INSECTA MUNDI A Journal of World Insect Systematics

0390

South American Coccinellidae (Coleoptera), Part XVI: systematic revision of *Brachiacantha* Dejean (Coccinellinae: Hyperaspidini)

Robert D. Gordon
Northern Plains Entomology
PO Box 65
Willow City, ND 58384, USA

Claudio Canepari
Societa Entomologica Italiana
Via Venezia 1
20097 San Donato Milanese
Milan, Italy

Guy A. Hanley
Curator of Collections
Cyril Moore Science Center
Minot State University
Minot, ND, USA

Date of Issue: October 10, 2014

CENTER FOR SYSTEMATIC ENTOMOLOGY, INC., Gainesville, FL

Robert D. Gordon, Claudio Canepari, and Guy A. Hanley
South American Coccinellidae (Coleoptera), Part XVI: systematic revision of *Brachiacantha* Dejean (Coccinellinae: Hyperaspidini)
Insecta Mundi 0390: 1–76

ZooBank Registered: urn:lsid:zoobank.org:pub:E98EF4BD-2EE6-4F39-929C-CCAC8800F900

Published in 2014 by
Center for Systematic Entomology, Inc.
P. O. Box 141874
Gainesville, FL 32614-1874 USA
http://centerforsystematicentomology.org/

Insecta Mundi is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod. Topics considered for publication include systematics, taxonomy, nomenclature, checklists, faunal works, and natural history. **Insecta Mundi** will not consider works in the applied sciences (i.e. medical entomology, pest control research, etc.), and no longer publishes book reviews or editorials. Insecta Mundi publishes original research or discoveries in an inexpensive and timely manner, distributing them free via open access on the internet on the date of publication.

Insecta Mundi is referenced or abstracted by several sources including the Zoological Record, CAB Abstracts, etc. **Insecta Mundi** is published irregularly throughout the year, with completed manuscripts assigned an individual number. Manuscripts must be peer reviewed prior to submission, after which they are reviewed by the editorial board to ensure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

Manuscript Preparation Guidelines and **Submission Requirements** available on the Insecta Mundi webpage at: http://centerforsystematicentomology.org/insectamundi/

Printed copies (ISSN 0749-6737) annually deposited in libraries:
CSIRO, Canberra, ACT, Australia
Museu de Zoologia, São Paulo, Brazil
Agriculture and Agrifood Canada, Ottawa, ON, Canada
The Natural History Museum, London, UK
Muzeum i Instytut Zoologii PAN, Warsaw, Poland
National Taiwan University, Taipei, Taiwan
California Academy of Sciences, San Francisco, CA, USA
Florida Department of Agriculture and Consumer Services, Gainesville, FL, USA
Field Museum of Natural History, Chicago, IL, USA
National Museum of Natural History, Smithsonian Institution, Washington, DC, USA
Zoological Institute of Russian Academy of Sciences, Saint-Petersburg, Russia

Electronic copies (Online ISSN 1942-1354, CDROM ISSN 1942-1362) in PDF format:
Printed CD or DVD mailed to all members at end of year. Archived digitally by Portico.
Florida Virtual Campus: http://purl.fcla.edu/fcla/insectamundi
University of Nebraska-Lincoln, Digital Commons: http://digitalcommons.unl.edu/insectamundi/
Goethe-Universität, Frankfurt am Main: http://nbn-resolving.de/urn/resolver.pl?urn:nbn:de:hebis:30:3-135240

Layout Editor for this article: Eugenio H. Nearns

INSECTA MUNDI 0390: 1–76 2014

South American Coccinellidae (Coleoptera), Part XVI: systematic revision of *Brachiacantha* Dejean (Coccinellinae: Hyperaspidini)

Robert D. Gordon
Northern Plains Entomology
PO Box 65
Willow City, ND 58384, USA
rdgordon@utma.com

Claudio Canepari
Societa Entomologica Italiana
Via Venezia 1
20097 San Donato Milanese
Milan, Italy
ccanepari@libero.it

Guy A. Hanley
Curator of Collections
Cyril Moore Science Center
Minot State University
Minot, ND, USA
guy.hanley@minotstateu.edu

Abstract. *Brachiacantha* Dejean (Coccinellinae: Hyperaspidini), containing 49 species, is discussed, species described, illustrations provided, and a key to all recognized taxa included. *Coccinella octopustulata* F., *Cleothera groendali* Mulsant, *Hyperaspis argentinica* Weise, *Hyperaspis blandula* Weise, and *Hyperaspis egae* Crotch are **transferred** to *Brachiacantha*. *Cleothera billoti parva* Mulsant is recognized as a valid species and **transferred** to *Brachiacantha*. *Brachiacantha arrowi* Brèthes, *Brachiacantha australe* Leng, *Brachiacantha manni* Nunenmacher, and *Brachiacantha propria* Kirsch are recognized as **synonyms** of *Brachiacantha groendali* (Mulsant). A total of 29 **new species** of *Brachiacantha* are described; *B. amber*, *B. anita*, *B. april*, *B. cathy*, *B. clara*, *B. charlotte*, *B. danielle, B. darlene*, *B. debbie*, *B. eleanor*, *B. emma*, *B. esther*, *B. eva*, *B. gail*, *B. hazel*, *B. jamie*, *B. joanne*, *B. jill*, *B. juanita*, *B. lauren*, *B. leslie*, *B. lynn*, *B. monica*, *B. pauline*, *B. pseudoarrowi*, *B. regina*, *B. sally*, *B. valerie*, and *B. veronica*. **Lectotypes are designated** for *B. argentinica* (Weise), *B. armandi* (Mulsant), *B. arrowi* Brèthes, *B. bahiensis* Brethès, *B. bilineata* Weise, *B. blandula* Weise, *B. bruchi* Weise, *B. loricata* (Mulsant), *B. octopustulata* (F.), *B. propria* Kirsch.

Key words. *Brachiacantha*, key, synonyms, systematics.

Introduction

The South American Hyperaspidini (Coccinellidae: Hyperaspidinae) were revised by Gordon and Canepari (2008). A comprehensive taxonomic revision of the South American tribe Brachiacanthini, the remaining tribe in Hyperaspidinae, was begun with revisions of *Cleothera* Mulsant, *Hinda* Mulsant, and *Serratitibia* Gordon et al. (2013) followed by a revision of *Dilatitibialis* Duverger Canepari et al. (2013). Here the genus *Brachiacantha* Dejean is revised with all known taxa described, illustrated and keyed to species. The remaining genera of Brachiacanthini, *Cyrea* Gordon and Canepari and *Tiphysa* Mulsant, will be revised in a future publication.

Gordon et al. (2013) presented an overview of Brachiacanthini providing 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 need to consult Gordon et al. (2013) for generic illustrations and other details concerning characters of Brachiacanthini genera.

Gordon et al. (2013) incorrectly listed the type locality of *Serratitibia sarah* Gordon and Canepari as Tabatinga, Peru. The country should be corrected to read "Tabatinga, Brazil".

Changes to Coccinellidae classification were recently made by Seago et al. (2011). These changes impact the status of variously 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.

Biology. See biology section in Gordon and Canepari (2008). Prey records are generally unknown for South American species of Brachiacanthini, but Schilder and Schilder (1928) list *Pseudococcus* (= *Saccharicoccus*) *sacchari* (Cockerell) as prey of *Brachiacantha octopustulata* (F.), and some BMNH specimens of *B. octopustulata* are labeled as feeding on *Pseudococcus calceolariae* (Maskell) in Guyana. No further information is available, so doubt exists as to whether the beetle was actually feeding on these mealybugs or not. No other biological information has been found for South American species of *Brachiacantha*. Douglass Miller, Systematic Entomology Laboratory, Beltsville, MD, supplied the correct names for both pest species, and also stated that *S. sacchari* is mostly restricted to feeding on grasses, mainly sugar cane, and is present wherever sugar cane is grown, and that *P. calceolariae* is a common polyphagous pest.

Materials and Methods

Morphology. 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 used by Slipinski (2007), which publication should be consulted if clarification is needed. Lectotype and paralectotype labels were affixed to specimens so designated throughout. Label data for all newly described taxa are transcribed exactly as they appear on the label.

Dissections. Both sexes should be dissected when examining specimens of Brachiacanthini. A specific technique consists 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 are newly described herein by Gordon and Canepari. Lectotypes for many species are designated to stabilize current classification for future researchers.

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 exactly as it appears on the labels, with correction of obvious incorrect spelling.

Male genitalia. Species of *Brachiacantha* are grouped according to genitalia type, based primarily on form of the basal lobe or paramere. Nearly all species of *Brachiacantha* have male genitalia with parameres at least slightly of the *Psc* type (Fig. 53) (shape similar to that of a scimitar).

Collection codens. The following acronyms denote depositories for borrowed specimens of *Brachiacantha*. (**BMNH**) Natural History Museum, London, England; (**CASC**) California Academy of Sciences, San Francisco, California; (**CSCA**) California Department of Food and Agriculture, California; (**CMNH**) Carnegie Museum of Natural History, Pittsburgh, Pennsylvania; (**CNC**) Canadian National Collection, Ottawa, Ontario; (**DEI**) Deutsches Entomologisches Institut, Müncheberg, Germany; (**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; (**MKRB**) Museo de Entomologia Klaus Raven Búller, Universidad Agraria la Molina, Peru; (**MNHL**) Muséum d'Histoire Naturelle, Lyon, France; (**MNHP**) Muséum Nationale d'Histoire Naturelle, Paris; (**MZSP**) Museo de Zoologia, Universidad de Sao Paulo, Sao Paulo, Brazil; (**SNSD**) Staatliches Museum für Tierkunde, Dresden, Germany; (**UNMSM**) Universidad Nacio-

nal Mayor de San Marcos, Lima, Peru; (**UMZC**) Cambridge University Museum, Cambridge, England; (**USNM**) U.S. National Museum of Natural History, Smithsonian Institution, Washington, DC, USA; (**ZMHB**) Zoologisches Museum, Humboldt Universität, Berlin, Germany; (**ZMUC**) Zoologisk Museum, Copenhagen, Denmark.

Systematics

Brachiacantha Dejean

Brachiacantha Dejean, 1837: 458; Belicek 1976: 317; Gordon 1985: 556; Milléo and Almeida 2007: 419.
Brachyacantha: Chevrolat 1842: 704 (unjustified emendation); Mulsant 1850: 520; Crotch 1874: 377; Chapuis 1876: 228; Korschefsky 1931: 202; Blackwelder 1945: 448. Type species; *Coccinella dentipes* F., by subsequent designation of Crotch (1874).
Cleothera (*Cyra*) Mulsant, 1850: 544.
Cyra: Crotch 1874: 213 (as synonym of *Hyperaspis*); Korschefsky 1931: 177; Chapin 1966: 279, 280 (as valid genus); Duverger 1989: 146; Milléo et al. 1997: 391; Duverger 2001: 226; Duverger 2003: 67; Milléo and Almeida 2007: 421; Gordon et al. 2013 (as a synonym of *Brachiacantha* Dejean). Type species; *Cyra loricata* Mulsant 1850, by subsequent designation of Duverger (2001).

Description. Brachiacanthini with form slightly variable, usually elongate or oval. Elytra usually dark with pale maculae, or pale with dark maculae (Fig. 1, 7, 139). Head usually yellow in male but usually entirely or partially brown or black in female. Antenna with 11 articles, basal article longer than wide, antennal insertion exposed. Clypeus with apical margin truncate to weakly or deeply 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, nearly always with two carinae joined apically or not. Protibia with narrow flange, flange occasionally as wide as remainder of protibia (Fig. 37, 70, 96, 121). Abdomen without visible primary pores between ventrites 4 and 5. Tarsal claw with subquadrate basal tooth. Male abdominal ventrites 5–6 modified, sometimes with ventrites 3–6 medially depressed, or with cusps on 3rd or 5th ventrite. Female abdominal ventrites unmodified, ventrite 5 truncate or feebly emarginate apically, ventrite 6 apically arcuate. Male genitalia with basal lobe symmetrical (Fig. 8, 14), except those of *B. bistripustulata* asymmetrical (Fig. 2).

Remarks. Species with a protibial tooth are quickly recognized as members of *Brachiacantha*, those with reduced or without a protibial tooth are more difficult to recognize. One species, *B. darlene*, lacks the protibial tooth but is considered a member of *Brachiacantha* because the male 5th abdominal ventrite has distinct cusps. Because primary pores are absent in both *Brachiacantha* and *Cyrea*, species of *Brachiacantha* with reduced or absent protibial teeth are most likely to be considered species of *Cyrea*. A total of 49 species are recognized as members of *Brachiacantha,* 29 of them newly described.

In addition to generic characters described above, species of this genus have other characters not unique to *Brachiacantha*, but useful in aiding recognition. These are: 1) male head often black; 2) head and pronotum usually alutaceous, dull, especially the head; 3) prosternal carinae often not joined at apices, or if so then usually not connected to the prosternal base by a single carina; 4) punctures on apical 1/4 of metasternum usually evenly sized and spaced throughout, not larger and denser toward lateral margin; 5) and male genitalia nearly always with paramere *Psc*.

Brachiacantha bistripustulata differs from all other South American species by the strongly asymmetrical male genitalia and presence of median cusps on the 3rd abdominal ventrite. *Brachiacantha dentipes* (F.), the North American type species of the genus, as well as numerous other North American species, have extremely similar, asymmetrical genitalia. *Brachiacantha* should perhaps be restricted to this group with all other species having asymmetrical male genitalia placed in a new genus.

Species groups are recognized based primarily on male genitalia. Those groups are defined as follows:

bistripustulata group - this species contains *B. bistripustulata*, the only South American species of this genus having an asymmetrical basal lobe of the male genitalia (Fig. 1).

buckleyi group - male genitalia have a long, slender, apically truncate basal lobe; paramere longer than basal lobe, very wide at base, narrowed to rounded apex (Fig. 8, 9).

sellata group - male genitalia with basal lobe apically lunulate (Fig. 19); paramere highly modified, usually dorsally flattened (Fig. 19).

juanita group - male genitalia with basal lobe short, evenly, ovately narrowed from base to apex, apex narrowly rounded, sometimes acute (Fig. 57); sipho with inner arm of basal capsule apically bifid (Fig. 66). Female genitalia with spermatheca long, slender, basal 1/4 widened, cornu bulbous or narrowed to acute apex (Fig. 62).

jill group - male genitalia with basal lobe long, very slender, sides slightly convergent from base to rounded apex (Fig. 141).

blandula group - male genitalia with basal lobe narrowed from base to about apical 1/3, apical 1/3 narrowed to broadly rounded apex (Fig. 147).

groendali group - male genitalia with basal lobe long, slender, longer than paramere, penis shaped (Fig. 163).

debbie group - male genitalia with basal lobe long, slender, as long or longer than paramere, with truncate apex (Fig. 176).

leslie group - male genitalia with basal lobe long, longer than paramere, slender, narrowed from base to apical 2/3, then widened into slightly triangular apical 1/3 (Fig. 200); paramere abruptly narrowed in apical 1/5, upper 1/3 of paramere darker, more heavily sclerotized than lower 2/3.

trimaculata group - male genitalia with basal lobe longer than paramere, sides parallel in basal 1/2, widened in apical 1/2, sides rounded to acute apex (Fig. 206).

tucumanensis group - male genitalia with basal lobe about as long as paramere, slightly "pinched" laterally at basal 1/3, widened in apical 1/2, sides rounded to acute apex (Fig. 220).

bahiensis group - male genitalia with basal lobe apically triangular, dorsal surface with large, arcuate dorsal keel (Fig. 231), or with dorsal keel on each side of middle.

