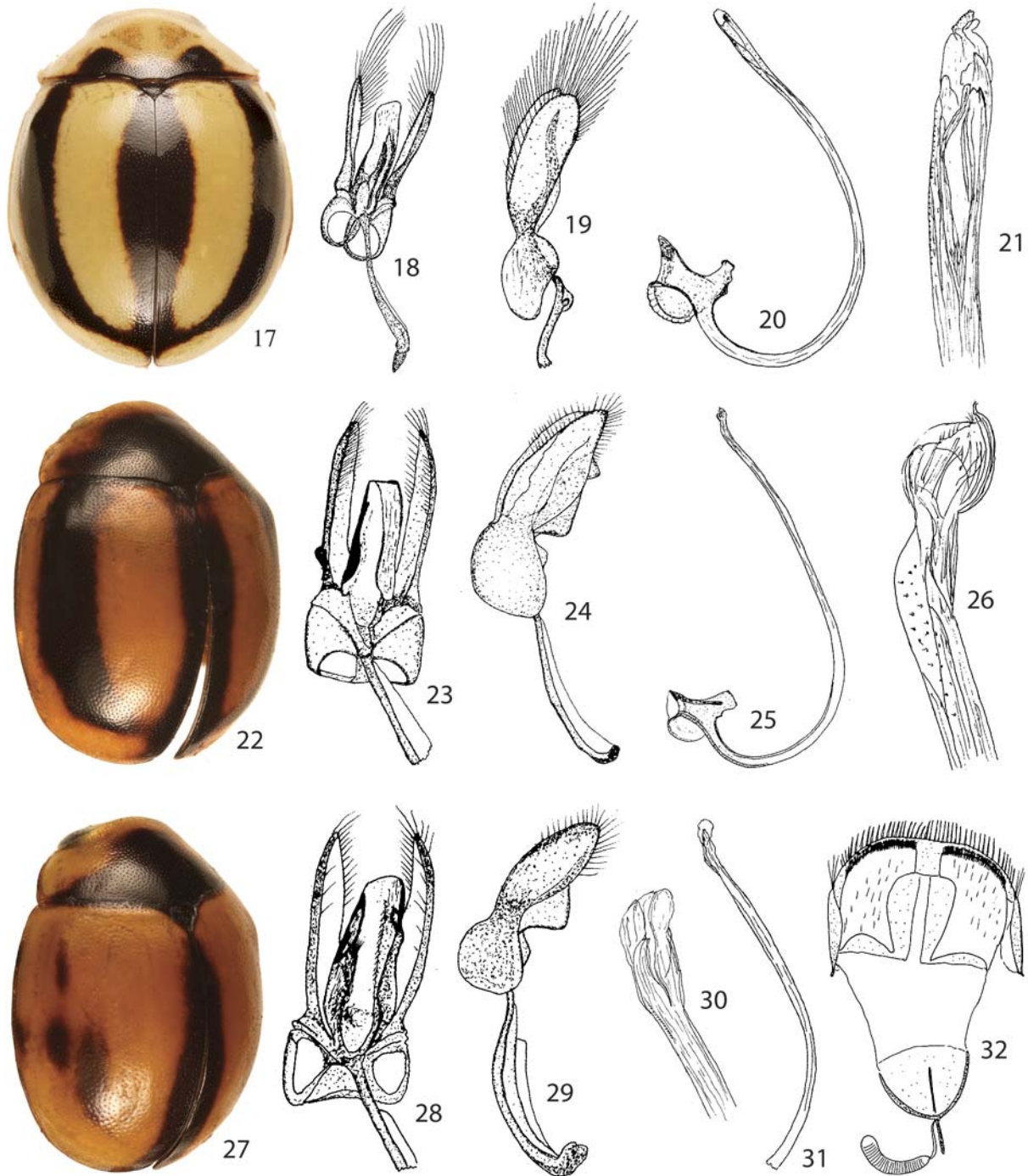
Received April 5, 2013; Accepted May 27, 2013.

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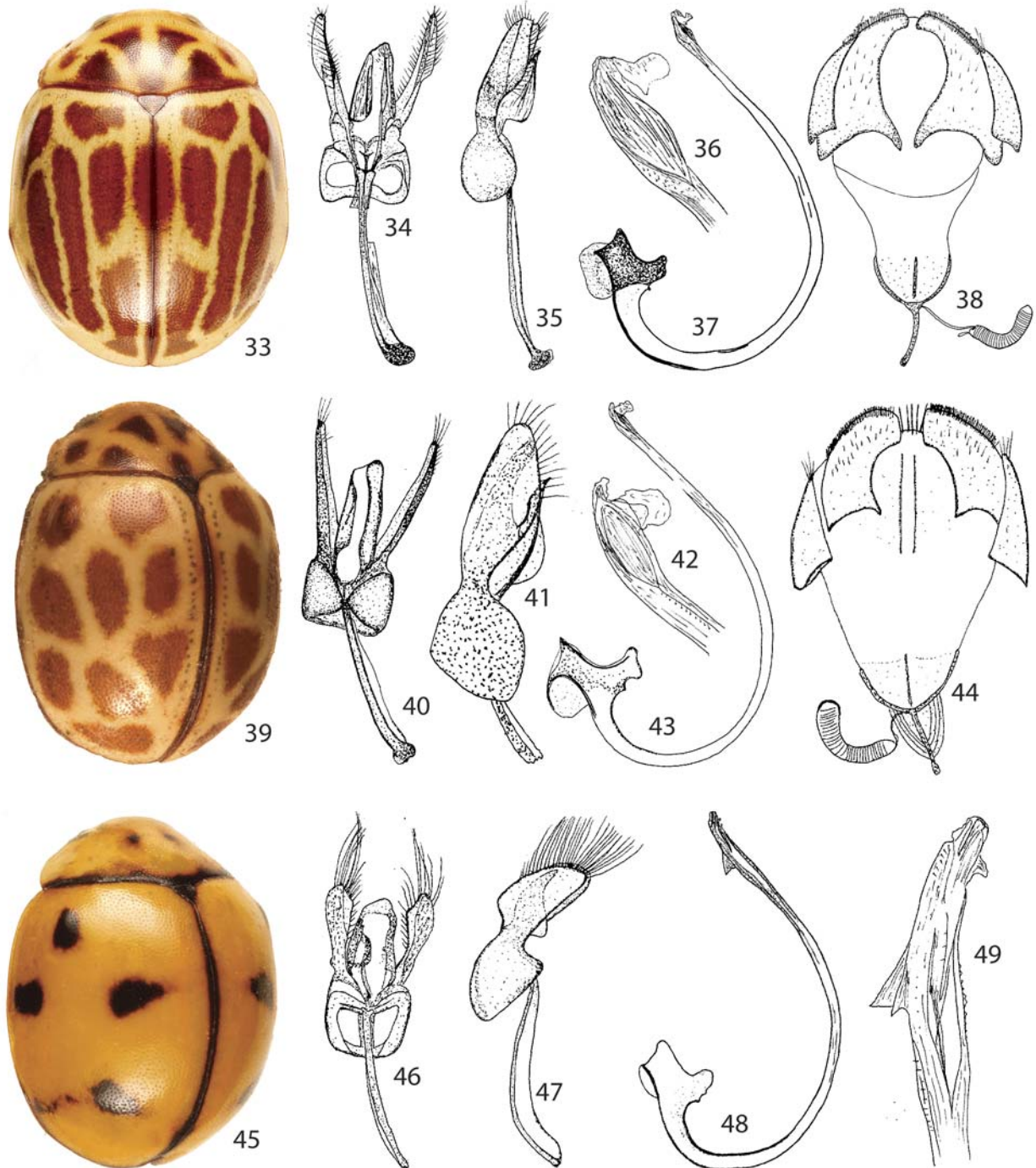