Key to *Brachiacantha* species

1. Elytron yellow with complete black border (Fig. 192) ..... **34. *B. amber*, n. sp.**
— Elytron yellow or not, if so then lacking complete dark border **2**

2(1). Elytron yellow with narrow, median dark vitta (Fig. 259) ..... **46. *B. bilineata* Weise**
— Elytron yellow or not, if so then without median dark vitta **3**

3(2). Elytron black with wide, irregular, pale median vitta (Fig. 255) .. **45. *B. argentinica* (Weise)**
— Elytron black or not, if black, then without pale median vitta, or vitta accompanied with pale spots or maculae **4**

4(3). Elytron black with yellow outer border, without other pale maculae; if maculae present in form of two transverse vittae then it is *B. steineri* **5**
— Elytron black without yellow outer border, other maculae present or not **6**

5(4). Elytron with yellow outer border wide, continued onto basal margin lateral to scutellum (Fig. 7) ..... **2. *B. buckleyi* Crotch**
— Elytron with yellow border narrow, confined to lateral margin (Fig. 247) .... **43. *B. gail*, n. sp.**

6(4). Elytron with yellow lateral border and 2 narrow, obliquely transverse vittae (Fig. 265) .... **49. *B. steineri*, n. sp.**
— Elytron without obliquely transverse vittae **7**

7(6). Elytron black with 2 reddish yellow spots, 1 large humeral spot and 1 small apical spot (Fig. 181) ..... **32. *B. monica*, n. sp.**

— Elytron black with maculation not as described for *B. monica* **8**

8(7). Elytron black with 3 yellow spots, humeral, postmedian, apical (Fig. 205) ..... **36. *B. trimaculata* Leng**

— Elytron with variable color pattern, never as described above **9**

9(8). Elytron pale with dark maculation **10**

— Elytron dark with pale maculation **16**

10(9). Elytron with dark border on sutural margin, and 2 dark brown spots, anterior spot emarginate with yellow on posterior margin (Fig. 81), anterior spot often narrowly connected to posterior spot ..... **15. *B. margaritae* (Crotch)**

— Elytron with dark sutural border or not, with 2 brown or black spots or not, if with 2 spots then posterior border of anterior spot not emarginate with yellow **11**

11(10). Elytra with black sutural border, evenly narrowed toward apex of elytra (Fig. 95) ..... **17. *B. loricata* (Mulsant)**

— Elytra with sutural border dark or not, if dark then border not evenly narrowed from base to apex **12**

12(11). Elytron with black basal band, small black spot on suture at middle, large black spot near lateral margin on apical declivity, and median black spot at apex on sutural margin (Fig. 69) ..... **13. *B. hazel*, n. sp.**

— Elytron with spot pattern not as described above **13**

13(12). Elytra with large, black spot on sutural margin, dark sutural border extended posteriorly to small, triangular spot on apical declivity, spot reaching dark apical border (Fig. 146) ..... **26. *B. blandula* (Weise)**

— Elytra with spot pattern not as described above **14**

14(13). Body elongate, nearly parallel sided, elytron with narrow, black sutural border contiguous with 2 widened areas, wider one at middle and one at apex (Fig. 139) ..... **25. *B. jill*, n. sp.**

— Body rounded, elytron with or without dark sutural border, if border present then not widened into triangular anterior spot, posterior spot not on lateral margin of elytron **15**

15(14). Male pronotum mostly yellow with short, basomedian black macula (Fig. 18); prosternal carinae evenly, widely spaced from apex toward prosternal base ..... **4. *B. sellata* Mulsant**

— Male pronotum mostly black, basomedian macula large, extended nearly to anterior pronotal margin at middle (Fig. 24); prosternal carinae narrowly spaced, slightly convergent from apex toward prosternal base ..... **5. *B. bruchi* Weise**

16(9). Elytron black with yellow border on lateral margin extended from base nearly to apical spot, 3 spots present, discal spot elongate oval except tapered to abruptly rounded apex in anterior 1/3 (Fig. 252) ..... **44. *B. appropinquata* (Mulsant)**

— Elytron dark with pale spots or macula, but arrangement or shape of pale areas not as described above **17**

17(16). Elytron with large, median yellow macula occupying most of surface, 2 small, reddish yellow spots present between median macula and base of elytron, 1 spot near scutellum, 1 spot anterior to humeral callus (Fig. 260) ..... **47. *B. egae* (Crotch)**

— Elytron with different number of pale spots, but if single median spot present, then description not as above **18**

18(17). Elytron with wide, irregular, median vitta extended from base nearly to apex, and small, narrow spot on humeral angle (Fig. 263) ..... **48. *B. sicardi* Leng**

— Elytron with or without vitta, if vitta present then not located medially, or narrower, or not extended from base to apex **19**

19(18). Elytron with 1 spot **20**

— Elytron with more than 1 spot or macula **21**

20(19) Elytron with single, small, reddish yellow spot on humeral angle (Fig. 211) ..... **37. *B. eleanor*, n. sp.**

— Elytron with single reddish yellow discal spot (Fig. 157) ..... **28. *B. clara*, n. sp.**

21(19). Elytron with 3 or fewer spots, excluding any spot on humeral angle **22**

— Elytron with 4 or more spots or maculae, excluding any humeral spot **27**

22(21). Elytron with 2 spots (Fig. 136) **23**

— Elytron with 3 large spots, excluding any humeral spot **24**

23(22). Elytron with large spot extended from base to apical declivity, then bent at right angle to lateral margin, apical spot smaller, transversely oval with anterior border emarginate (Fig. 136) ..... **24. *B. cathy*, n. sp.**

— Elytron with large spot in basal 1/2, and slightly smaller spot on apical 1/2 (Fig. 134) ..... **23. *B. lauren*, n. sp.**

24(22). Elytron with spots restricted to posterior 2/3 of elytron (Fig. 1); male genitalia strongly asymmetrical (Fig. 2); length 3.0 mm or more ..... **1. *B. bistripustulata* (F.)**

— Elytron with 2 spots in anterior 1/2, 1 spot in posterior 1/2; length usually less than 3.0 mm **25**

25(24). Elytron with 2 anterior spots connected (Fig. 108) ..... **19. *B. sally*, n. sp.**

— Elytron with all 3 spots discrete **26**

26(25). Length more than 3.0 mm; male pronotum yellow with large basomedian dark spot (Fig. 103) ..... **18. *B. lynn*, n. sp.**

— Length less than 2.7 mm; male pronotum nearly entirely yellow with small basomedian black spot (Fig. 114) ..... **20. *B. regina*, n. sp.**

27(21). Elytron with 4 discrete yellow spots, spots arranged in 2 diagonal rows, lacking humeral or scutellar spot, both anterior spots widely removed from basal border of elytron (Fig. 88) ..... **16. *B. octopustulata* (F.)**

— Elytron with spot arrangement not as described above, nearly always with 1 or more spots on basal margin of elytron **28**

28(27). Lateral margin of elytron with yellow humeral, mediolateral, and apical spots connected, forming an irregular, lateral vitta extended from base to apex (Fig. 13) **29**

— Lateral margin without lateral vitta, or if vitta present then vitta not complete **30**

29(28). Elytron with vitta on lateral margin wide, irregular, discal spot obliquely oval (Fig. 13); length 2.8 mm or more ..... **3. *B. charlotte*, n. sp.**

— Elytron with vitta narrow, slightly irregular, discal spot narrowly elongate, oval (Fig. 46); length 2.3 mm ..... **9. *B. jamie*, n. sp.**

30(28). Elytron with 5 very small yellow spots, or 4 spots if humeral and mediolateral spots are narrowly connected (Fig. 75); Argentina, Brazil ..... **14. *B. armandi* (Mulsant)**

— Elytron with fewer than 5 spots, or with spots larger; Argentina, Brazil, and elsewhere **31**

31(30). Male genitalia with apex of basal lobe lunulate (Fig. 38) **32**
— Male genitalia with apex of basal lobe variable, not lunulate **35**

32(31). Body slender, elongate, nearly parallel sided; male pronotum with basomedian macula extended nearly to anterior pronotal margin, apex of macula not emarginate with yellow (Fig. 36) .... **7. *B. pauline*, n. sp.**
— Body oval, not parallel sided, male pronotum with basomedian macula restricted to basal 1/2 of pronotum or with apex emarginate with yellow **33**

33(32). Length 2.6mm; male pronotum with basomedian macula narrowly, abruptly emarginate with yellow (Fig. 51) ..... **10. *B. joanne*, n. sp.**
— Length more than 3.0 mm; male pronotum with basomedian macula not emarginate with yellow, or with wide, shallow emargination (Fig. 41) **34**

34(33). Male pronotum with basomedian macula broadly, shallowly emarginate with yellow, without median maculae (Fig. 31) ..... **6. *B. esther*, n. sp.**
— Male pronotum with basomedian maculae slightly longer than in *B. esther*, small, obliquely triangular pale brown spot present medially on each side of middle anterior to basomedian macula (Fig. 41) ..... **8. *B. emma*, n. sp**.

35(31). Male genitalia with basal lobe shorter than paramere, evenly, ovately narrowed from base to apex, apex narrowly rounded, sometimes acute (Fig. 122, 57); sipho with inner arm of basal capsule usually apically bifid (Fig. 124); female genitalia with spermatheca long, slender, basal 1/4 widened, cornu bulbous or narrowed to acute apex (Fig. 127) **36**
— Male genitalia with basal lobe usually as long as paramere, apex usually not narrowly rounded or acute, variable, not as described above; sipho with inner arm apically bifid or not; female genitalia variable, never as described above **39**

36(35). Protibia with outer margin completely smooth, without tooth, or with tiny basal tooth; male abdominal ventrite 5 with cusp on each side of middle ..... **21. *B. darlene*, n. sp.**
— Protibia with small tooth on outer margin; male abdominal ventrite 5 without cusp on each side of middle **37**

37(36). Yellow spots on elytron small, discal spot narrowly elongate oval, scutellar spot usually elongately triangular (Fig. 56); background elytral color brown to dark brown ... **11. *B. juanita*, n. sp.**
— Yellow spots on elytron larger than in *juanita*, discal and scutellar spots not elongate; background elytral color black **38**

38(37). Length 3.2 mm; discal spot on elytron obliquely oval, humeral and median spots narrowly connected along lateral margin (Fig. 128) ..... **22. *B. veronica*, n. sp.**
— Length less than 3.0 mm; discal spot on elytron irregularly rounded; humeral and median spots not connected along lateral margin (Fig. 63) ..... **12. *B. anita*, n. sp.**

39(35). Male genitalia with basal lobe narrowed from base to about apical 1/3, apical 1/3 narrowed to broadly rounded apex, paramere with upper surface medially flattened, appearing emarginate in lateral view (Fig. 152) ..... **27. *B. april*, n. sp.**
— Male genitalia with basal lobe variable, not as described above, paramere with upper surface rounded, not emarginate in lateral view **40**

40(39). Male genitalia with basal lobe with enlarged apex (Fig. 163) **41**
— Male genitalia with basal lobe variable, never with enlarged apex **42**

41(40). Male pronotum with basomedian macula apically emarginate with yellow; elytron not vittate, spots discrete (Fig. 161) ..... **29. *B. groendali* (Mulsant)**
— Male pronotum with large basomedian macula not apically emarginate with yellow; elytron with median vitta and vitta on lateral margin from base posteriorly beyond apical declivity (Fig. 168). ..... **30. *B. eva*, n. sp.**

42(40). Male genitalia with basal lobe long, longer than paramere, slender, narrowed from base to apical 2/3, then feebly widened into slightly triangular apex (Fig. 200) .. **35. *B. leslie*, n. sp.**
— Male genitalia with basal lobe variable, not as described above **43**

43(42). Male genitalia with basal lobe about as long as paramere, slightly constricted laterally at basal 1/3, widened in apical 2/3, sides rounded to acute apex (Fig. 220) **44**
— Male genitalia with basal lobe variable, not as described above **45**

44(43). Male pronotum with basomedian macula narrowly, deeply emarginate with yellow apically, spots on elytron small, scutellar and discal spots slightly larger than scutellum (Fig. 218); paramere with setae on upper margin not reaching apex ..... **38. *B. tucumanensis* Weise**
— Male pronotum with basomedian macula weakly emarginate with yellow apically, spots on elytron large, scutellar and discal spots 4 or 5 times larger than scutellum (Fig. 225); paramere with setae on upper margin present on both upper surface and apex ... **39. *B. valerie*, n. sp.**

45(43). Male genitalia with basal lobe apically somewhat triangular, dorsal surface with large, arcuate dorsal keel, or with dorsal keel on each side of middle (Fig. 238) **48**
— Male genitalia with basal lobe not apically triangular, dorsal surface without dorsal keel .. **46**

46(45). Male genitalia with apical 1/2 of basal lobe constricted laterally before apex, paramere with basal 3/4 wide, apical 1/4 narrow (Fig. 238) ..... **41. *B. pseudoarrowi*, n. sp.**
— Male genitalia with basal lobe not constricted laterally before apex, paramere slender throughout **48**

47(45). Male genitalia with basal lobe slightly longer than paramere, dorsal surface of basal lobe with single median keel (Fig. 231); body length 2.3 to 3.0 mm ..... **40. *B. bahiensis* Brèthes**
— Male genitalia with basal lobe slightly shorter than paramere, dorsal surface of basal lobe with keel on each side of middle (Fig. 242); body length 2.0 to 2.6 mm ..... **42. *B. danielle*, n. sp.**

48(45). Basal lobe of male genitalia as long as paramere, gradually narrowed from base to truncate apex, slightly narrowed immediately before apex (Fig. 188) ..... **33. *B. parva* (Mulsant)**
— Basal lobe of male genitalia with sides parallel from base to truncate apex (Fig. 176) .... **31. *B. debbie*, n. sp.**

List of South American species of *Brachiacantha*

bistripustulata group

1. *B. bistripustulata* (F.)

buckleyi group

2. *B. buckleyi* Crotch
3. *B. charlotte*, n. sp.

sellata group

4. *B. sellata* Mulsant
5. *B. bruchi* Weise
6. *B. esther*, n. sp.
7. *B. pauline*, n. sp.
8. *B. emma*, n. sp.
9. *B. jamie*, n. sp.
10. *B. joanne*, n. sp.

juanita group

11. *B. juanita*, n. sp.
12. *B. anita*, n. sp.
13. *B. hazel*, n. sp.
14. *B. armandi* (Mulsant)
15. *B. margaritae* (Crotch)
16. *B. octopustulata* (F.)
17. *B. loricata* (Mulsant)
18. *B. lynn*, n. sp.
19. *B. sally*, n. sp.
20. *B. regina*, n. sp.
21. *B. darlene*, n. sp.
22. *B. veronica*, n. sp.
23. *B. lauren*, n. sp.
24. *B. cathy*, n. sp.

jill group

25. *B. jill*, n. sp.

blandula group

26. *B. blandula* Weise
27. *B. april*, n. sp.
28. *B. clara*, n. sp.

groendali group

29. *B. groendali* (Mulsant)
30. *B. eva*, n. sp.

debbie group

31. *B. debbie*, n. sp.
32. *B. monica*, n. sp.
33. *B. parva* (Mulsant)
34. *B. amber*, n. sp.

leslie group

35. *B. leslie*, n. sp.

trimaculata group

36. *B. trimaculata* Leng

tucumanensis group

37. *B. eleanor*, n. sp.
38. *B. tucumanensis* Weise
39. *B. valerie*, n. sp.

bahiensis group

40. *B. bahiensis* Brèthes
41. *B. pseudoarrowi*, n. sp.
42. *B. danielle*, n. sp.
43. *B. gail*, n. sp.

Females not associated with males

44. *B. appropinquata* (Mulsant)
45. *B. argentinica* (Weise)
46. *B. bilineata* Weise
47. *B. egae* (Crotch)
48. *B. sicardi* Leng
49. *B. steineri*, n. sp.

bistripustulata group

1. ***Brachiacantha bistripustulata* (Fabricius)**

Coccinella bistripustulata Fabricius, 1801: 383.
Brachyacantha bis-tripustulata: Mulsant, 1850: 528.
Brachyacantha bistripustulata: Gorham 1894: 188; Casey 1899: 119; Leng 1911: 296; Korschefsky 1931: 203; Blackwelder 1945: 449.
Brachyacantha bistripustulata var. *guttata* Weise, 1885: 231; Korschefsky, 1931: 203.
Brachyacantha bistripustulata ab. *decora* Casey, 1899: 119; Korschefsky 1931: 203.
Brachyacantha bistripustulata var. *quichiana* Leng, 1911: 290; Korschefsky 1931: 204.
Brachyacantha bistripustulata var. *minor* Leng, 1911: 290; Korschefsky 1931: 203.
Brachyacantha bistripustulata var. *obscura* Leng, 1911: 290; Korschefsky 1931: 204.
Brachiacantha bistripustulata: Milléo and Almeida 2007: 420.