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<b>josephine</b> , n. sp. ....	59	<b>wendy</b> , n. sp. ....	48
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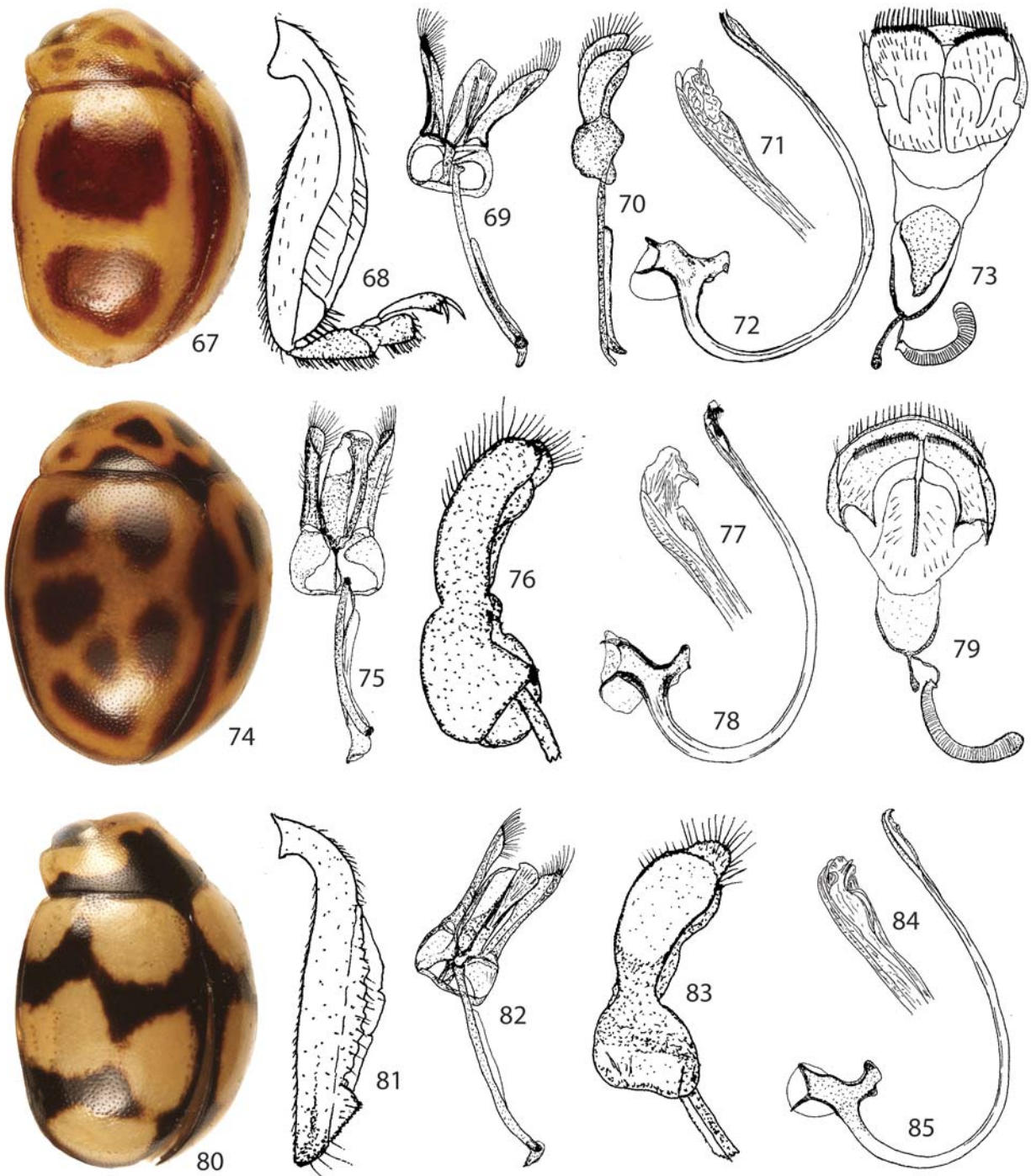