Description. **Male**. Length 3.3 mm, width 2.6 mm; body oval, convex. Dorsal surface with head strongly alutaceous, dull, pronotum and elytron slightly alutaceous, shiny. Color yellow except pronotum with narrow, black mediobasal macula extended 3/4 distance to anterior pronotal margin, macula apically entire; elytron black with 4 yellow spots, humeral spot small, triangular, remaining spots large, irregularly shaped (Fig. 1); ventral surface with head, prosternum, meso- and metaventrite black; abdomen dark brown except apices of ventrites 4–5 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 larger than on pronotum, separated by less than to twice a diameter; metaventral punctures as large as on elytron medially, separated by a diameter or less, coarser, 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, 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, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin curved, smooth, basal tooth large, longer than 1/2 width of tibia at base, sponda extended beyond protibial flange, apically rounded. Carinae on prosternal process narrowly separated at apex, slightly convergent toward base, not joined, ended at base of process. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward at apex, ventrite with dense, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 with large, flat, apically acute cusp on each side of middle; 5th ventrite depressed medially, apical margin broadly, strongly emarginate; 6th ventrite short, narrow, depressed medially, apical margin broadly emarginate. Apical tergite finely, densely punctured, apex convex. Genitalia with basal lobe long, 4/5 as long as paramere, asymmetrical, sides convergent from base to apex, apex abruptly bent to one side; paramere wide, curved, not *Psc*, with large, apically acute angulation before apex, apex rounded (Fig. 2, 3); sipho robust, strongly curved in basal 1/2, lateral alae present at apical 3/4, basal capsule large, heavily sclerotized, inner arm short, wide, apex abruptly rounded, outer arm about as wide and longer than inner arm, with small accessory piece, basal border deeply emarginate (Fig. 4, 5).

Female. Similar to male except head yellow with apex of yellow area semicircular, clypeus black, black area narrowly extended posteriorly along inner eye margin, pronotal macula extended to apical margin of pronotum, apex of macula widened, elytron without humeral spot. Genitalia with spermathecal capsule short, slender, narrowed from base to apex; bursal cap oval, with 3 arms, apical strut long, wide, flattened in lateral view (Fig. 6).

Variation. Length 3.0 to 4.5 mm, width 2.4 to 2.8 mm. Elytron with yellow maculae somewhat variable in size, shape, and arrangement. Size and shape vary considerably, and males often have the humeral and mediolateral spots narrowly connected.

Type locality. Not determined.

Type depository. ZMUC.

Geographical distribution. Mexico south through Central and South America to Brazil and Peru, and also known from Cuba and Jamaica.

Specimens examined. 87. This species is commonly collected and numerous in collections.

Remarks. *Brachiacantha bistripustulata* is an unusual element in the South American fauna. It belongs to a group of species well represented in North America containing such species as *B. dentipes* (F.), *B. tau* LeConte, etc., but is the only member of this group known from South America. It is probable that *B. bistripustulata* should be considered a member of *Brachiacantha*, and all others with symmetrical male genitalia placed in a new genus.

It is the most frequently seen species of *Brachiacantha* in all collections examined.

buckleyi group

2. ***Brachiacantha buckleyi* Crotch**

Brachiacantha buckleyi Crotch, 1874: 210; Leng 1911: 289; Blackwelder 1945: 449; Gordon 1987: 26.

Description. **Male**. Length 3.4 mm, width 2.8 mm; body rounded, slightly elongate, convex. Dorsal surface smooth, shiny except head faintly alutaceous, shiny. Color yellow except pronotum with apex of median black elytral spot slightly extended onto pronotum anterior to scutellum; elytra with large, round, black median spot, spot apically emarginate on sutural border (Fig. 7); ventral surface with

median 1/4 of prosternum, meso- and metaventrites black; abdomen with ventrites 1–3 dark brown medially, lateral 1/4 to 1/3 yellow, ventrites 5–6 yellow. Head punctures small, dense, separated by less than a diameter, each puncture slightly smaller 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 larger than on elytron, separated by a diameter. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, curved 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 medially. Epipleuron wide, slightly grooved, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin nearly straight, smooth, basal tooth large, slightly less than 1/2 width of tibia at base, sponda extended beyond protibial flange, apically rounded. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite with truncate apical margin; 6th ventrite medially depressed, apex barely perceptibly emarginate. Apical tergite finely, densely punctured, apex arcuate. Genitalia with basal lobe long, slender, 3/4 as long as paramere, symmetrical, sides parallel in basal 2/3, narrowed in apical 1/3, apex truncate; paramere narrowed from wide base to narrow apex, weakly curved, slightly *Psc* (Fig. 8, 9); sipho robust, strongly curved in basal 1/2, with faint lateral alae at apical 7/8, basal capsule slender, weakly sclerotized, inner arm long slender, sinuate, apex rounded, outer arm slightly wider, shorter than inner arm, without apparent accessory piece, basal border broadly, shallowly emarginate (Fig. 10, 11).

Female. Similar to male externally, except genitalia with spermathecal capsule long, wide, abruptly narrowed in basal 1/6; bursal cap oval, with 2 arms, without apparent apical strut (Fig. 12).

Variation. Length 3.0 to 3.4 mm, width 2.2 to 2.8 mm.

Type locality. Ecuador.

Type depository. UMZC (holotype).

Geographical distribution. Ecuador, French Guiana, Peru.

Specimens examined. 9. **French Guiana.** "Cayenne." **Ecuador**. Carchi Prov, Rio Chota; Leticia, Amazonas, 700 ft.; Napo, Misahualli; **Peru.** Ayacucho, La Mar, Santa Rosa. (CSCA) (USNM) (UMZC) (ZMHB).

Remarks. *Brachiacantha buckleyi* has a dorsal color pattern that consists of a large, round, black median elytral macula or spot that is unique within the genus, but reminiscent of several species of *Zenoria* Mulsant.

3. *Brachiacantha charlotte* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.8 mm, width 2.3 mm; body rounded, slightly elongate, convex. Dorsal surface smooth, shiny except head faintly alutaceous, shiny. Color black except head yellow; pronotum yellow with small, medially projecting black basomedian macula, macula restricted to basal 1/3 of pronotum; elytron with 5 yellow spots, humeral, mediolateral and apical spot broadly connected by yellow band along lateral margin of elytron, scutellar spot small, round, discal spot obliquely oval (Fig. 13); ventral surface with median 1/5 of prosternum, meso- and metaventrites black; abdomen with ventrites 1–4 dark brown medially, lateral 1/4 to 1/3 brownish yellow, ventrites 5–6 brownish yellow. Head punctures small, dense, separated by less than a diameter, each puncture 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 1 to 3 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or less, becoming coarser and separated by less than a diameter laterally. Clypeus weakly emarginate apically, nearly truncate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, curved 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 medially. Epipleuron wide, slightly grooved, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin nearly straight, smooth, basal tooth large, less than 1/2 width of tibia at base, sponda extended beyond protibial flange, apically rounded. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite with setal tuft. Abdomen with postcoxal line on basal ventrite slightly flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite deeply depressed medially in median 1/3, with feebly emarginate apex; 6th ventrite medially depressed, apex arcuate. Apical tergite finely, densely punctured, apex emarginate. Genitalia with basal lobe long, slender, 3/4 as long as paramere, symmetrical, sides weakly curved in basal 7/8, narrowed in apical 1/8, apex truncate; paramere narrowed from wide base to narrow apex, weakly curved, slightly *Psc* (Fig. 14, 15); sipho robust, strongly curved in basal 1/2, with faint lateral alae at apical 7/8, basal capsule slender, weakly sclerotized, inner arm long, slender, sinuate, apex rounded, outer arm slightly wider and shorter than inner arm, without apparent accessory piece, basal border broadly, shallowly emarginate (Fig. 16, 17).

Female. Unknown.

Variation. Length 2.8 to 3.0 mm. Mediobasal pronotal macula slightly variable in size and width, 2 paratypes from Santarem and Taperina, Brazil, have lateral spots on elytron discrete, not connected.

Type material. Holotype male: Brasil, Icoraci, Belém PA, 3.II.1962, J. Bechyné col., Convênio DZSP-Goeldi (MZSP). Paratypes; 3, 1, "Brazil" (CASC); 1, Brazil, Para, IPEAN, Belém, XII-1-2-1969, JM & BA Campbell (CNC); 1, Brazil, Santarem, Acc.2966 (CMNH); 1, Brazil, Taperina, Acc.2966 (CMNH).

Remarks. *Brachiacantha charlotte* has a dorsal color pattern seemingly very different from that of *B. buckleyi*. However, the male genitalia are nearly identical, as is the ventral coloration. These are considered valid species on the basis of differences in dorsal color pattern, *B. charlotte* males with distinct setal tuft on basal abdominal ventrite, and ventrite 5 deeply depressed.

sellata group

4. ***Brachiacantha sellata* Mulsant**

Brachyacantha sellata Mulsant, 1850: 522; Crotch 1874: 210; Leng 1911: 203; Korschefsky 1931: 207; Blackwelder 1945: 449.
Brachiacantha sellata: Milléo and Almeidae 2007: 420.

Description. **Male**. Length 5.0 mm, width 4.0 mm; body oval, convex. Dorsal surface with head alutaceous, feebly shiny, pronotum faintly alutaceous, shiny, elytron smooth, shiny. Color yellow except pronotum with mediobasal black macula short, wide, apex of macula deeply, broadly emarginate with yellow medially; elytron with scutellum, sutural, apical and lateral margins narrowly bordered with black, with 3 large black spots, median discal spot on sutural border, humeral spot irregularly oval, apical spot irregularly rounded (Fig. 18); ventral surface with head, prosternum, meso- and metaventrites, abdomen black, legs 1, 2 with outer 1/2 of tibia dark brown, leg 3 entirely dark 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 less than to 3 times a diameter, elytral punctures 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. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, slightly angled forward, apically acute, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, slightly grooved, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin nearly straight, smooth, basal tooth large, about 1/2 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, parallel toward base, not joined, ended at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite deeply depressed in median 1/3, apex broadly emarginate; 6th ventrite depressed medially, apex deeply emarginate. Apical tergite finely, densely punctured, apex truncate. Genitalia with basal lobe longer than paramere, symmetrical, sides parallel in basal 2/3, narrowed in apical 1/3, apex lunulate; paramere short, wide basally, narrowed in apical 1/2, apical 1/2 flattened dorsally with setae rising from flattened area, apex rounded, slightly *Psc* (Fig. 19, 20); sipho robust, strongly curved in basal 1/2, with large lateral alae posterior to apex, basal capsule heavily sclerotized, inner arm short, triangular, apex rounded, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 21, 22).

Female. Similar to male except head black, pronotum black except lateral 1/8 yellow, anterolateral angle of black area slightly emarginate with yellow, scutellum black, all legs except tarsi black. Genitalia with spermathecal capsule short, wide, cornu with short apical beak; bursal cap oval, with outer arms not sclerotized, inner arm short, slender, without apparent apical strut (Fig. 23).

Variation. Length 4.2 to 5.0 mm, width 3.5 to 4.0 mm.

Type locality. Brazil.

Type depository. MNHL (lectotype designated by Milléo and Almeida 2007).

Geographical distribution. Brazil.

Specimens examined. 26. **Brazil**. Bahia; Chapada; Espirito Santo; Mato Grosso; Rio Grande; Guanabara; Rio de Janeiro; Sao Paulo; SP (Sao Paulo); Tabatinga. (BMNH) (CASC) (CMNH) (DEI) (MNHL) (DZUP) (USNM) (ZMHB).

Remarks. *Brachiacantha sellata* is closely similar in external appearance only to *B. bruchi*, see comparative remarks under that species. Primarily a Brazilian species, this large taxon is highly distinctive based on size and dorsal coloration. It and *B. bruchi* do not resemble other species in the sellata group because of those characters.

The lectotype designated by Milléo and Almeida (2007) is a type specimen in the BMNH labeled "SYNTYPE (blue bordered disc)/5771 (blue disc, handwritten)/Sellata.Dej. Bresil (green label, handwritten)/ Named by Mulsant." Other type specimens designated as paralectotypes are a male in the Dejean collection labeled "5-maculata Buquet/Bresil.," one specimen of *B. sellata* in the DEI is labeled "Paratypus,"? It bears the labels "Brasil Schaum (handwritten)/Coll. Haag/Paratypus (red paper)/sellata Typ Mls. (handwritten)/coll. DEI Müncheberg." Why the paratypus label is uncertain, but Mulsant (1850) had specimens from several sources, specifically stating that the type was in the "Dejean" collection, so the DEI specimen from the Germar and Schaum collection is labeled as a paralectotype.

5. ***Brachiacantha bruchi* Weise**

Brachyacantha bruchi Weise, 1906: 196; Leng 1911: 293; Korschefsky 1931: 204: Blackwelder 1945: 449. *Brachiacantha bruchi*: Milléo and Almeida 2007: 420.

Description. **Male**. Length 3.0 mm, width 2.4 mm; body oval, convex. Dorsal surface with head alutaceous, dull, pronotum alutaceous, feebly shiny, elytron slightly alutaceous, shiny. Color yellow except pronotum with large, mediobasal black macula occupying most of surface, anterior 1/5 and lateral 1/8 of pronotum yellow, anterolateral angle of black macula emarginate with yellow; elytron with complete black border, border widened on apical declivity, scutellum black, 3 large black spots present, median discal spot on sutural border, humeral spot irregularly oval, apical spot rounded (Fig. 24); ventral surface with head, prosternum, meso- and metaventrites black; abdomen mostly black with lateral 1/4 and apices of ventrites 5–6 yellowish brown, legs yellow except leg 3 with basal 5/6 of femur brown. 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 less than to 2 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 a diameter or less. Clypeus weakly emarginate apically, nearly truncate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, straight, apically acute, brown. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin straight, basal margin without trace of bordering line medially. Epipleuron narrow, grooved, weakly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin nearly straight, smooth, basal tooth large, about 1/2 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, slightly convergent toward base, not joined, ended at basal 1/5 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite deeply depressed in median 1/3, apex broadly emarginate; 6th ventrite depressed medially, apex deeply emarginate. Apical tergite finely, densely punctured, apex slightly arcuate. Genitalia with basal lobe slightly longer than paramere, symmetrical, sides weakly rounded in basal 2/3, slightly narrowed before apical 1/3, apex lunulate; paramere slightly *Psc*, short, wide basally, narrowed in apical 1/2, apical 1/2 flattened dorsally with setae rising from flattened area, apex rounded (Fig. 25, 26); sipho robust, strongly curved in basal 1/2, with large lateral alae posterior to apex, basal capsule heavily sclerotized, inner arm short, triangular, apex acute, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 27–29).

Female. Similar to male except head black, pronotum black except lateral 1/8 yellow, anterolateral angle of black area slightly emarginate with yellow, all legs with femur brown. Genitalia with spermathecal capsule short, wide, cornu with short, apical beak; bursal cap oval, with outer arms not sclerotized, inner arm absent, apical strut elongate, basal 1/2 slender, lightly sclerotized, apical 1/2 laterally flattened, apical 1/5 heavily sclerotized (Fig. 30).

Variation. Length 3.0 to 4.0 mm, width 2.4 to 3.1 mm.

Type locality. Argentina (Catamarca or Salta).

Type depository. ZMHB (lectotype here designated).

Geographical distribution. Argentina, Brazil, Paraguay, Peru.