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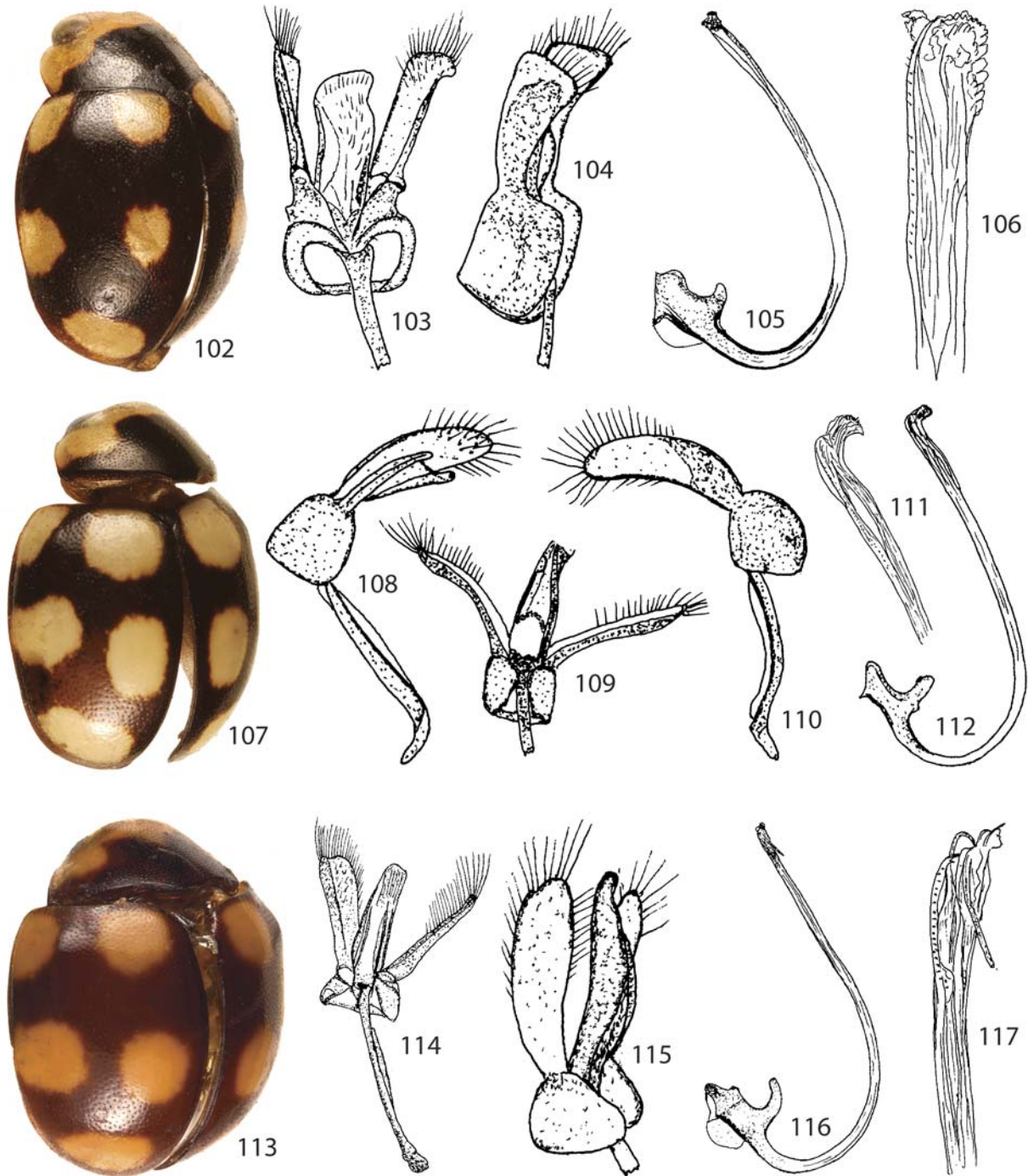




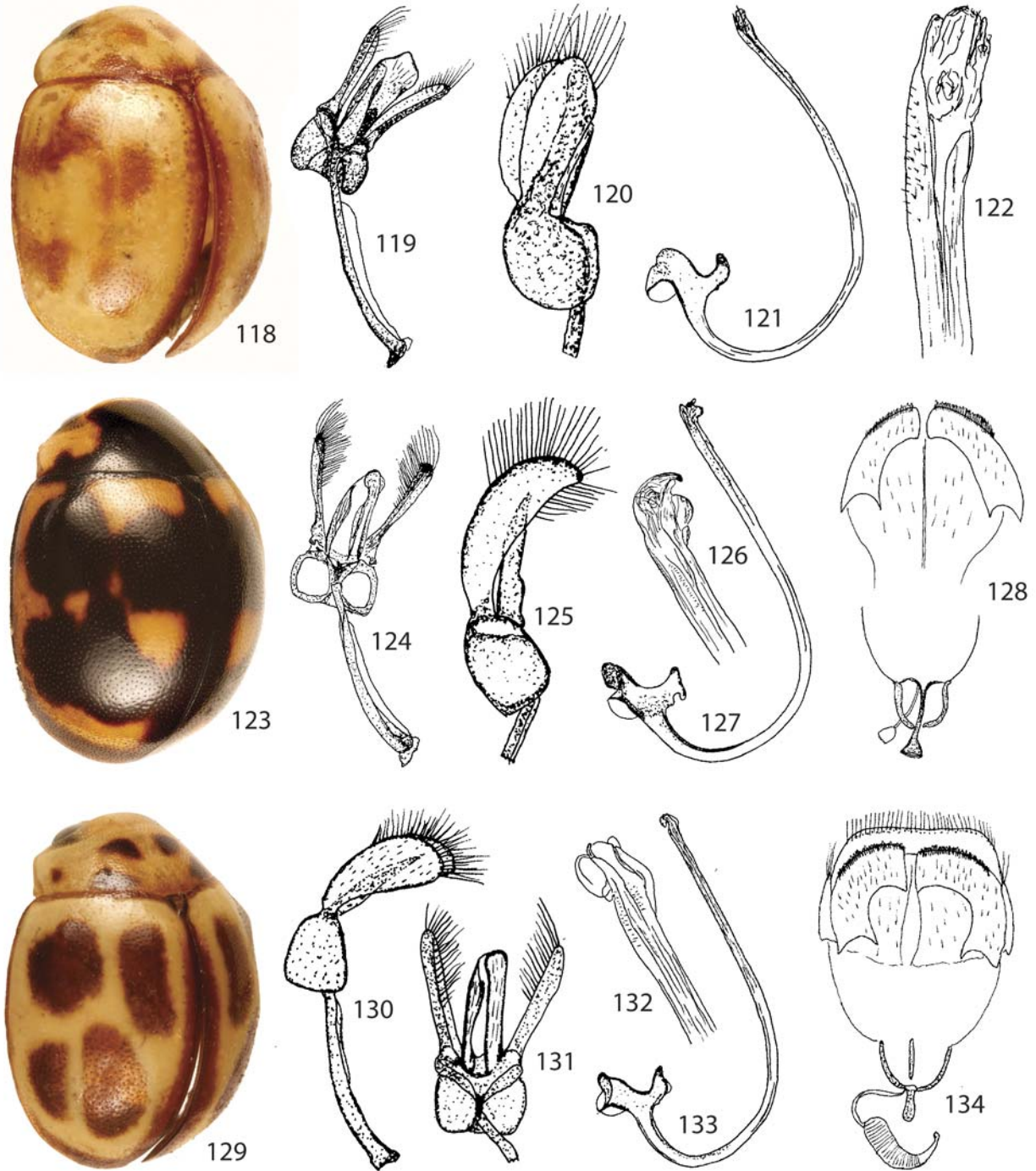
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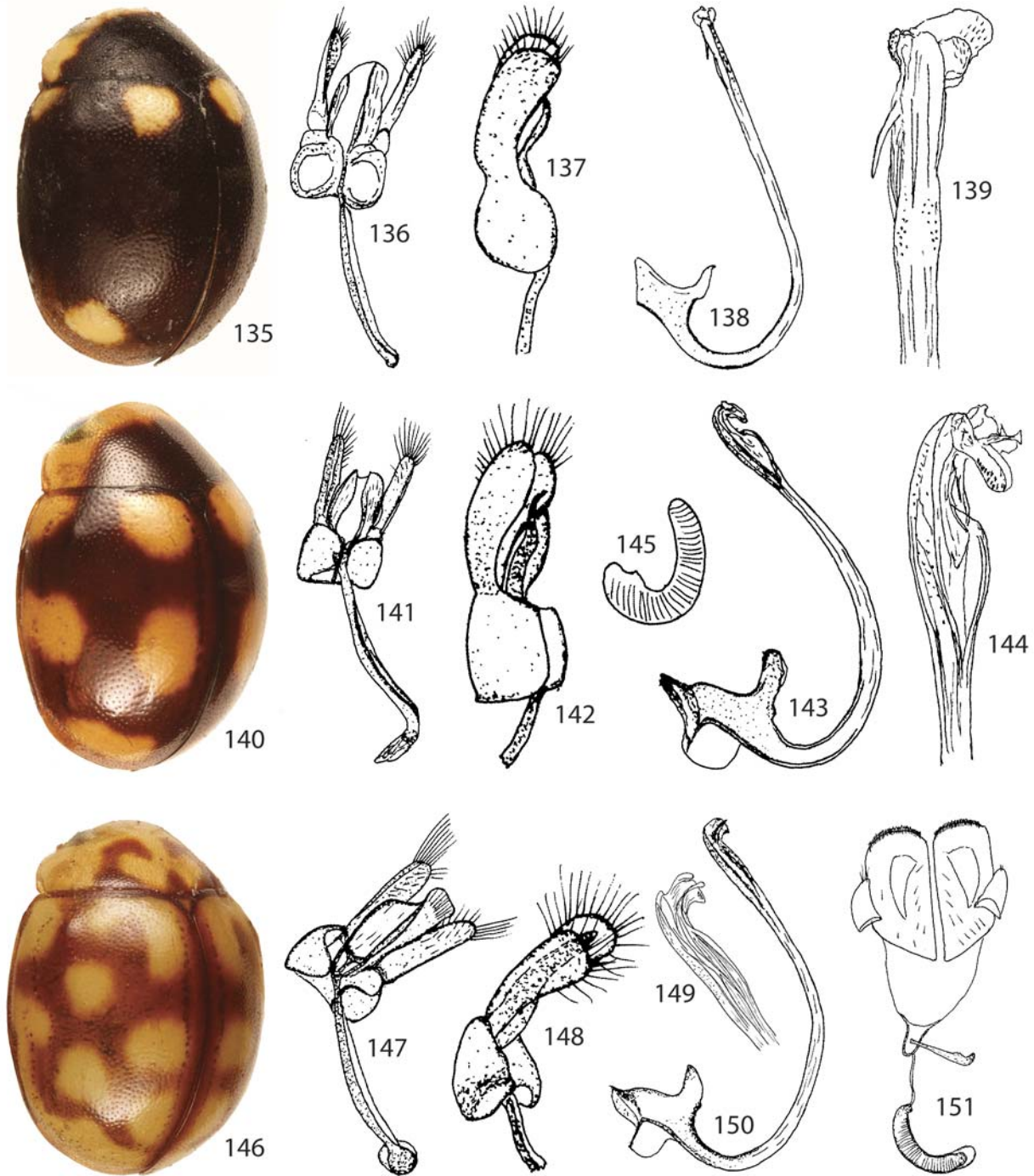
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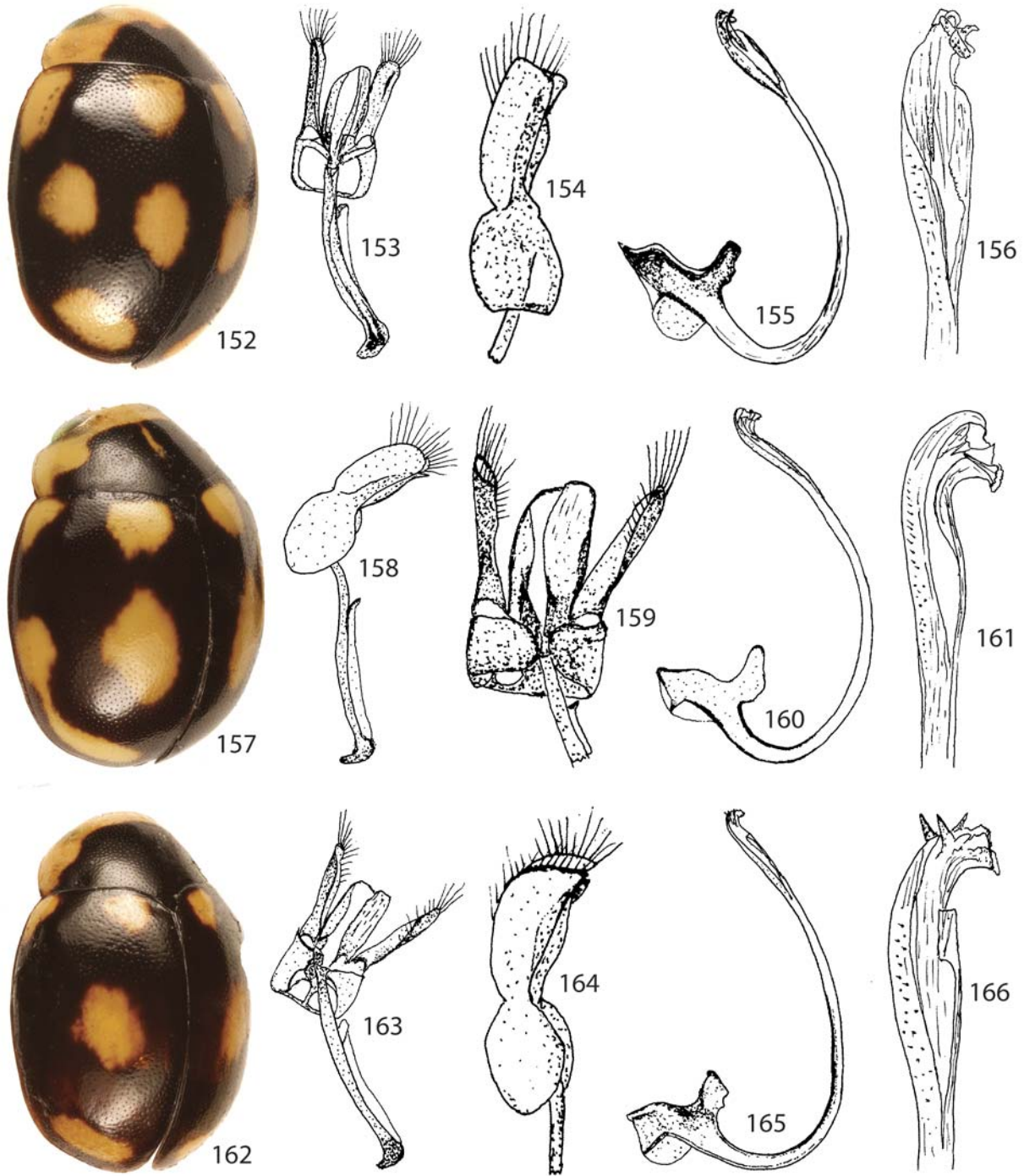
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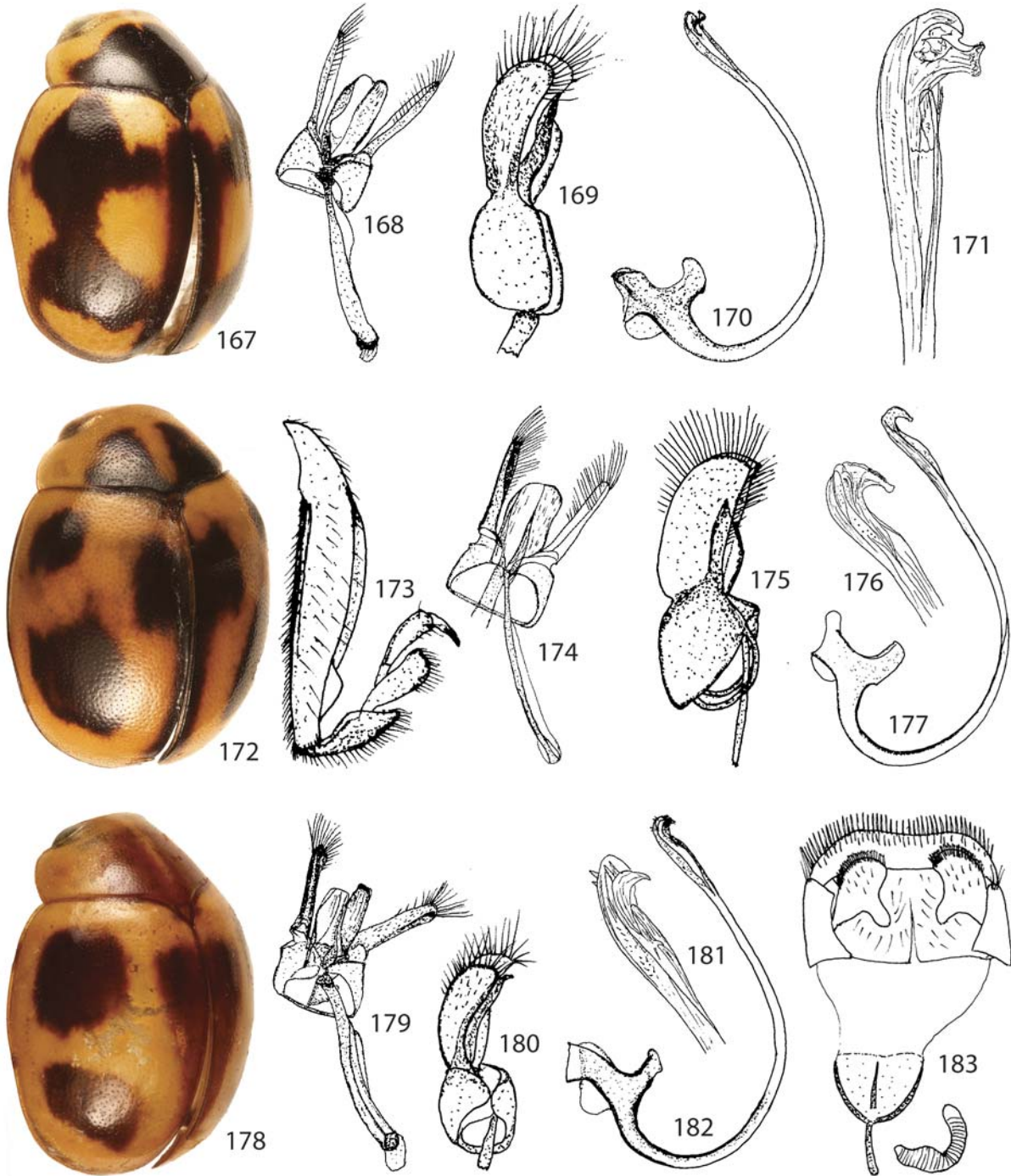