Specimens examined. 44. **Argentina**. Loreto; Misiones, Dep. Concepcion, Sta. Maria; Misiones, Piñalito; Tucuman; Tucuman, Tacanas. **Brazil**. Chapada; Corumba; Matto Grosso; MG, Rio Verde; MT, Cáceres. **Paraguay**. Sapucay. **Peru**. La Merced, Valle de Chanchamayo. (MNHL) (DZUP) (USNM) (ZMHB).

Remarks. Closely similar to *B. sellata*, males of *B. bruchi* are distinguished by the mostly black pronotum, smaller size, and male genitalia. Females, though smaller in size, are more difficult, but both sexes are usually distinguished by the narrowly spaced prosternal carinae extended to the basal 1/5 of the prosternum.

The lectotype is a female in the ZMHB labeled "Rep ARGENTINA, XII 1899, C. Bruch/TYPUS (red paper)/ex. coll. J. Weise/Brachyacantha bruchi m." A second type, a male labeled "Tucuman Bruch (green paper, handwritten)/male symbol/ex. coll. J. Weise," is designated a paralectotype. Weise (1906) stated that his Coccinellidae specimens were from "provincia Catamarca et provincia Salta," but did not specifically state which province his specimens of *B. bruchi* came from.

6. *Brachiacantha esther* Gordon and Canepari, new species

Description. **Male** holotype. Length 3.4 mm, width 2.5 mm; body elongate oval, convex. Dorsal surface with head alutaceous, dull, pronotum, elytron feebly alutaceous, shiny. Color yellow except pronotum with small, short, dark brown mediobasal macula, macula triangularly emarginate with yellow medially, with 2 dark yellow, obliquely oval spots at middle anterior to dark brown macula; elytron dark brown with 5 large, yellow spots arranged in 2 rows plus apical spot, scutellar and humeral spots narrowly connected at base, mediolateral spot not extended to lateral margin, apical spot shortly transverse (Fig. 31); ventral surface with head, prosternum, meso- and metaventrites dark brown; abdomen 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 less than to about a diameter, elytral punctures larger than on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than on elytron, separated by about a diameter. 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 medially. 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, basal tooth small, about 1/4 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, not convergent toward base, not joined, ended at base of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite slightly depressed in median 1/3, apex slightly emarginate; 6th ventrite medially depressed, apex deeply emarginate. Apical tergite finely, densely punctured, apex arcuate. Genitalia with basal lobe slightly longer than paramere, symmetrical, sides parallel in basal 1/2, wide in apical 1/2, apex slightly lunulate but side nearly flat on each side of median projection; paramere slightly *Psc*, short, wide basally, narrowed in apical 1/2, apical 1/2 flattened dorsally with setae rising from flattened area, apex rounded (Fig. 32, 33); sipho robust, strongly curved in basal 1/2, without visible lateral alae, with short widened area at apical 1/6, basal capsule heavily sclerotized, inner arm short, apex abruptly rounded, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 34, 35).

Female. Unknown.

Variation. One paratype with scutellar and humeral spots discrete, not connected along base.

Type material. Holotype male: DZUP 187832, CHAPADA, Brasil, 27-X-61, F M Oliveira leg. (DZUP). Paratypes: 2, Rio de Jan., Brazil, Acc.No.2966 (CMNH).

Other specimens. 14. Brazil, Chapada (which "Chapada" is unknown). (CMNH).

Remarks. *Brachiacantha esther* has the same dorsal color pattern as several other *Brachiacantha* species, but within the sellata group it resembles *B. pauline*. The latter species is small, slender, nearly

parallel sided, and has small yellow spots on each elytron. Male genitalia are needed to positively identify either *B. esther* or *B. pauline*.

Specimens listed under "Other specimens" differ slightly from the types of *B. esther* by male genitalia having the apex of the basal lobe slightly more triangular. They are almost certainly the same species, but not designated as paratypes.

7. *Brachiacantha pauline* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.7 mm, width 1.7 mm; body elongate, almost parallel sided. Dorsal surface with head and pronotum alutaceous, dull, elytron feebly alutaceous, shiny. Color yellow except pronotum with large, black mediobasal macula, macula extended 4/5 distance to anterior pronotal border, anterolateral angle broadly emarginate with yellow; elytron black with 5 small, yellow spots arranged in 2 rows plus apical spot, mediolateral spot projected inward, apical spot transverse, emarginate apically (Fig. 36); ventral surface with head, prosternum, meso- and metaventrites dark brown; abdomen dark brown with lateral 1/4 and 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 on pronotum, separated by less than to twice a diameter; metaventral punctures larger than on elytron, 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, 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 medially. 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, basal tooth small, about 1/4 width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, parallel, not joined, ended at basal 1/8 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal ventrite curved throughout, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite slightly depressed in median 1/3, apex weakly emarginate; 6th ventrite medially depressed, apex deeply emarginate. Apical tergite finely, densely punctured, apex arcuate. Genitalia with basal lobe longer than paramere, symmetrical, sides parallel in basal 5/6, wide in apical 1/2, apex lunulate; paramere slightly *Psc*, short, wide basally, narrowed from base to apex, apical 1/2 flattened dorsally with setae rising from flattened area, apex rounded (Fig. 37, 38); sipho robust, strongly curved in basal 1/2, with lateral alae posterior to apex, basal capsule heavily sclerotized, inner arm short, apex abruptly rounded, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 39. 40).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; Brazil, Cordisburgo, Minas Geraes, 7-8Nov-'19. Cornell University Expedit., R. G. Harris Collector, Nunenmacher Collection. (CASC).

Remarks. *Brachiacantha pauline* is somewhat distinctive because of the small size, parallel sided body, and male pronotum with large black macula extended nearly to anterior pronotal border. Male genitalia do need to be examined for positive identification.

8. *Brachiacantha emma* Gordon and Canepari, new species

Description. **Male** holotype. Length 3.4 mm, width 2.5 mm; body elongate oval, convex. Dorsal surface with head alutaceous, dull, pronotum alutaceous, feebly shiny, elytron feebly alutaceous, shiny. Color yellow except pronotum with short, narrow, dark brown basomedian macula, macula with anterior

margin broadly, deeply emarginate with yellow, small, obliquely triangular, pale brown spot medially on each side of middle, apex of macula triangularly emarginate with yellow medially; elytron black with 5 large, yellow spots arranged in 2 rows plus apical spot, mediolateral and apical spots transversely oval (Fig. 41); ventral surface with head, prosternum, meso- and metaventrites black; abdomen dark brown except lateral 1/4 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 less than to twice a diameter, elytral punctures larger than on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than on elytron, separated by less than a diameter. Clypeus 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 straight, basal margin without trace of bordering line medially. 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, basal tooth small, triangular, about 1/6 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, parallel, not joined, ended slightly anterior to middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex shallowly emarginate; 6th ventrite medially depressed, apex deeply emarginate. Apical tergite finely, densely punctured, apex weakly emarginate. Genitalia with basal lobe longer than paramere, symmetrical, sides slightly convergent in basal 2/3, wide in apical 1/3, apex lunulate with sides angled toward apex of basal lobe; paramere slightly *Psc*, short, slender, slightly widened from base to apex, not dorsally flattened, apex rounded (Fig. 42, 43); sipho robust, strongly curved in basal 1/2, apical 1/2 lost, basal capsule heavily sclerotized, inner arm short, narrow, apex abruptly rounded, outer arm wider and longer than inner arm, with accessory piece, basal border not emarginate (Fig. 44).

Female. Similar to male except head black with clypeus and rounded macula on base of frons yellow, pronotum with large, dark brown, median macula, macula extended 7/8 distance to anterior pronotal border, lateral 1/4 of pronotum yellow. Genitalia with spermathecal capsule short, narrowed from wide base to apex; bursal cap without visible sclerotized arms, apical strut short, widened from base to spatulate apex (Fig. 45).

Variation. Length 3.2 to 3.4 mm. Size and shape of yellow elytral spots slightly variable.

Type material. Holotype male; (Brazil) Hist.-Coll. (Coleoptera) Nr. 4484, Brachiacantha spec., Brazil, v. Olfers, Zool. Mus. Berlin. (ZMHB). Paratypes; 3, same data as holotype except one paratype with additional labels "4484/Brasil v. Olf. (handwritten) (ZMHB).

Remarks. Similar in external appearance to *B. esther* and *B. pauline*, this species is recognized by the short protibial tooth, distinct, brown, obliquely triangular spots on middle of pronotum in the male, and small basomedian pronotal spot broadly, deeply emarginate on the anterior margin. In addition, male genitalia differ from those of other species in this group by having the paramere narrow and the dorsal surface not flattened. The male pronotal color pattern is similar to that of *B. esther*, but that species has the obliquely triangular pronotal spots pale, difficult to see.

9. *Brachiacantha jamie* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.3 mm, width 1.6 mm; body elongate oval, convex. Dorsal surface faintly alutaceous, shiny. Color yellow except pronotum with large, black, basomedian macula extended 4/5 distance to anterior pronotal border, macula deeply emarginate with yellow medially, anterolateral angle of macula shortly, widely emarginate with yellow; elytron black with 3 large, yellow areas, lateral margin with yellow macula extended from humeral angle to apical spot, discal spot narrowly

elongate, faintly connected to apical spot (Fig. 46); ventral surface with head, prosternum, meso- and metaventrites black; abdomen yellowish brown. Head punctures small, separated by a diameter or less, each puncture as large as an eye facet; pronotal punctures as large as on head, separated by 1 to 2 times a diameter, elytral punctures as large as on pronotum, separated by 1 to 6 times a diameter; metaventral punctures slightly larger than on elytron, widely separated. Clypeus emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus short, about 4 eye facets long, abruptly 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, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange slightly narrower than remainder of protibia, outer margin curved, smooth, basal tooth small, triangular, about 1/6 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, not joined, ended at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex shallowly emarginate; 6th ventrite medially depressed, apex deeply emarginate. Apical tergite finely, densely punctured, apex deeply emarginate. Genitalia with basal lobe longer than paramere, slender, symmetrical, sides slightly convergent in basal 3/4, wide in apical 1/4, apex lunulate with sides curved toward apex of basal lobe; paramere slightly *Psc*, slender, bent outward anterior to base, upper margin slightly sinuate, flattened in median 3/4, apex rounded (Fig. 47, 48); sipho robust, strongly curved in basal 2/3, without visible lateral alae, basal capsule heavily sclerotized, inner arm short, narrow, apex slightly enlarged, medially cleft, outer arm wider and longer than inner arm, with accessory piece, basal border deeply emarginate (Fig. 49, 50).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; Peru, Cusco, Limatambo, 7-Feb-1978, Univ. Maryland-SEL, SMF Expedition. (USNM).

Remarks. Somewhat similar in external appearance to several *Brachiacantha* species, *B. jamie* is distinguished by the complete yellow, lateral vitta, elongate, slender discal spot, pronotal and elytral punctures extremely small, and short outwardly projected eye canthus. Placed in the sellata group because of the apically lunulate basal lobe of the male genitalia, this species differs from other species of this group by having a slender, basally bent paramere.

10. ***Brachiacantha joanne*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.6 mm, width 1.8 mm; body elongate oval, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, somewhat shiny, elytron smooth, shiny. Color yellow except pronotum with large, black basomedian macula extended slightly more than 1/2 distance to anterior pronotal margin, apex of macula deeply emarginate with yellow, lateral border of macula irregularly semicircular; elytron black with 4 large, yellow areas, lateral margin with yellow macula extended from humeral angle past apical declivity, scutellar spot round, discal spot elongate oval, apical spot transversely oval (Fig. 51); ventral surface with head, prosternum, meso- and metaventrites black; abdomen yellowish brown. 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 less than to 2 times a diameter, elytral punctures larger than on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than on elytron, separated by less than to a diameter. Clypeus emarginate apically, 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 weakly rounded, basal margin with trace of bordering line medially. Epipleuron narrow, grooved, not

descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange slightly narrower than remainder of protibia, outer margin curved, smooth, basal tooth small, triangular, about 1/6 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, weakly convergent toward base, not joined, ended at middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex shallowly emarginate; 6th ventrite medially depressed, apex deeply emarginate. Apical tergite finely, densely punctured, apex weakly emarginate. Genitalia with basal lobe slightly longer than paramere, slender, symmetrical, sides convergent in basal 2/3, abruptly widened in apical 1/3, apex triangular with sides angled toward apex of basal lobe; paramere slightly *Psc*, slender, bent outward anterior to base, upper margin slightly sinuate, flattened in median 3/4, apex rounded (Fig. 52, 53); sipho robust, strongly curved in basal 1/2, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, narrow, apex rounded, outer arm wider and longer than inner arm, with faint accessory piece, basal border not emarginate (Fig. 54, 55).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; Argentina, Prov. Salta, 3 km W Cabra Corral Dam, 30.I.1982, H & A Howden. (USNM).

Remarks. This species is similar in external appearance to several other *Brachiacantha* species, and male genitalia must be examined for correct identification. Externally *B. joanne* is similar to *B. groendali* because of the deeply emarginate basomedian macula on the male pronotum. The male genitalia are not typical of the sellata group in that the apex of the basal lobe is triangular rather than lunulate. The paramere of the male genitalia is nearly identical to that of *B. jamie*, in spite of dissimilarities in basal lobe structure.

juanita group

11. ***Brachiacantha juanita* Gordon and Canepari, new species**

Description. **Male** holotype. Length 3.0 mm, width 2.5 mm; body elongate oval, convex. Dorsal surface with head alutaceous, dull, pronotum alutaceous, feebly shiny, elytron feebly alutaceous, shiny. Color yellow except pronotum with large, dark brown basomedian macula extended 4/5 distance to anterior pronotal border, lateral margin of macula with small, short, angulate dark brown projection; elytron dark brown with 4 yellow areas, lateral margin with irregularly narrow yellow vitta extended from humeral angle to beyond apical declivity, triangular basal spot at middle of elytron base, small, elongate oval spot medially on apical declivity, and transversely oval apical spot, all spots with margins slightly blurred, not crisply contrasted with background (Fig. 56); ventral surface with head, median 1/3 of prosternum, meso- and metaventrites dark brown; abdomen dark brown except 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 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 about as large as on elytron, separated by a diameter. 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 rounded, basal margin with trace of bordering line medially. Epipleuron narrow, flat, not descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange as wide as remainder of protibia, outer margin straight, smooth, basal tooth small, broadly triangular, about 1/10 width of tibia at base, sponda not extended beyond protibial flange.

Carinae on prosternal process widely separated at apex, parallel, not joined, ended at about middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite rounded throughout, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite weakly depressed in median 1/3, apex shallowly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex broadly, weakly emarginate. Genitalia with basal lobe about as long as paramere, symmetrical, sides slightly rounded, convergent from base to apex, apex narrowly rounded; paramere *Psc*, wide, not widened from base to apex, apex rounded (Fig. 57, 58); sipho robust, strongly curved in basal 2/3, with large lateral alae at apical 1/5, basal capsule lightly sclerotized, inner arm short, narrow, apex bifid, outer arm wider and longer than inner arm, with accessory piece, basal border slightly emarginate (Fig. 59–61).

Female. Similar to male except head dark brown, pronotum with large, dark brown median macula extended to anterior pronotal border, lateral 1/5 of pronotum yellow with yellow area narrowly, shortly extended along anterior pronotal margin. Genitalia with spermathecal capsule long, slender except base bulbous, widened from bulbous base to acute apex; bursal cap with 2 large, heavily sclerotized outer arms, apical strut large, long, heavily sclerotized, widened from enlarged base to rounded apex (Fig. 62).

Variation. Length 2.6 to 3.0 mm, width 1.9 to 2.5 mm. Male pronotum sometimes lacking lateral projection of mediobasal spot, elytron with median spot on base often connected to spot on apical declivity, forming a vitta, size and shape of yellow elytral spots slightly variable.

Type material. Holotype male; Chapada, Brazil, Acc.No.2966, May. (CMNH). Paratypes; 57, same data as holotype except some paratypes with month "June." (CMNH).