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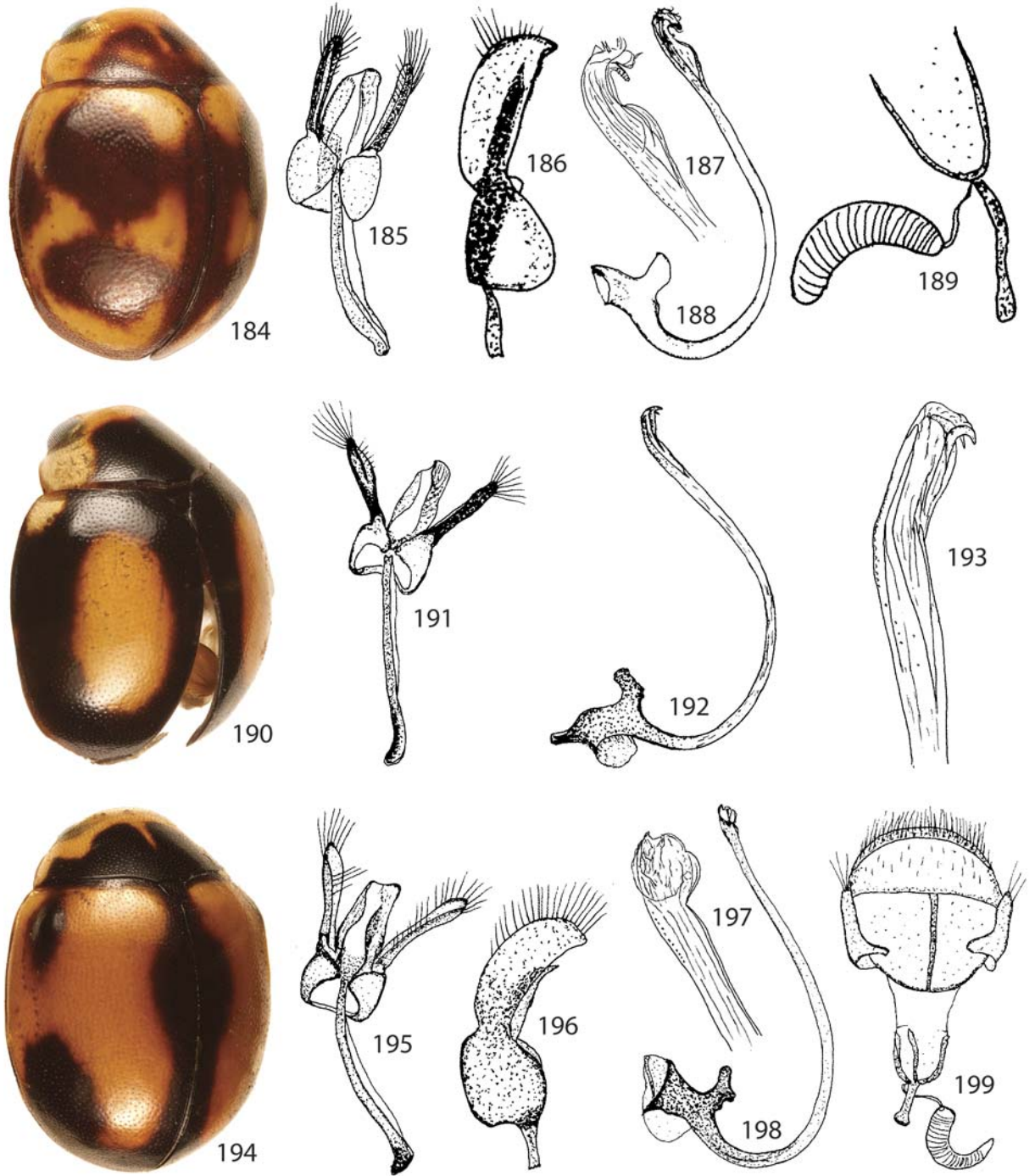
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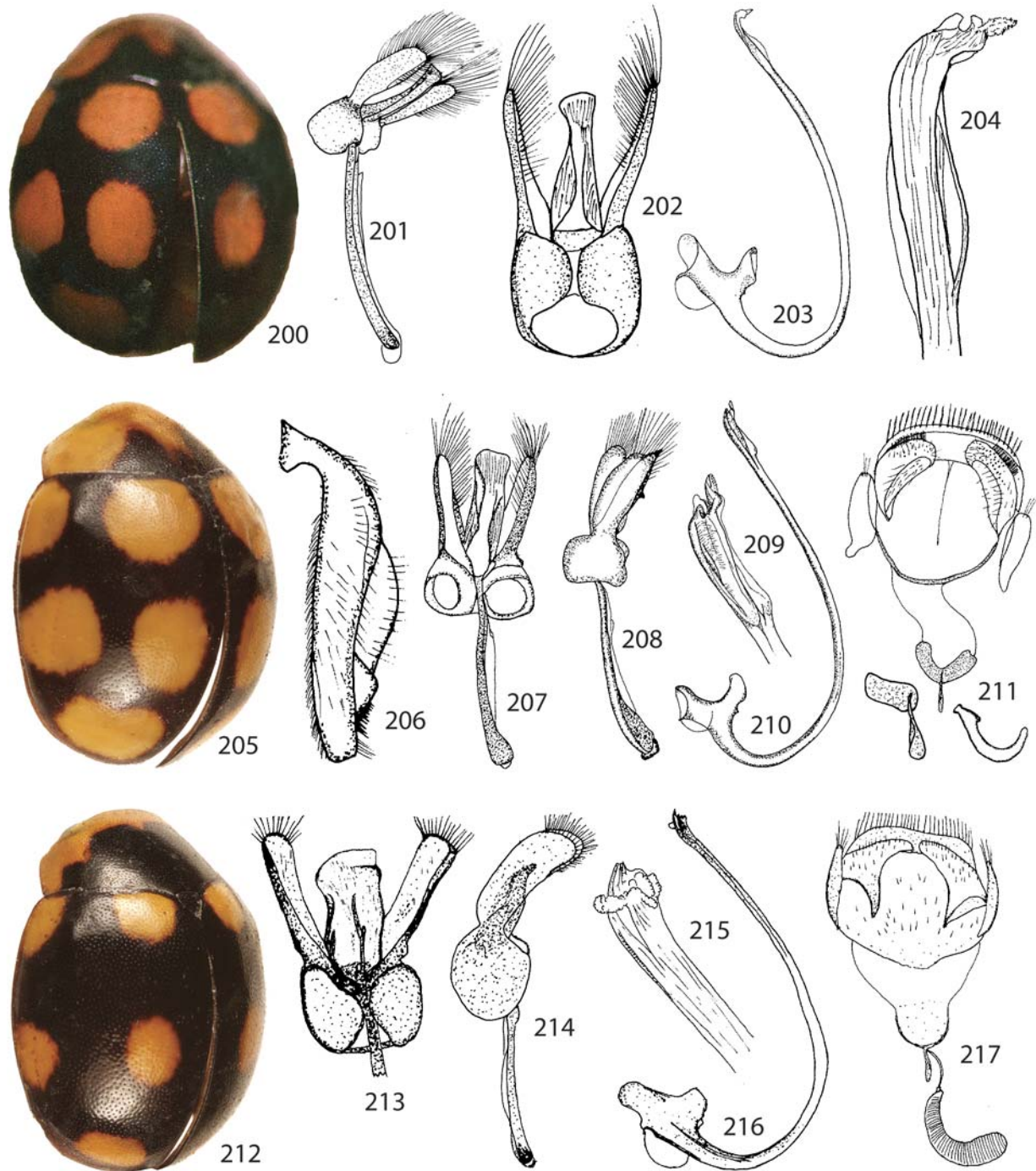


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