Other specimens. 8. **Brazil**. Sao Paulo, Campos do Jordao; Santana do Riacho, MG (Serra do Cipó). (CMNH) (DZUP).

Remarks. This is a distinctive species of *Brachiacantha* because of the dorsal color pattern. It is also distinguished by the very short protibial tooth, wide protibial flange, and female spermatheca with bulbous base and long, slender cornu. Specimens listed under "Other specimens" differ by having the dorsal background color black with yellow areas sharply outlined against the black surface. Genitalia are the same as those of typical specimens, but the appearance is strikingly different.

12. ***Brachiacantha anita*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.6 mm, width 2.0 mm; body elongate oval, convex. Dorsal surface with head slightly alutaceous, shiny, pronotum and elytron smooth, shiny. Color yellow except pronotum with large, black basomedian macula extended almost 2/3 distance to anterior pronotal border, macula with anterior margin narrowly, deeply emarginate with yellow; elytron black with 5 large, yellow spots arranged in 2 rows plus apical spot, mediolateral spot projected inward, discal spot slightly triangular, apical spot transversely rectangular with apical margin weakly emarginate (Fig. 63); ventral surface with head, prosternum, meso- and metaventrites black; abdomen dark brown, slightly paler toward lateral margin. 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 on pronotum, separated by less than to slightly more than a diameter; metaventral punctures larger than on elytron, separated by a diameter or slightly less medially, slightly larger and nearly contiguous 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 rounded, basal margin without trace of bordering line medially. 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, basal tooth small, triangular, about 1/8 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex shallowly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex weakly emarginate. Genitalia with basal lobe 3/4 as long as paramere, symmetrical, sides smoothly rounded and narrowed from base to acute apex; paramere slightly *Psc*, short, slender, slightly widened from base to apex, apex rounded (Fig. 64, 65); sipho robust, strongly curved in basal 1/2, basal capsule heavily sclerotized, inner arm short, wide, apex obliquely angled, slightly bifid, outer arm as wide as and longer than inner arm, with accessory piece, basal border not emarginate (Fig. 66. 67).

Female. Similar to male except head black, median area and base of frons broadly yellow, pronotum with large, black basomedian macula, macula extended to anterior pronotal border, lateral 1/4 of pronotum yellow, elytron with humeral spot reduced, very small. Genitalia with spermathecal capsule long, wide, basal 1/4 enlarged, widened, cornu bulbous; bursal cap narrowly rectangular, with 3 sclerotized arms, apical strut narrowed from base to apex (Fig. 68).

Variation. Length 2.3 to 2.6 mm, width 1.8 to 2.0 mm. Female head color varies from typical to entirely yellow except extreme base of frons and narrow, triangular macula along basal 1/2 of eye black.

Type material. Holotype male; Ecuador, vic. Misahualli, ca 1° 02'S, 77° 40'W, X-27 to X-31-2002, coll: E. Fisher, malaise. (CSCA). Paratypes; 5, same data as holotype (CSCA).

Remarks. The dorsal color pattern is similar to several other species within this genus, but both the male and female genitalia are distinctive, and when taken in combination with the dorsal color pattern, will identify *B. anita.*

13. *Brachiacantha hazel* Gordon and Canepari, new species

Description. **Male** holotype. Length 3.3 mm, width 2.6 mm; body elongate oval, convex. Dorsal surface with head alutaceous, feebly shiny, pronotum slightly alutaceous, shiny, elytron smooth, shiny. Color yellow except head with black vertex, pronotum with black basomedian macula wide basally, slightly extended anteriorly at each end, and large, long median projection extended 4/5 distance to anterior pronotal border; elytron yellow with sutural margin black, and 4 black spots, basal spot extended from scutellum laterally past humeral callus, discal spot oval, attached to black sutural border, mediolateral spot not reaching lateral margin, apical spot on sutural margin (Fig. 69); ventral surface with head, prosternum, meso- and metaventrites black, legs with trochanter pale brown; abdomen brownish yellow except median 1/3 of ventrites 1–3 dark brown. Head punctures small, separated by a diameter or less, each puncture slightly smaller than 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 1 to 3 times diameter; metaventral punctures larger than on elytron, separated by a diameter medially, larger and separated by less than a diameter laterally. 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 straight, basal margin without trace of bordering line medially. Epipleuron narrow, descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange about 1/4 as wide as remainder of protibia, outer margin straight, smooth, basal tooth small, triangular, about 1/12 width of tibia at base, sponda extended beyond protibial flange (Fig. 70). Carinae on prosternal process widely separated at apex, convergent, joined at middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on

basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex slightly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex weakly emarginate. Genitalia with basal lobe about as long as paramere, symmetrical, sides straight, convergent from base to acute apex; paramere *Psc*, wide, strongly curved, slightly widened from base to apex, apex rounded (Fig. 71, 72); sipho robust, strongly curved in basal 2/3, with lateral alae at apical 1/6, basal capsule lightly sclerotized, inner arm short, wide, apex widely bifid, outer arm wider and longer than inner arm, with accessory piece, basal border shallowly emarginate (Fig. 73, 74).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; Peru, Cuzco, Cashiriari (light), 4-22 jul 2005, leg. J. Williams, Coleccion J.E. Barriga, Chile 167153. (JEBC). Paratype; 1, Peru, Dep. Cusco, Callanga, 10-III, 17, 1953, Woytkowski (USNM).

Remarks. *Brachiacantha hazel* is a juanita group species that resembles *B. blandula* in dorsal coloration. Both types are males distinguished by the head with black vertex and uniquely shaped basomedian pronotal macula.

14. ***Brachiacantha armandi*** **(Mulsant), new combination**

Cleothera armandi Mulsant, 1850: 617.
Hyperaspis armandi: Crotch 1874: 221; Korschefsky 1931: 184; Blackwelder 1945: 446.

Description. **Male**. Length 2.6 mm, width 1.9 mm; body oval, convex. Dorsal surface with head and pronotum alutaceous, dull, elytron smooth, shiny. Color yellow except pronotum with large, black basomedian macula occupying all of pronotal surface except narrow apical and lateral borders yellow; elytron black with 5 small yellow spots, humeral spot somewhat extended posteriorly along lateral margin, discal, mediolateral and apical spots oval (Fig. 75); ventral surface with head, prosternum, meso- and metaventrites black, legs with basal 3/4 of femur brown; abdomen dark brown medially, lateral 1/4 and ventrites 5–6 lighter brown. Head punctures small, separated by about a diameter, each puncture as large as an eye facet; pronotal punctures as large as head punctures, separated by a diameter or less, elytral punctures larger than on pronotum, separated by 1 to 3 times a diameter; metaventral punctures smaller than on elytron, widely spaced, nearly absent. Clypeus weakly emarginate apically, 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 weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, nearly flat, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin straight, smooth, basal tooth very small, nearly invisible, length about 1/12 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 2/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex deeply emarginate. Apical tergite densely punctured, apex slightly rounded. Genitalia with basal lobe slightly shorter than paramere, slender, symmetrical, sides slightly convergent in basal 2/3, curved to acute apex in apical 1/3; paramere short, strongly *Psc*, slightly widened from base to apex, apex rounded (Fig. 76, 77); sipho robust, strongly

curved in basal 3/4 with lateral alae at apical 1/10, basal capsule heavily sclerotized, inner arm long, medially "pinched," apex strongly bifid, outer arm slightly wider and longer than inner arm, with small accessory piece, basal border broadly, shallowly emarginate (Fig. 78, 79).

Female. Similar to male except head entirely black, pronotum entirely black except narrow, lateral border yellow. Genitalia with spermathecal capsule long, slender, basal 1/4 enlarged, widened, cornu apically narrowed; bursal cap narrowly triangular, with 2 sclerotized lateral arms and an indistinct, wide, sclerotized area medially, apical strut long, widened from base to apex (Fig. 80).

Variation. Length 2.0 to 2.6 mm, width 1.4 to 2.0 mm. Elytron with humeral and mediolateral spot sometimes narrowly connected along lateral margin of elytron.

Type locality. Brazil, Mato Grosso.

Type depository. MNHP (lectotype here designated).

Geographical distribution. Argentina, Brazil.

Specimens examined. 28. **Argentina**. Iguasu. **Brazil**. Campos Jordáo, Sao Paulo; Serra do Cipo, MG, 1300 m. (DZUP) (MNHP) (USNM).

Remarks. *Brachiacantha armandi* is recognized by the very small, yellow elytral spots, female head entirely black without pale spot on base of frons, and nearly all black male pronotum. Both male and female genitalia place it in the juanita group.

The lectotype in the MNHP is labeled "Museum Paris, Matto-Grosso, de Castelnau 13-47."

15. *Brachiacantha margaritae* (Crotch), new combination

Hyperaspis margaritae Crotch, 1874: 219; Korschefsky 1931: 192; Blackwelder 1945: 447; Gordon 1987: 27.

Description. **Male**. Length 2.6 mm, width 2.0 mm; body oval, convex. Dorsal surface with head and pronotum weakly alutaceous, dull, slightly shiny, elytron smooth, shiny. Color yellow except pronotum with short, black basomedian macula extended 1/8 distance to anterior pronotal margin, macula widely emarginate medially, each end triangularly angled forward, small, light brown, comma shaped spot on each side at middle of pronotum; elytron with black border, border narrow on basal, lateral, and apical margins, sutural border wide, widened posterior to scutellum, then gradually narrowed to apex, with 2 large black maculae, anterior macula on humeral callus large, narrowly connected to black basal border, apex of spot narrowly emarginate, spot on apical declivity curved, obliquely transverse (Fig. 81); ventral surface with head, median 1/3 of prosternum, meso- and metaventrites black; abdomen dark brown medially, lateral 1/4 and ventrites 5–6 yellowish brown. Head punctures small, separated by about a diameter, each puncture as large as an eye facet; pronotal punctures larger than head punctures, separated by less than to about a diameter, elytral punctures larger than on pronotum, separated by less than to 2 times a diameter; metaventral punctures smaller than on elytron medially, widely spaced, nearly absent, becoming larger, dense in lateral 1/3. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 8 eye facets long, slightly 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, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin straight, smooth, basal tooth small, length about 1/10 width of tibia at base, sponda extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined at basal 1/3 of prosternum, single carinae extended to prosternal base. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small,

dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex shallowly emarginate. Apical tergite densely punctured, apex weakly emarginate. Genitalia with basal lobe 4/5 as long as paramere, symmetrical, sides curved from base to rounded apex; paramere *Psc*, slightly widened from base to apex, apex rounded (Fig. 82, 83); sipho robust, strongly curved in basal 1/2 with lateral alae at apical 1/6, basal capsule lightly sclerotized, inner arm elongate, apex oblique, widely, shallowly emarginate, outer arm slightly wider and longer than inner arm, with small accessory piece, basal border broadly, deeply emarginate (Fig. 84–86).

Female. Similar to male except head black with median, star shaped yellow spot on apical 2/3 of frons, pronotum with median spots black, narrowly connected to lateral projection of basomedian macula. Genitalia with spermathecal capsule long, slender, basal 1/4 enlarged, widened, cornu apically bulbous; bursal cap narrowly triangular, with 3 sclerotized arms, apical strut long, apical 1/3 widened (Fig. 87).

Variation. Length 1.7 to 2.6 mm, width 1.5 to 2.8 mm. Female pronotum sometimes with dark pattern expanded to isolate a yellow spot on each sided of middle. Elytron with anterior and apical spots often narrowly connected, anterior spot sometimes narrowly connected to black sutural border.

Type locality. Colombia, Bogota.

Type depository. UMZC (holotype).

Geographical distribution. Colombia, Venezuela.

Specimens examined. 22. **Colombia**. "Colomb."; Antioquia, Amaga; Cundinamarca, Sasaima; Cundinamarca, Villeta; Meta, Restrepo; Santander, Suaita. **Venezuela**. Sanare. (USNM) (ZMHB).

Remarks. *Brachiacantha margaritae* is recognized by the 2 irregular black spots on each elytron. Both male and female genitalia are typical of those in the juanita group, and dorsal color pattern must be relied on for species identification. Specimens from Santander, Colombia, are noticeably larger than those from Cundinamarca, although they have identical color patterns.

16. ***Brachiacantha octopustulata* (F.), new combination**

Coccinella octopustulata Fabricius, 1801: 383.
Cleothera octopustulata: Mulsant 1850: 636.
Hyperaspis octopustulata: Crotch 1874: 222; Korschefsky 1931: 193; Blackwelder 1945: 447.

Description. **Male**. Length 3.1 mm, width 2.5 mm; body oval, convex. Dorsal surface with head weakly alutaceous, slightly shiny, pronotum and elytron smooth, shiny. Color yellow except pronotum with large, black basomedian macula extended anteriorly 2/3 distance to anterior pronotal margin, apex of macula not emarginate, lateral 1/3 of pronotum yellow; elytron black with 4 large, mostly round yellow spots in posterior 7/8 of elytron (Fig. 88); ventral surface with head, prosternum, meso- and metaventrites dark reddish brown; abdomen with median 1/3 of ventrites 1–4 dark brown, remainder of abdomen yellowish brown. Head punctures small, separated by about a diameter, each puncture slightly smaller than an eye facet; pronotal punctures larger than head punctures, separated by less than to 2 times a diameter, elytral punctures slightly larger than on pronotum, separated by 1 to 4 times a diameter; metaventral punctures slightly larger than on elytron, separated by less than to a diameter. Clypeus emarginate apically, 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 weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange about 1/2 as wide as remainder of protibia, outer margin straight,

smooth, basal tooth small, length about 1/6 width of tibia at base, sponda extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, slightly convergent toward base, joined at basal 1/3 of prosternum, connected to prosternal base with single carina. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex shallowly emarginate. Apical tergite densely punctured, apex slightly rounded. Genitalia with basal lobe about as long as paramere, slender, symmetrical, sides weakly convergent from base to weakly acute apex; paramere strongly *Psc*, slightly widened from base to apex, apex rounded (Fig. 89, 90); sipho robust, strongly curved in basal 3/4 with lateral alae at apical 1/6, basal capsule heavily sclerotized, inner arm long, medially "pinched," apex widely bifid, outer arm slightly wider and longer than inner arm, curved, with small accessory piece, basal border broadly, shallowly emarginate (Fig. 91–93).

Female. Similar to male except head with lateral brown band on frons next to eye, pronotum with mediobasal macula extended to apical pronotal border medially. Genitalia with spermatheca long, slender, basal 1/4 not enlarged, cornu abruptly enlarged apically, bulbous; bursal cap oval, with 3 sclerotized arms, median arm faint, apical strut short, same width from base to apex (Fig. 94).

Variation. Length 2.3 to 3.6 mm, width 1.6 to 2.8 mm. Elytron with anterior spot next to scutellum usually larger than other spots, and reddish yellow, but it is often not larger and may be yellow. Three USNM specimens labeled "Kolumb.(Colombia), Cundinamarca, Monterredondo, 1400 m., 20.7, leg. Schneble 1961" differ from typical *C. octopustulata* by having pronotum with a large, obliquely oval, mediobasal yellow spot on each side of middle. Male genitalia also have the basal lobe noticeably longer than typical.

Type locality. Not known.

Type depository. ZMUC (lectotype here designated).

Geographical distribution. Brazil, Bolivia, French Guiana, Guyana, Peru, Surinam, Venezuela.

Specimens examined. 24. **Brazil**. AM, Barcelos; AM, Maturaca, alto Rio Cauaburi; AM, Manaus; Obidos; "Para"; Santarém. **Bolivia**. Saauedra. **French Guiana**. "Cayen."; Cayenne. **Guyana**. Georgetown; Lusignan. **Peru**. Loreto, Picuruyacu, 160 m. **Surinam**. "Surinam." **Venezuela**. Suapure, Caura R. (BMNH) (CMNH) (GGC) (MKRB) (USNM) (ZMHB) (ZMUC).

Remarks. *Brachiacantha octopustulata* is distinguished by having 4 large, pale spots on the apical 7/8 of the elytron. There is no humeral spot, and no scutellar spot in the strict sense, a combination not seen elsewhere in this genus. The very small protibial tooth typical of this group was overlooked by previous authors. Therefore this species was not placed in *Brachiacantha*. Both male and female genitalia put it in the juanita group.

The lectotype female in the ZMUC is labeled "C. 8pustulata, ex Am. mer. Schmidt (handwritten) TYPE (red paper)." One other specimen, a male labeled "TYPE" without further labels is designated a paralectotype.

This is the only species of Brachiacanthini known to have associated host data. See explanatory comments in the "Biology" section.

17. *Brachiacantha loricata* (Mulsant), new combination

Cleothera loricata Mulsant, 1850: 544.
Hyperaspis loricata: Crotch 1874: 217; Korschefsky 1931: 191; Blackwelder 1945: 447.
Cyra loricata: Duverger 2001: 226; Milléo and Almeida 2007: 421.

Description. **Male**. Length 3.4 mm, width 2.7 mm; body elongate oval, convex. Dorsal surface with head and pronotum alutaceous, dull, elytron smooth, shiny. Color black except pronotum yellow with large, basomedian black macula extended 3/4 distance to anterior pronotal margin, apex of macula evenly arcuate; elytron reddish yellow with sutural margin widely bordered with black, black area widened anterior to middle, triangular, narrowed to apex. apical margin narrowly bordered with black, with 2 large black spots in lateral 1/2, 1 spot posterior to humeral callus, 1 spot on apical declivity (Fig. 95); ventral surface dark brown with antenna, mouthparts reddish yellow, legs yellow except basal 2/3 of femora brown; abdomen yellowish brown except median 1/3 dark brown. Head punctures small, dense, separated by a diameter or less, each puncture slightly larger than an eye facet; pronotal punctures larger than head punctures, separated by less than to about a diameter, elytral punctures as large as on pronotum, separated by less than to 2 times diameter; metaventral punctures larger than on elytron, separated by a diameter or less. Clypeus slightly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, slightly angled forward, apically rounded, yellow, extreme apex brown. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth short, length about 1/10 width of tibia at base, sponda extended beyond protibial flange (Fig. 96). Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/3 of prosternum, single carinae extended to base of prosternum. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite slightly depressed in median 1/3, apex slightly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex weakly emarginate. Genitalia with basal lobe about as long as paramere, symmetrical, sides slightly convergent from base to apical 5/6, apical 1/6 with sides curved to abruptly rounded apex; paramere *Psc*, wide, curved, slightly widened from base nearly to rounded apex, lower apical angle slightly produced (Fig. 97. 98); sipho robust, strongly curved in basal 2/3, with lateral alae at apical 1/6, basal capsule lightly sclerotized, inner arm long, narrowed medially, apex broadly bifid, outer arm slightly wider and longer than inner arm, with accessory piece, basal border broadly, deeply emarginate (Fig. 99–101).

Female. Similar to male except head black with narrow clypeal apex reddish brown, pronotum black except narrow apical border and lateral 1/5 reddish yellow. Genitalia with spermatheca long, slender, widened in basal 1/4, slender medially, cornu bulbous; bursal cap rectangular with 3 sclerotized arms, median arm faint, outer arms triangular, widened basally, apical strut long, widened from base to apex (Fig. 102).

Variation. Length 3.0 to 3.4 mm, width 2.4 to 2.7 mm. Elytral spots variable in size and shape, apical spot varies from irregularly round to transversely oval, width of black sutural border varies from narrow to wide.

Type locality. Brazil, Capitolinerie de Rio Grande.

Type depository. MNHP (lectotype here designated).

Geographic distribution. Argentina, Brazil, Paraguay, Peru.

Specimens examined. 20. **Argentina**. Formosa, Grau Guardia; Prov. Salta, 3 km W Cabrera Corral Dam; Prov. Tucuman; Salta; Salta Prov., Tartegal; Santiago del Estero. **Brazil**. Type locality; Corcovado, Guanabara, Rio de Jan. **Paraguay**. San Pedro, Corori-Rio Ypane. **Peru**. Satipo. (CSCA) (USNM) (ZMHB).

Remarks. *Brachiacantha loricata* is another member of the juanita group with the protibial tooth very much reduced. It was not recognized as a member of *Brachiacantha* by Mulsant (1850) and described as

a *Cleothera* (*Cyra*). It is slightly similar to *B. argentinica*, but has its own recognizable color pattern by which it may be identified. Female genitalia place it in the juanita group, but the genitalia differ from those of other species in that group by the wide, triangular lateral arms of the bursal cap.

The female lectotype in the MNHP is labeled "Museum Paris Capitolinerie de Rio Grande/146/ Cleothera loricata Muls., auct. det."

This species was the first of many after the subgeneric name *Cyra* in Mulsant's 1850 revision. Therefore it was unfortunately selected as the type species of that genus by Duverger (2001), and again by Milléo and Almeida (2007).

18. *Brachiacantha lynn* Gordon and Canepari, new species

Description. **Male** holotype. Length 3.0 mm, width 2.5 mm; body oval, convex. Dorsal surface with head slightly alutaceous, shiny, pronotum and elytron smooth, shiny. Color yellow except pronotum with short, narrow, brown basomedian macula extended about 1/2 distance to apical pronotal margin, anterior border of macula slightly extended forward on each side of middle; elytron dark brown with 3 large yellow spots, humeral spot widened apically, scutellar spot triangularly elongate, apical spot irregularly rounded (Fig. 103); ventral surface with head, median 1/3 of prosternum, meso- and metaventrites brown; abdomen yellow except basal 3 ventrites slightly darker medially. 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 1 to 2 times a diameter, elytral punctures larger than on pronotum, separated by 1 to 3 times diameter; metaventral punctures slightly smaller than on elytron medially, separated by a diameter or less, larger and separated by less than a diameter in lateral 1/4. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, straight, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly curved, basal margin without trace of bordering line medially. Epipleuron narrow, descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange nearly as wide as remainder of protibia, outer margin straight, smooth, with small basal tooth about 1/10 as long as width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent, joined at basal 1/6 of prosternum, single carina extended to prosternal base. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex weakly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex slightly convex. Genitalia with basal lobe slightly longer than paramere, symmetrical, sides weakly curved from base to rounded apex; paramere *Psc*, curved, slightly widened from base to rounded apex, lower apical angle slightly produced (Fig.104,105); sipho robust, strongly curved in basal 1/2, with lateral alae at apical 1/6, basal capsule lightly sclerotized, inner arm long, narrow, angled forward, apex broadly, weakly bifid, outer arm as long as and wider than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 106, 107).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; (Colombia) Cordilre. Centr., (Colombie), R. O. Thieme 1877. (ZMHB).

Remarks. *Brachiacantha lynn* is one of the larger species in the juanita group, and is distinguished by 3 large yellow spots on each elytron, scutellar spot triangular, apical spot irregularly rounded and occupying most of apical declivity.

19. ***Brachiacantha sally*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.6 mm, width 2.0 mm; body oval, convex. Dorsal surface with head alutaceous, dull, pronotum and elytron smooth, shiny. Color yellow except pronotum with short, narrow, brown basomedian macula extended about 1/6 distance to apical pronotal margin, anterior border of macula broadly emarginate medially; elytron dark brown with 3 yellow spots, humeral and sutural spots rounded, narrowly connected posterior to humeral callus, apical spot occupying posterior 1/2 of apical declivity (Fig. 108); ventral surface with head, median 1/3 of prosternum, meso- and metaventrites brown; abdomen yellow except basal 3 ventrites darker in median 1/3. 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 less than to 2 times a diameter, elytral punctures larger than on pronotum, separated by 1 to 2 times diameter; metaventral punctures as large as on elytron medially, separated by a diameter or less, larger and separated by less than a diameter in lateral 1/4. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, straight, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly curved, basal margin without trace of bordering line medially. Epipleuron narrow, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin straight, smooth, with small basal tooth about 1/10 as long as width of tibia at base, sponda extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent, joined at basal 1/6 of prosternum, single carina extended to prosternal base. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex weakly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex slightly emarginate. Genitalia with basal lobe slightly longer than paramere, symmetrical, sides weakly curved from base to rounded apex; paramere *Psc*, curved, slightly widened from base to rounded apex, lower apical angle slightly produced (Fig. 109, 110); sipho robust, strongly curved in basal 1/2, with lateral alae at apical 1/6, basal capsule lightly sclerotized, inner arm long, wide, angled forward, apex nearly truncate, outer arm as long as and slightly wider than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 111–113).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; (Brazil) Ch.Fry, Pernam. (Pernambuco), Fry Coll. 1905. 100., Cleothera sex-verrucata (Fab.). (BMNH).

Remarks. *Brachiacantha sally* is similar to *B. lynn* in having 3 yellow spots on each elytron. However, *B. sally* is much smaller, the elytral spots are smaller, the 2 apical spots are narrowly joined, and the pronotal basomedian macula is very short.

20. ***Brachiacantha regina*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.6 mm, width 2.0 mm; body oval, convex. Dorsal surface with head alutaceous, weakly shiny, pronotum and elytron smooth, shiny. Color yellow except pronotum with short, narrow, brown basomedian macula extended about 1/6 distance to apical pronotal margin, anterior border of macula broadly emarginate medially, each end slightly angled forward; elytron dark brown with 3 yellow spots, humeral angle with small, faint, reddish yellow spot, lateral spot posterior to humeral callus not connected to sutural spot, apical spot on apical margin occupying more than posterior 1/2 of apical declivity (Fig. 114); ventral surface with head, pronotum brown, meso- and metaventrites dark brown; abdomen yellow except basal 3 ventrites darker in median 1/3. 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 less than to 2 times a diameter, elytral punctures larger than on pronotum, separated by 1 to 3 times diameter; metaventral punctures smaller than on elytron medially, separated by a diameter or less, larger and separated by less than a diameter in lateral 1/4. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 4 eye facets long, straight, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin nearly truncate, weakly curved, basal margin without trace of bordering line medially. Epipleuron narrow, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin straight, smooth, with small basal tooth about 1/8 as long as width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent, joined at basal 1/6 of prosternum, single carina extended to prosternal base. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex weakly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex slightly emarginate. Genitalia with basal lobe slightly longer than paramere, symmetrical, sides parallel in basal 2/3, curved in apical 1/3 to truncate apex; paramere *Psc*, curved, slightly widened from base to rounded apex, lower apical angle slightly produced (Fig. 115, 116); sipho robust, strongly curved in basal 1/2, with lateral alae at apical 1/6, basal capsule lightly sclerotized, inner arm long, slender, projected forward, apex feebly, broadly emarginate, outer arm slightly longer and much wider than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 117–119).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; (Brazil) Ch.Fry, Pernam. (Pernambuco), Fry Coll. 1905. 100., Cleothera sex-verrucata (Fab.). (BMNH).

Remarks. *Brachiacantha regina* and *B. sally* are very similar, but *B. regina* has a small, faint pale spot at the humeral angle, the apical 2 spots on each elytron are not joined, the eye canthus is only 4 eye facets long, and male genitalia have the basal lobe apically truncate. Holotypes of both species bear identical labels, and were probably collected at the same time and place.

21. *Brachiacantha darlene* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.5 mm, width 1.8 mm; body oval, convex. Dorsal surface with head alutaceous, dull, pronotum slightly alutaceous, shiny, elytron smooth, shiny. Color yellow except pronotum with narrow, black basomedian macula extended 1/6 distance to apical pronotal margin, anterior border of macula widely emarginate medially, triangular brown spot present medially on each side of middle, spot with posterior margin emarginate; elytron brown with 5 yellow spots, humeral spot narrowly connected to mediolateral spot, discal spot elongate oval (Fig. 120); ventral surface with head, prosternum, meso- and metaventrites, and basal abdominal ventrite brown; abdomen with ventrites 2–6 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 a diameter or less, elytral punctures as large as on pronotum, separated by 1 to 2 times diameter; metaventral punctures larger than on elytron, separated by a diameter or less. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 8 eye facets long, straight, apically rounded, yellow. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin straight, basal margin without trace of bordering line medially. Epipleuron narrow, descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange about 1/2 as wide as remainder of protibia,

outer margin straight, smooth, without basal tooth, sponda not extended beyond protibial flange (Fig. 121). Carinae on prosternal process narrowly separated at apex, weakly convergent, joined at basal 1/6 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, with prominent cusp on each side of depression, apex slightly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex widely emarginate. Genitalia with basal lobe short, slightly more than 1/2 length of paramere, symmetrical, sides straight, apically curved to abruptly rounded apex; paramere *Psc*, wide, curved, slightly widened from base to weakly rounded apex, lower apical angle slightly produced (Fig. 122, 123); sipho robust, strongly curved in basal 2/3, with lateral alae at apical 1/6, basal capsule lightly sclerotized, inner arm long, wide, narrowed medially, apex bifid, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 124–126).

Female. Similar to male except head black with large, median yellow macula, pronotum with basal macula extended anteriorly nearly to pronotal apex, widely, deeply emarginate with yellow medially, the paratypes from Trujillo have all dorsal pale areas reddish yellow, markings on pronotum are pale reddish brown. Genitalia with spermathecal capsule long, slender, basal 1/4 wide, apical 1/4 tapered to acute apex; bursal cap oval with 3 heavily sclerotized arms, apical strut heavily sclerotized, narrowed from base to slightly enlarged apex (Fig. 127).

Variation. Length 2.0 to 2.7 mm, width 1.6 to 2.0 mm. Pronotal color variable, females sometimes with pronotum entirely brown except lateral 1/4 yellow, males with median spot on each side of middle often brown, triangular, elytron with humeral spot and mediolateral spot connected or discrete. The protibial tooth is usually not present, but a tiny tooth has been observed on a few specimens as indicated in Fig. 121.

Type material. Holotype male; (Peru) Pocala (Chamico), 5-6-66, Korytkowski. (USNM). Paratypes; 28, 1, same data as holotype; 1. Bolivia, Lag Palma Sola, Dep. Sta. Cruz, 1923, GL Harrington (USNM); 8, Ecuador, Pich. Pr. 250m, 47km S Sto. Domingo, RioPalenqueStation, 17-25.II.1979, L. Ling USNM); 1, Ecuador, 700', RiPalenque, 47km S St. Domingo, Feb. 22-27 1976, H. & A. Howden (USNM); 5, Peru, Lambayeque, Roadside veg. 1 mile S. E. of town., 20.viii.1971., Fertile irrigated region in arid coastal desert, P.S.&H.L. Broomfield, B.M.1971-486. (BMNH); 2, Peru, Piura, 2.5.IX, Quinta Perez, Townsend No 1793, CHTTownsend coll (USNM); 1, Peru, Piura, Oct 29 1941, PA Bery, No. 252 (USNM);1, Peru, Chiclayo, No 395, So Amer Paras Lab, Date 9-19-42 Host, Berry (USNM); 2, Peru, Piura, May 2-1941, E.J. Hambleton, On cotton (USNM); 1, Peru, ???(illegible), Zarum - Tumbes, 04-XI-??, Leg. I.Miro (MKRB); 1, Peru, ??-Zarumilla - Tumbes, 04-XI-??, Leg. P. Castillo (MKRB); 1, Matapalo - Tumbes, 11-XI-06, Leg. I. Miro (MKRB); 4, (Peru) Trujillo, 20-III-82, 29-V-82, 20-VI-82A. Carbajal, UA 583-82 (MKRB).

Remarks. *Brachiacantha darlene* is externally nearly identical to several other *Brachiacantha* species, but males with bicuspid 5th ventrite distinguish this species. In spite of the unusually modified ventrite, male and female genitalia place this species in the juanita group.