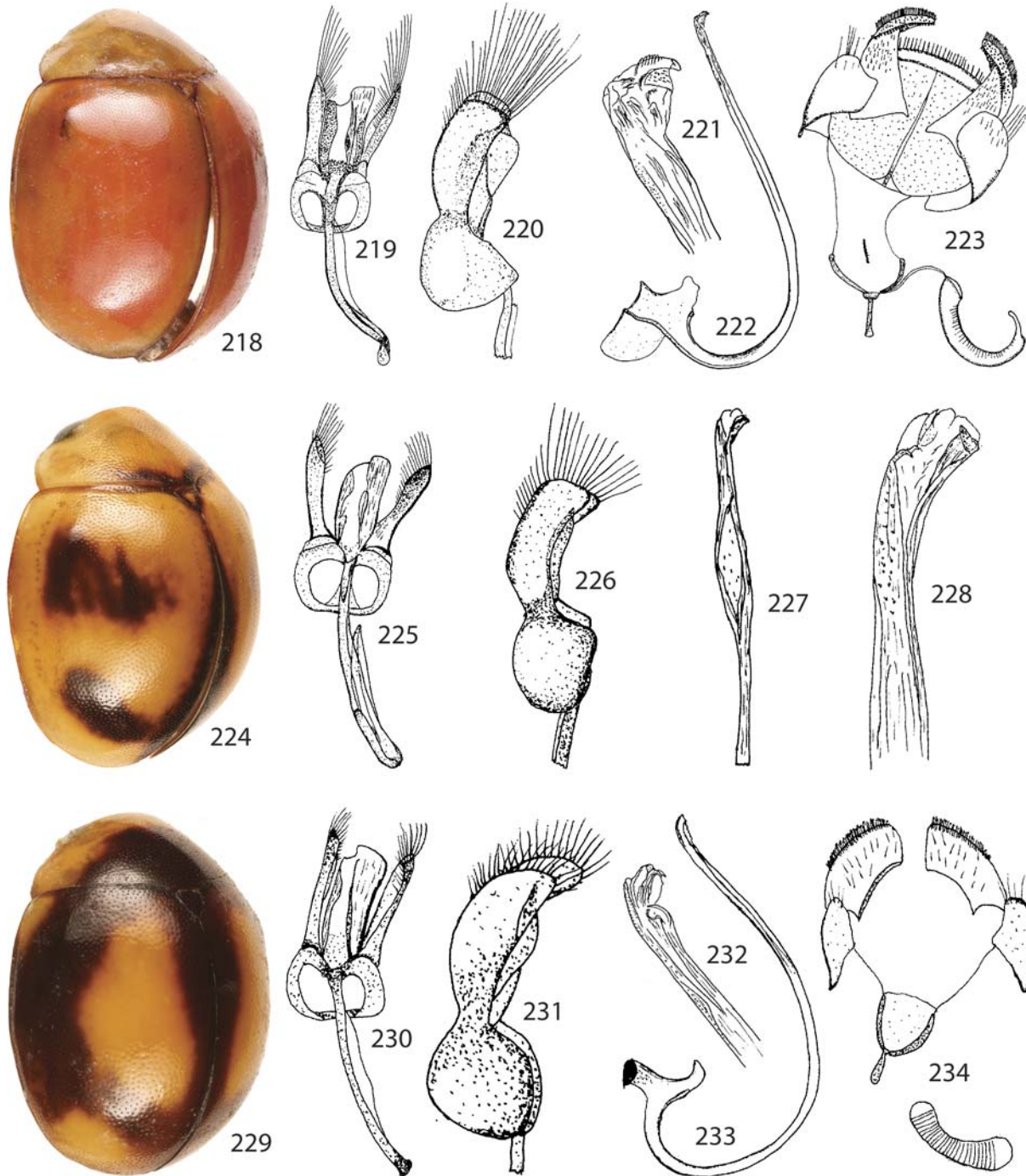


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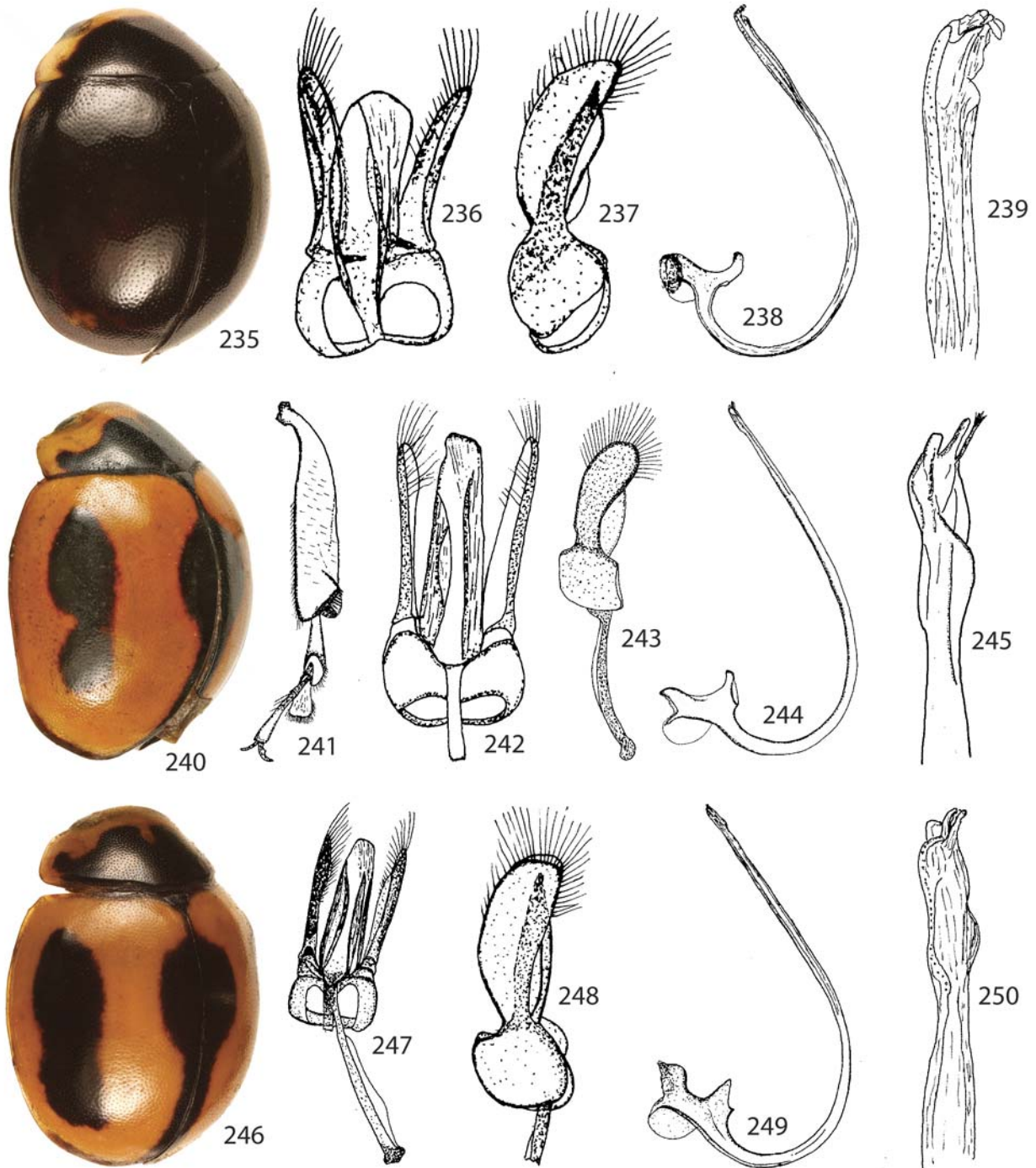




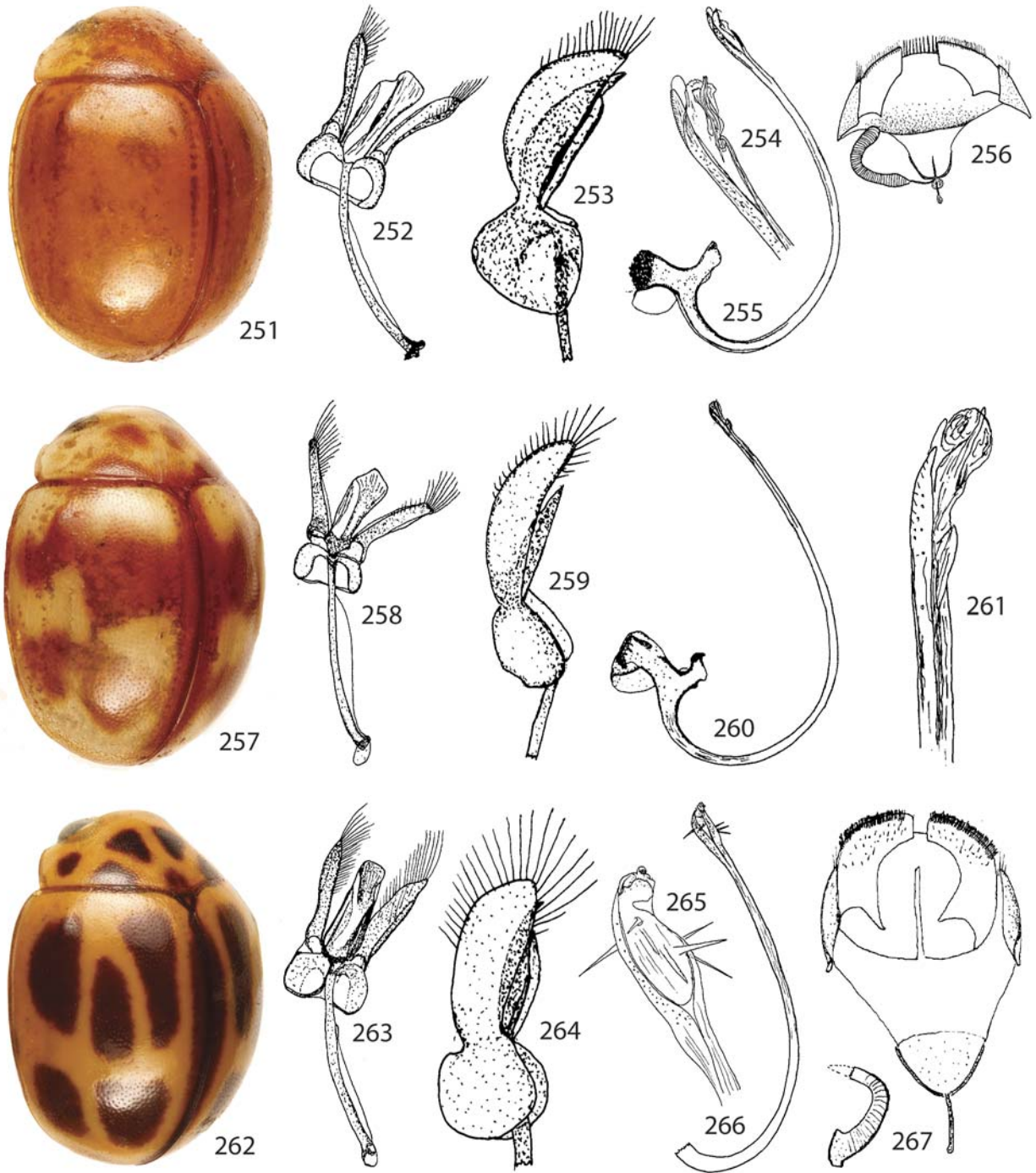