22. *Brachiacantha veronica* Gordon and Canepari, new species

Description. **Male** holotype. Length 3.2 mm, width 2.5 mm; body elongate oval, convex. Dorsal surface with head and pronotum alutaceous, dull, elytron slightly alutaceous, shiny. Color yellow except pronotum with large, wide, black basomedian macula extended 5/6 distance to apical pronotal margin, anterior border of macula not emarginate, lateral 1/8 of pronotum yellow; elytron black with 5 yellow spots, scutellar spot triangular, humeral spot narrowly connected to mediolateral spot, discal spot obliquely oval, apical spot transversely oval (Fig. 128); ventral surface with head, prosternum, meso- and metaventrites black; abdomen brownish yellow except median 1/3 of basal ventrite 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 diameter, elytral punctures as large as on pronotum, separated by 1 to 2 times a diameter; metaventral punctures larger than on elytron, separated by less than a diameter. 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 curved, basal margin without trace of bordering line medially. Epipleuron narrow, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange about as wide as remainder of protibia, outer margin straight, smooth, with distinct basal tooth about as long as 1/5 width of tibia at base, sponda extended beyond protibial flange. Carinae on prosternal process widely separated at apex, weakly convergent, not joined at base, ended at middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex slightly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex widely emarginate. Genitalia with basal lobe as long as paramere, symmetrical, sides straight, convergent from base to abruptly rounded apex; paramere *Psc*, wide, curved, slightly widened from base to rounded apex, lower apical angle slightly produced (Fig. 129, 130); sipho robust, strongly curved in basal 2/3, with lateral alae at apical 1/6, basal capsule lightly sclerotized, inner arm short, wide, apex broadly bifid, outer arm wider and slightly longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 131–133).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; (Brazil) Sao Paulo, Bras. MRAZ LGT. Mus.Pragense, Korschefsky Collection 1952. (USNM).

Remarks. *Brachiacantha veronica* is not readily recognizable on external characters, but the large size along with male genitalia having a long, tapered basal lobe will distinguish it. It does not fit the juanita group well, but is placed in it because of the somewhat similar male genitalia.

23. *Brachiacantha lauren* Gordon and Canepari, new species

Description. **Female** holotype. Length 2.6 mm, width 2.1 mm; body rounded, convex. Dorsal surface with head weakly alutaceous, slightly shiny, pronotum and elytron mostly smooth, shiny. Color dark brown except pronotum with lateral 1/4 yellow; elytron yellow, completely bordered with dark brown except lateral margin on apical declivity yellow, sutural border wide, straight, humeral angle faintly reddish brown, lateral border wide, ended at apical declivity, wide dark brown band extended from lateral border to sutural border at apical declivity (Fig. 134); ventral surface with antenna, mouthparts yellow, legs yellow except basal 3/4 of femora brown; abdomen brownish yellow. Head punctures small, dense, separated by a diameter or less, each puncture about as large as an eye facet; 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 diameter; metaventral punctures larger than on elytron, separated by a diameter or less. Clypeus slightly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, slightly angled forward, apically rounded, brown. 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, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth short, length about 1/5 width of tibia at base, sponda extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/3 of prosternum, single carina extended to base of prosternum. Abdomen with postcoxal line on basal abdominal ventrite flattened

along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense. Genitalia with spermathecal capsule short, basal 1/4 widened, slender medially, cornu slightly bulbous; bursal cap without sclerotized arms, apical strut not found (Fig. 135).

Male. Unknown.

Variation. Unknown.

Type material. Holotype female; Paraguay, Hohenau, Alto-Parana, H.Jacob., 5.9.34, 31 46, B.M. 1954-814. (BMNH). Paratype; 1, same data as holotype with additional label Hyperaspis sp., 4-signata Muls., det. R.D. Pope 1955 (BMNH).

Remarks. This is another species recognized by a characteristic dorsal color pattern. A unique female, the color pattern is slightly similar to *B. argentinica*, but *B. lauren* is much smaller and the elytron is basically yellow instead of reddish yellow. This species seems to belong in the juanita group because it has female genitalia of the type found in that group.

24. *Brachiacantha cathy* Gordon and Canepari, new species

Description. **Female** holotype. Length 2.6 mm, width 2.0 mm; body rounded, convex. Dorsal surface with head alutaceous, dull, pronotum and elytron mostly smooth, shiny. Color dark brown except pronotum with lateral 1/4 yellow; elytron yellow, completely bordered with black, basal margin with narrow black border joined to humeral spot and sutural border, lateral margin narrowly black, sutural border wide, enlarged anterior to middle of elytron, apical margin narrowly black, humeral spot large, extended posteriorly beyond humeral callus, apical spot a sinuate black band extended from lateral margin to sutural border (Fig. 136); ventral surface with antenna, mouthparts yellow, legs yellow except basal 3/4 of femora brown; abdomen dark brown medially, lateral 1/4 brownish yellow. Head punctures small, dense, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures larger than on head, separated by less than a diameter, elytral punctures larger than on pronotum, separated by less than to 2 times diameter; metaventral punctures larger than on elytron, separated by 1 to 3 times a diameter medially, larger and separated by less than a diameter laterally. Clypeus slightly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, slightly angled forward, apically rounded, brown. 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, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin slightly curved, smooth, basal tooth very short, length about 1/12 width of tibia at base, sponda extended beyond protibial flange (Fig. 137). Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/4 of prosternum, single carina extended to base of prosternum. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense. Genitalia with spermathecal capsule long, basal 1/4 widened, slender medially, cornu bulbous; bursal cap rectangular, with 3 sclerotized arms, apical strut long, widened from base to apex (Fig. 138).

Male. Unknown.

Variation. Unknown.

Type material. Holotype female; (Venezuela) Hist.-Coll. (Coleoptera), Nr. 4480, Brachiacantha spec., Nueva Valencia, Moritz, Zool. Mus. Berlin. (ZMNHB). Paratype; 1, same data as holotype except additional label “4480,” and another label “Nova Valencia Moritz (blue paper, handwritten) (ZMHB).

Remarks. The distinctive dorsal color pattern will identify this species. The type locality is given as "Nueva Valencia" which probably refers to the modern city of Carabobo that was originally known as Nueva Valencia.

jill group

25. ***Brachiacantha jill*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.6 mm, width 1.8 mm; body elongate, nearly parallel sided, convex. Dorsal surface with head and pronotum alutaceous, dull, elytron smooth, shiny. Color yellow except head black, pronotum with large, wide, black basomedian macula extended to anterior pronotal margin, lateral 1/5 of pronotum yellow; elytron reddish yellow with sutural and apical margins black, sutural border slightly widened opposite apical spot, with 3 black spots, discal spot triangular on sutural margin, humeral spot not connected to lateral margin, apical spot on lateral margin projected inward nearly to suture (Fig. 139); ventral surface with head, prosternum, meso- and metaventrites, and legs with basal 3/4 of femora black; abdomen yellowish brown except median 1/3 of ventrites 1–3 brown. Head punctures small, separated by a diameter or less, each puncture larger than an eye facet; pronotal punctures about as large as head punctures, separated by less than to 2 times a diameter, elytral punctures about as large as on pronotum, separated by 1 to 3 times diameter; metaventral punctures larger than on elytron, separated by less than a diameter. Clypeus apically emarginate, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, angled forward, apically rounded, black. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line medially. Epipleuron narrow, descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange slightly narrower than remainder of protibia, outer margin straight, smooth, with small, triangular basal tooth, tooth as long as 1/6 width of protibia at base, sponda not extended beyond protibial flange (Fig. 140). Carinae on prosternal process widely separated at apex, convergent, not joined basally, ended at about middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex slightly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex widely emarginate. Genitalia with basal lobe slightly longer than paramere, slender, symmetrical, sides slightly convergent from base to rounded apex; paramere weakly *Psc*, slender, nearly straight, sides parallel to rounded apex, lower apical angle slightly produced (Fig. 141, 142); sipho robust, strongly curved in basal 2/3, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, triangular, apex narrowly emarginate, outer arm wider and longer than inner arm, with accessory piece, apex of outer arm with long, slender projection on each side, apex of each projection heavily sclerotized, basal border not emarginate (Fig. 143, 144).

Female. Externally similar to male except genitalia with spermathecal capsule short, wide, narrowed from base to acute apex; bursal cap without sclerotized arms, apical strut short, slender, apical 1/4 spatulate (Fig. 145).

Variation. Length 2.0 to 2.7 mm, width 1.6 to 2.0 mm. Pronotal color variable, females sometimes with pronotum entirely brown except lateral 1/4 yellow, males with median spot on each side of middle often brown, triangular. Humeral spot on elytron with connection to lateral margin nearly absent, humeral spot and mediolateral spot connected or discrete.

Type material. Holotype male; (Argentina) Est. Expl. Agrop. Bella Vista (ctes), 9/X/961, S/Psidium, col.: M.A Rosillo, M.M. Portillo, ex Coleccion M. Viana Arg. 022008, Coleccion J.E. Barriga Chile 079752. (JEBC). Paratypes; 2, 1, same data as holotype (JEBC); 1, (Argentina) E. Exp. 8. Vista (Corrientes), 4/Vl/64, s/citrus, Coleccion J.E. Barriga Chile 077796, ex. Coleccion M. Viana Arg. 035977. (JEBC).

Remarks. This species has a dorsal color pattern similar to that of *B. sellata*, *B. bruchi*, and some members of the juanita and blandula groups, but *B. jill* is distinguished by male genitalia with a long, slender basal lobe. Male genitalia place this species in a group by itself, but there are noticeable similarities to genitalia of species in the juanita group.

blandula group

26. ***Brachiacantha blandula* (Weise), new combination**
Hyperaspis blandula Weise, 1902: 172; Korschefsky 1931: 185; Blackwelder 1945: 446.

Description. **Male**. Length 2.9 mm, width 2.4 mm; body oval, convex. Dorsal surface with head alutaceous, dull, pronotum alutaceous, feebly shiny, elytron slightly alutaceous, shiny. Color yellow except head black with yellow clypeus, pronotum black except anterior 1/10 and lateral 1/12 yellow; elytron with all margins black and 3 black spots, sutural margin with large, oval, discal spot, black border triangularly widened on apical declivity, humeral spot large, irregularly oval, apical spot large, irregularly rounded (Fig. 146); ventral surface with head, prosternum, meso- and metaventrites black, legs 1 and 2 with outer 1/2 of tibia dark brown, leg 3 entirely dark brown; abdomen dark 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 less than to twice a diameter, elytral punctures as large as on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or less medially, separated by less than to 3 times a diameter laterally. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, slightly angled forward, apically rounded, brown. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, slightly grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin straight, smooth, basal tooth small, about 1/6 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined slightly anterior to middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite slightly depressed in median 1/3, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex deeply emarginate. Apical tergite densely punctured, apex slightly emarginate. Genitalia with basal lobe longer than paramere, symmetrical, sides convergent from base to apex, narrowed in apical 1/3, apex rounded; paramere short, *Psc*, wide, same width throughout, apex rounded (Fig. 147, 148); sipho robust, strongly curved in basal 1/2, with large lateral alae immediately posterior to apex, basal capsule heavily sclerotized, inner arm short, narrow, apex rounded, outer arm wider and longer than inner arm, with accessory piece, basal border not emarginate (Fig. 149).

Female. Externally similar to male except genitalia with spermathecal capsule short, wide, narrowed from base to apex, apex with short, narrow extension; bursal cap oval, with arms not sclerotized, apical strut long, widened from base to rounded apex, flat in lateral view (Fig. 150).

Variation. Length 2.6 to 3.0 mm, width 2.4 to 2.6 mm. Male head varies from entirely black to having apical 1/2 yellow, or entirely head yellow.

Type locality. Peru, Rio Toro.

Type depository. ZMHB (lectotype here designated).

Geographical distribution. Bolivia, Brazil, Peru.

Specimens examined. 9. **Bolivia**. Dept. S. Cruz; Prov. del Sara. **Brazil**. Chapada; Taquara. **Peru**. Chanchamayo, La Merced. (CMNH) (USNM) (ZMHB).

Remarks. *Brachiacantha blandula* is in its own group, but has a dorsal color pattern similar to *B. hazel*. The patterns differ somewhat and male genitalia are distinctive for both species.

The lectotype female in the ZMHB is labeled "Peru Rio Toro/ex. coll. J. Weise/TYPUS (red paper)/ Cleothera blandula m. (handwritten)/SYNTYPUS Hyperaspis blandula Weise, 1902 labelled by MNHUB 2004 (red paper)." Two additional syntypes with the same labels, except for Weise's hand written label, are designated paralectotypes.

27. *Brachiacantha april* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.6 mm, width 2.0 mm; body elongate oval, convex. Dorsal surface with head and pronotum alutaceous, feebly shiny, elytron smooth, shiny. Color yellow except head black with yellow spot on vertex and base of frons, pronotum entirely black except anterolateral angle yellow; elytron black with 5 small, yellow spots, humeral spot triangular, discal spot oval, mediolateral spot irregularly oval, somewhat projected inward, apical spot transversely oval (Fig. 151); ventral surface with head, prosternum, meso- and metaventrites black, legs with basal 3/4 of femora dark brown; abdomen dark brown except ventrites 5–6 yellowish brown. 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 1 to 2 times a diameter, elytral punctures larger than on pronotum, separated by 1 to 3 times diameter; metaventral punctures larger than on elytron, separated by a diameter or less. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, straight, apically rounded, black. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin without trace of bordering line medially. Epipleuron narrow, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange about 1/4 as wide as remainder of protibia, outer margin straight, smooth, basal tooth small, triangular, about 1/5 width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, parallel, not joined, ended at basal 1/5 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex slightly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex weakly emarginate. Genitalia with basal lobe longer than paramere, symmetrical, sides convergent from base to apical 2/3, apical 1/3 narrower, apex rounded; paramere short, strongly *Psc*, slender, strongly curved, sides almost parallel from base to apex, except upper surface medially emarginate, with patch of setae, apex rounded (Fig. 152, 153); sipho robust, strongly curved in basal 1/2, with lateral alae at apical 1/8, basal capsule lightly sclerotized, inner arm short, narrow, apex widely emarginate, outer arm curved, wider and longer than inner arm, with accessory piece, basal border shallowly emarginate (Fig. 154, 155).

Female. Externally similar to male except genitalia with spermathecal capsule short, wide, narrowed from base to apex; bursal cap without sclerotized arms, apical strut short, strongly widened apically, paddle shaped (Fig. 156).

Variation. Length 2.0 to 2.7 mm, width 1.5 to 2.0 mm.

Type material. Holotype male; (Brazil) No 666.106 Montevideo So Amer Paras Lab, Date Jan.14.42, swept, Parker, Bras Sao Paulo. (USNM). Paratypes; 14, 1, same data as holotype (USNM); 5, Campinas, Brazil, Mar.19'39, PA Berry (USNM); 2, Campinas 1939, Sao Paulo Brazil, 3.3-9, PA Berry (USNM); 3, Corrientes, Argentina (USNM); 1, Santiago del Estero, Argentina, April 13, 1940, H. L. Parker (USNM); 1, Bolivia-360m alt., Dept. Cochabamba, San Antonio Rd., VIII.5.1951, sweeping, G.H. Dieke (USNM); 1, Peru-670m alt., Dept Huanuco, Tingo Maria, VIII.16-25.1951, sweeping, G.H. Dieke (USNM).

Remarks. *Brachiacantha april* is distinguished from other species with 5 yellow spots on a dark background by the black male head, male genitalia with triangular basal lobe, and paramere of male genitalia with dorsal margin medially emarginate with clump of setae. The paramere is similar to those of some species in the sellata group.

The holotype and 1 paratype bear labels that refer to the U.S. Department of Agriculture parasite laboratory in Montevideo in the early 1940s.