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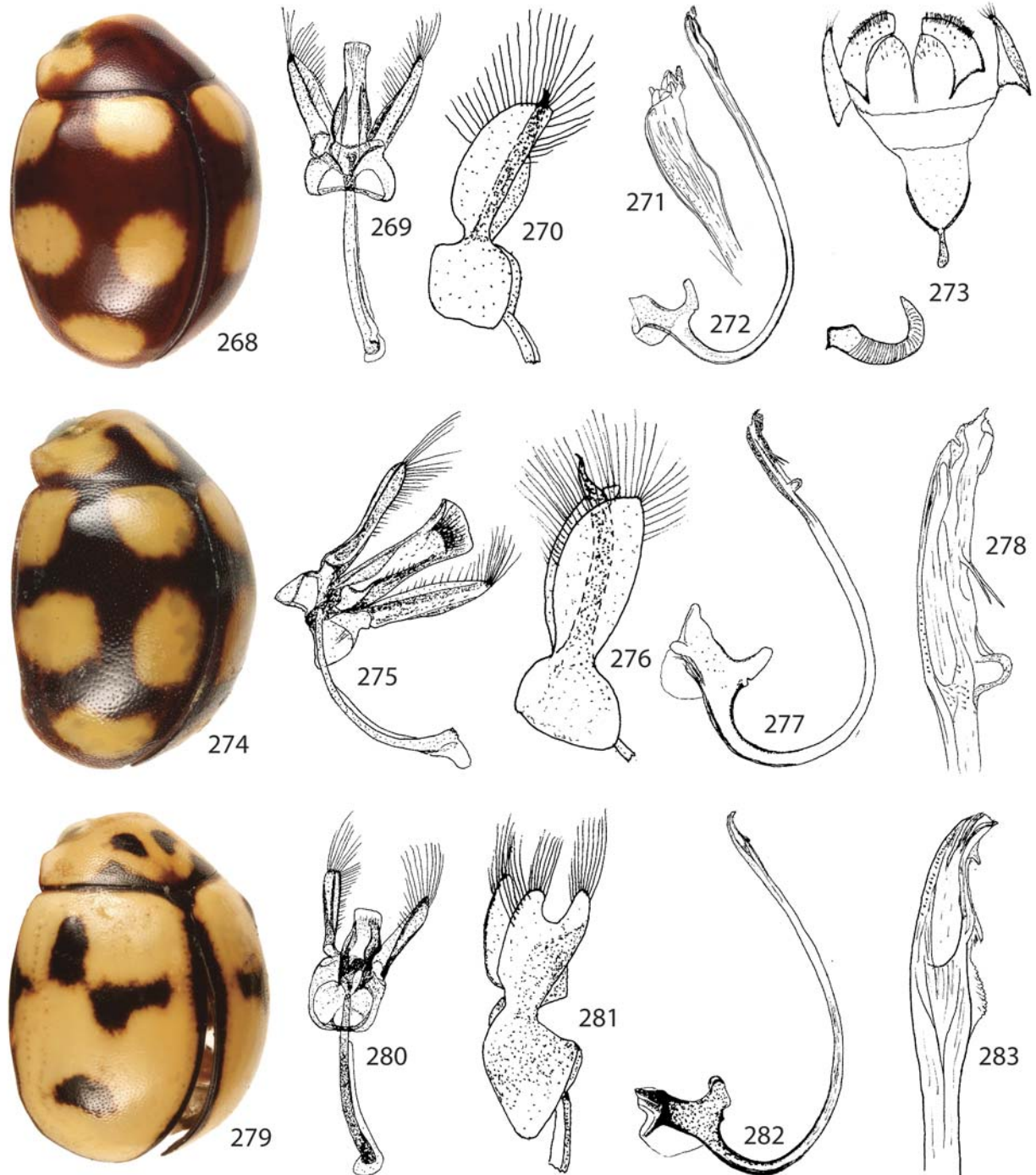
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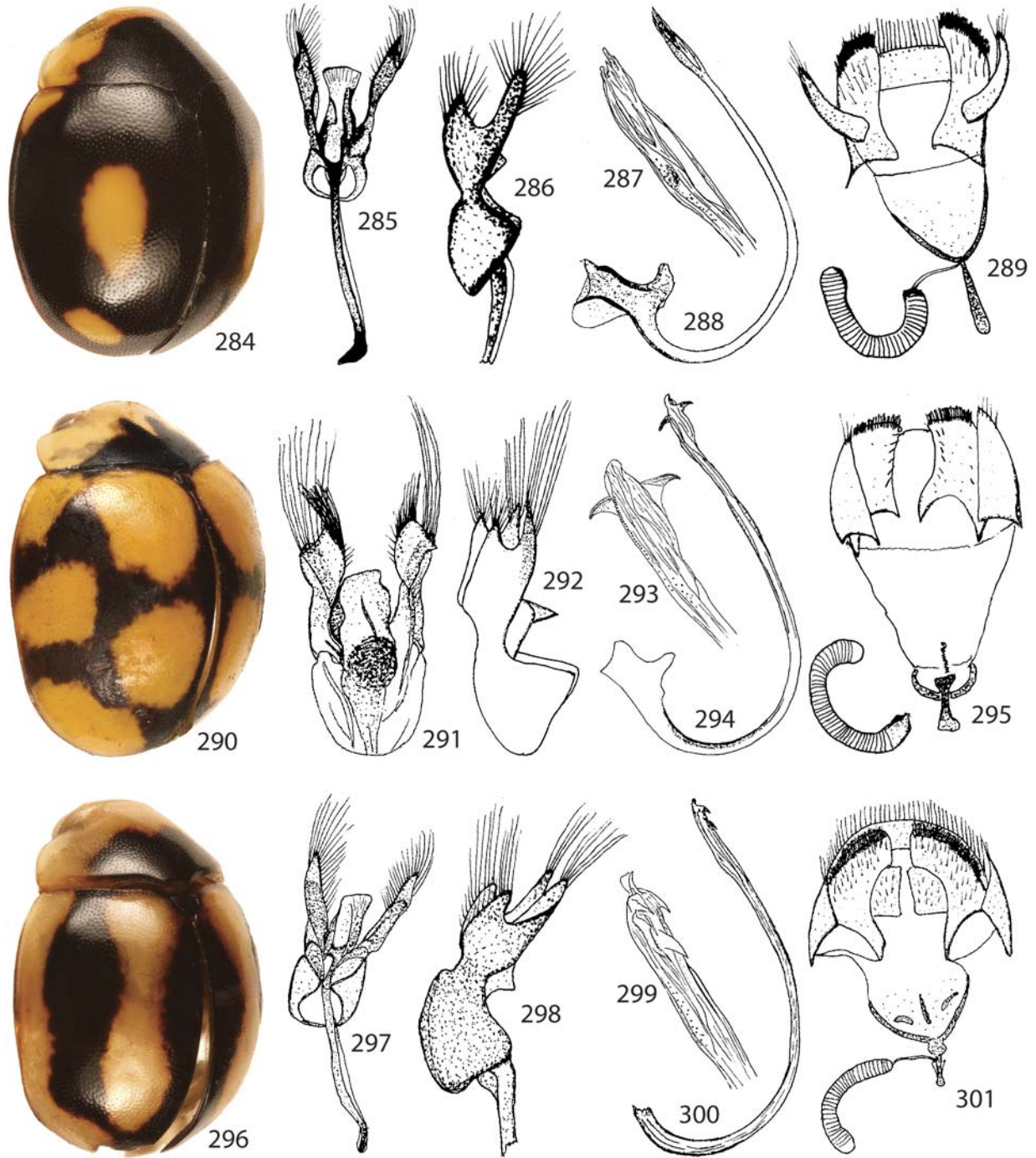
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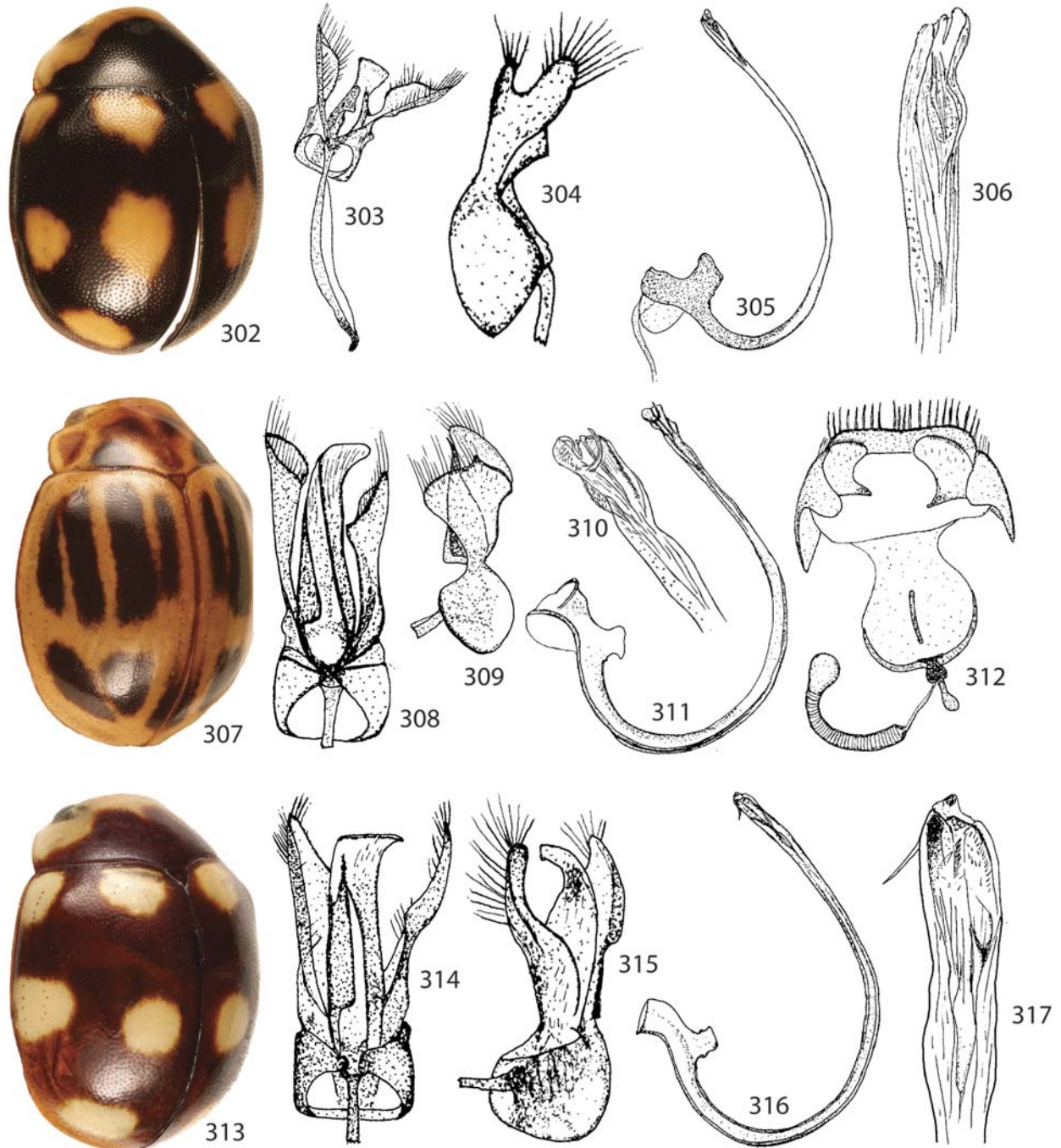
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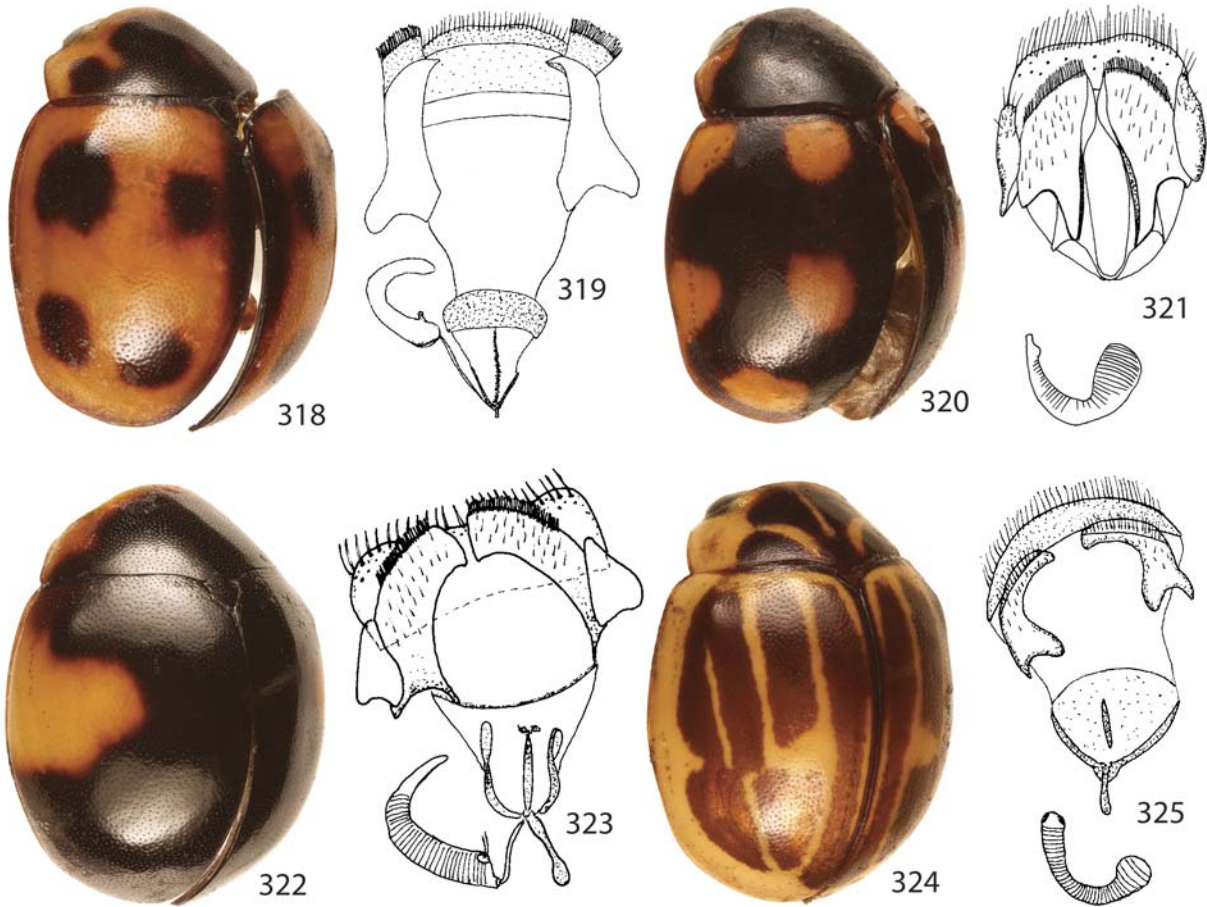
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