28. *Brachiacantha clara* Gordon and Canepari, new species

Description. **Male** holotype. Length 3.0 mm, width 2.4 mm; body elongate oval, convex. Dorsal surface with head and pronotum alutaceous, feebly shiny, elytron smooth, shiny. Color black except pronotum entirely black with small yellow spot on anterolateral angle; elytron black with 1 yellowish red, obliquely oval discal spot (Fig. 157); ventral surface with antenna, mouthparts yellow, fore leg 1 yellow except anterior 1/2 of femur brown, mid and hind legs 2–3 with basal 3/4 of femur brown; abdomen dark brown. Head punctures small, separated by less than a diameter, each puncture as large as an eye facet; pronotal punctures as large as head punctures, separated by less than to 2 times a diameter, elytral punctures larger than on pronotum, separated by less than to twice a diameter; metaventral punctures slightly larger than on elytron, separated by 1 to 2 times a diameter. Clypeus emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 4 eye facets long, slightly angled forward, apically rounded, black. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin rounded, basal margin with trace of bordering line medially. Epipleuron narrow, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange about 1/6 as wide as remainder of protibia, outer margin straight, smooth, basal tooth very small, nearly invisible, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, convergent toward base, joined slightly anterior to middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex slightly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex weakly emarginate. Genitalia with basal lobe longer than paramere, symmetrical, sides convergent from base to apical 3/4, apical 1/4 barely perceptibly narrower, apex acutely rounded; paramere short, *Psc*, slender (Fig. 158, 159); sipho robust, strongly curved in basal 2/3, with lateral alae immediately behind apex, with short, bulbous, wide area at apical 2/3, basal capsule strongly sclerotized, inner arm short, narrow, apex widely emarginate, outer arm wider and longer than inner arm, with accessory piece, basal border shallowly emarginate (Fig. 160).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; (Brazil) Vila Velha-PR, Brasil 20-XI-1966, Pa. Moure, V. Graf. Mieleke, Azevado. (DZUP).

Remarks. *Brachiacantha clara* has a unique dorsal color pattern with a single, large, yellowish red spot on each elytron. Male genitalia have a basal lobe that is more slender than in other species of this group, and the protibial tooth is difficult to detect. Other members of the blandula group have very small protibial teeth, but in *B. clara* that tooth is essentially absent.

groendali group

29. *Brachiacantha groendali* (Mulsant), new combination

Cleothera billoti groendali Mulsant, 1850: 620.
Hyperaspis billoti groendali: Crotch 1874: 221.
Hyperaspis billoti ab. *groendali*: Korschefsky 1931: 185; Blackwelder 1945: 446.
Brachyacantha propria Kirsch, 1876: 119; Leng 1911: 292; Korschefsky 1931: 206; Blackwelder 1945: 449. NEW SYNONYM.
Brachyacantha australe Leng, 1911: 292. NEW SYNONYM.
Brachyacantha australis: Korschefsky 1931: 203; Blackwelder 1945: 448.
Brachyacantha manni Nunenmacher, 1912; 150; Korschefsky 1931: 206; Blackwelder 1945: 449. NEW SYNONYM.
Brachiacantha arrowi Brèthes, 1925b: 9. NEW SYNONYM.
Brachyacantha arrowi: Korschefsky 1931: 203; Blackwelder 1945: 448.

Description. **Male**. Length 2.2 mm, width 1.6 mm; body oval, convex. Dorsal surface with head and pronotum alutaceous, dull, elytron smooth, shiny. Color yellow except pronotum with wide, short basomedian macula extended slightly more than 1/2 distance to anterior pronotal margin, apex of macula deeply, narrowly indented with yellow, lateral 1/3 of macula rectangularly indented with yellow; elytron black with 5 small, yellow spots, all spots more or less rounded except humeral spot triangular, apical spot transversely oval (Fig. 161); ventral surface with head, prosternum, meso- and metaventrites black, legs 1, 2 with outer 1/2 of tibia dark brown, leg 3 entirely dark brown; abdomen dark 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 a diameter or less, 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, larger and separated by less than a diameter laterally. Clypeus weakly emarginate apically, 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 weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, slightly grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin arcuate, smooth, basal tooth large, length about 1/2 width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined slightly anterior to middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex deeply emarginate. Apical tergite densely punctured, apex slightly emarginate. Genitalia with basal lobe much longer than paramere, penis shaped, slender, symmetrical, sides slightly convergent in basal 1/2, apical 1/2 slightly wider than basal 1/2, sides slightly curved to rounded apex; paramere short, *Psc*, slender, same width throughout, apex rounded (Fig. 162, 163); sipho robust, strongly curved in basal 1/2, with large lateral alae posterior to apex, basal capsule heavily sclerotized, inner arm short, narrow, apex slightly bifid, outer arm weakly curved, wider and longer than inner arm, with small accessory piece, basal border not emarginate (Fig. 164–166).

Female. Similar to male except head entirely black with small, yellowish red spot at base of frons in middle, pronotum entirely black except narrow, triangular macula on lateral margin yellow. Genitalia with spermathecal capsule short, wide, narrowed from base to apex; bursal cap with arms not sclerotized, apical strut long, widened from base to rounded apex, flat in lateral view (Fig. 167).

Variation. Length 2.0 to 2.6 mm, width 1.4 to 2.0 mm.

Type locality. Of *groendali*, Brazil; of *propria*, Peru; of *australe*, Paraguay; of *manni*, Independencia, Parahyba, Brazil; of *arrowi*, Pernambuco, Brazil.

Type depository. Of *groendali* (holotype), ZMUC; of *propria* (lectotype here designated), SNSD; of *australe* (holotype), USNM; of *manni* (holotype), CASC; of *arrowi* (lectotype here designated), BMNH.

Geographical distribution. Bolivia, Brazil, Peru.

Specimens examined. 154. This is a frequently collected species known from Pernambuco, Brazil, south to Argentina and Paraguay. A few specimens have also been seen from Bolivia. Specimens are present in most collections examined. (BMNH) (CASC) (CSCA) (CMNH) (DZUP) (GGC) (JEBC) (MKRB) (USNM) (ZMHB).

Remarks. *Brachiacantha groendali* has distinctive male genitalia, but is similar to several other species of *Brachiacantha* in external appearance. However, the male pronotal color pattern is found in few other species and is useful in distinguishing *B. groendali*. Examination of type specimens indicated that several synonyms of *B. groendali* had been named, as indicated below.

Mulsant (1850) described 3 subspecies or variations of his *Cleothera billoti,* C. *groendali*, *parva*, and *bourdini*. His *C. billoti* specimens were from the Pilate collection and cannot be located; *C. parva* specimens were from the Chevrolat collection and are in the UMZC; and *C. bourdini* specimens came from an unnamed collection and have not been located.

The holotype of *B. groendali* is labeled "Brasil, gröndal Billoti M. var. gröndali Muls.(handwritten)/ HOLOTYPE Cleothera (Cyra) billoti grondali Mulsant (red paper)." The lectotype of *B. propria* is a male labeled "Poznzn Coll Kirsch (green paper) /propria Kirsch (handwritten)/Brachyacantha propria Kirsch (blue paper, handwritten)/Typus (red paper)/Brachyacantha propria Kirsch (handwritten) det. R. Korschefsky 1944/Staatl. museum für Tierkunde, Dresden." Two other specimens bearing the same labels except the handwritten name on white paper and the Korschefsky det. label are designated paralectotypes. The lectotype of *B. arrowi* is part of a series of 5 specimens labeled as Type (1) and Syntype (4). Two of these syntypes are females, different species, of unknown ancestry, 3 are males, the type and one syntype have identical male genitalia, the other syntype has radically different male genitalia, a type not seen in any specimens on hand, therefore this one is described as *B. pseudoarrowi*, n. sp. The lectotype is labeled "Type (orange bordered disc)/Pernam. (handwritten)/type (handwritten)/ Ch.Fry (handwritten)/Fry Coll. 1905.100. /J. Brethes det 1925." The other 17 specimens are labeled as paralectotypes, although only one is the true *B. arrowi*. In addition, there are 7 paralectotype specimens in the MBR. The holotype of *B. australe* is labeled "Sbernardino Paraguay/KFiebrig Collector, U.S.N.M. Paratype 40412." The holotype of *B. manni* is labeled "Independencia, Parahyba, Brazil, 1911, Mann and Heath."

30. ***Brachiacantha eva*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.9 mm, width 2.3 mm; body oval, convex. Dorsal surface with head and pronotum weakly alutaceous, slightly shiny, elytron smooth, shiny. Color yellow except pronotum with large basomedian macula extended 3/4 distance to anterior pronotal margin, apex of macula not emarginate with yellow, lateral 1/5 of pronotum yellow; elytron black with median vitta, lateral margin, and apical spot yellow, median vitta irregular, extended from base to apical spot, connected to apical spot, lateral border with vitta extended from humeral angle to apical 5/6, widened at apical declivity where a mediolateral spot would normally be located (Fig. 168); ventral surface with head, prosternum, meso- and metaventrites black, legs with femur brown; abdomen dark brown. Head punctures small, separated by a diameter or less, each puncture slightly larger than an eye facet; pronotal punctures slightly 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 about a diameter. Clypeus truncate apically, lateral angle rounded, surface with sparse, short pubescence. Eye canthus about 4 eye facets long, slightly 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 medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower

than remainder of protibia, outer margin arcuate, smooth, basal tooth small, length about 1/6 width of tibia at base, sponda not extended beyond protibial flange (Fig. 169). Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at basal 1/6 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite rounded throughout, extended forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite with apex broadly, weakly emarginate; 6th ventrite depressed medially, apex shallowly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe much longer than paramere, penis shaped, slender, symmetrical, sides straight in basal 1/2, apical 1/2 slightly wider than basal 1/2, sides slightly curved to narrowly flattened apex; paramere short, *Psc*, slender, slightly narrowed from base to rounded apex (Fig. 170, 171); sipho robust, strongly curved in basal 1/2, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, narrow, angled, apex rounded, outer arm curved, wider and longer than inner arm, with large accessory piece, basal border widely emarginate (Fig. 172, 173).

Female. Similar to male except head entirely black with small, yellowish red spot at base of frons in middle, pronotum entirely black except anterolateral angle narrowly yellow. Genitalia with spermathecal capsule short, wide, narrowed from base to apex; bursal cap with 2 lateral arms weakly sclerotized, apical strut short, wide, club shaped (Fig. 174).

Variation. See remarks below.

Type material. Holotype male; (Argentina) Arg. Salta, Cafayate, II-1983, M. I. Viana, ex Coleccion M. Viana ARG 021690, Coleccion J.E. Barriga, Chile 070983. (JEBC). Paratypes; 2, ARGENTINA, prov. Córdoba, depto Calamuchita, El Sauce, oct 1976, leg. M. Viana (JEBC).

Other specimens. 6. Argentina, Catamarca prov., 22 km S Palo Labrado; Argentina, prov. Chaco, Resistencia; Argentina, prov. San Luis, Merlot; Argentina, San Pablo. (JEBC).

Remarks. This species has male genitalia similar to those of *B. groendali*, and is placed in the same group. The vittate dorsal surface is unique among currently known species of this genus, but specimens listed under "Other specimens" are always lacking the median vitta and sometimes without the lateral vitta. Although differing in dorsal color, both the paratypes and other specimens have identical male genitalia.

debbie group

21. ***Brachiacantha debbie* Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.6 mm, width 1.8 mm; body oval, convex. Dorsal surface with head and pronotum alutaceous, elytron weakly alutaceous, weakly shiny. Color yellow except pronotum with large, oval mediobasal macula extended 4/5 distance to anterior pronotal margin, macula not apically indented with yellow, small, rounded brown spot on each side laterad of median macula; elytron black with 5 large, yellow spots, scutellar and humeral spots narrowly connected along basal margin, scutellar and apical spots narrowly connected to oval discal spot (Fig. 175); ventral surface with head, prosternum, meso- and metaventrites black; abdomen dark 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 a diameter or less, elytral punctures larger than on pronotum, separated by about a diameter; metaventral punctures as large as on elytron, separated by about a diameter. 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 medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange about 1/2 width of remainder of protibia,

outer margin arcuate, smooth, basal tooth large, length about 1/3 width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, parallel toward base, joined at basal 1/6 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite slightly depressed in median 1/3, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex broadly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe much longer than paramere, slender, symmetrical, sides parallel from base to truncate apex; paramere short, weakly *Psc*, slender, same width throughout, apex rounded (Fig. 176, 177); sipho robust, strongly curved in basal 1/2, with lateral alae posterior to apex, basal capsule lightly sclerotized, inner arm short, narrow, apex oblique, outer arm wider and longer than inner arm, with small accessory piece, basal border distinctly emarginate (Fig. 178, 179).

Female. Female head entirely black, pronotum entirely black except anterolateral angle broadly yellow. Genitalia with spermathecal capsule long, slender, basal 1/4 wider than remainder of capsule, apex acute; bursa with 3 distinct arms, apical strut large, flattened at apex, widened from base to nearly truncate apex (Fig. 180).

Variation. Length 2.4 to 2.8 mm, width 1.6 to 2.0 mm. Male pronotum with mediobasal macula varying from that described above to larger, extended 5/6 distance to anterior pronotal margin, and nearly reaching lateral pronotal margin., female head entirely black or with small, median reddish yellow spot at base of frons, elytron with scutellar, discal, and apical spots sometimes narrowly, feebly connected.

Type material. Holotype male; Argentina, Isla Los Cisnes. Parana Delta. v-xi 1920, H.E. Box, Brit. Mus. 1921-260., Hyperaspis flavoguttata Muls (handwritten). (BMNH). Paratypes; 16, 1, Argentina, prov. Buenos Aires, Pque Pereyra Iraola, La Plata, nov 1976, leg. JE. Barriga, Coleccion J.E. Barriga Chile 131476 (JEBC); 15, (Argentina) Bs As (Buenos Aires), Tigre (numerous dates), Daguerre (USNM).

Remarks. Both male and female genitalia of *Brachiacantha debbie* are distinctive within this genus, although the male genitalia are somewhat similar to several other species. The male pronotal color pattern with a large, oval, mediobasal macula not indented with yellow on anterior border is found in few other species and is useful in distinguishing *B. debbie*.

32. *Brachiacantha monica* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.4 mm, width 1.8 mm; body rounded, slightly elongate, convex. Dorsal surface with head weakly alutaceous, somewhat shiny, pronotum and elytron smooth, shiny. Color black except head yellow; pronotum nearly all black except narrow apical margin and anterolateral angle yellow; elytron with 2 reddish yellow spots, humeral spot large, irregularly rectangular, apical spot small, somewhat rounded (Fig. 181); ventral surface with antenna, mouthparts, prothoracic hypomeron, legs yellow; abdomen with ventrites dark brown. Head punctures small, dense, separated by a diameter or less, each puncture about as large as an eye facet; pronotal punctures larger than head punctures, separated by 1 to 2 times diameter, elytral punctures larger than on pronotum, separated by 1 to 2 times a diameter; metaventral punctures fine, sparse, nearly absent. Clypeus truncate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, curved 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 medially. Epipleuron narrow, slightly grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin curved, smooth, basal tooth small, about 1/3 width of tibia at base, sponda extended beyond protibial flange, apically rounded. Carinae on prosternal process widely separated at apex, parallel toward base, ended at base of prosternal process, not joined basally. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened

along posterior ventrite margin, extended forward at apex, ventrite with sparse, long pubescence and small, sparse punctures, punctures nearly absent; ventrite 2 nearly impunctate medially; ventrites 3–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite deeply depressed in median 1/3, with broadly emarginate apex; 6th ventrite medially depressed, apex broadly emarginate. Apical tergite finely, densely punctured, apex arcuate. Genitalia with basal lobe long, slender, about as long as paramere, symmetrical, sides weakly convergent in basal 7/8, narrowed in apical 1/8, apex truncate; paramere slender from base to apex, weakly curved, slightly *Psc* (Fig. 182, 183); sipho robust, strongly curved in basal 1/2, with faint lateral alae at apical 7/8, basal capsule strongly sclerotized, inner arm short, obliquely angled, apex narrowly rounded, outer arm wider and longer than inner arm, without accessory piece, basal border broadly, deeply emarginate (Fig. 184, 185).

Female. Similar to male except head black with triangular, yellowish red spot at middle of frons, pronotum entirely black except narrow, anterolateral border yellow. Genitalia with spermathecal capsule short, slender, cornu widened; bursal cap small, oval, with 2 sclerotized arms, apical strut long, widened from base to rounded apex, flattened in lateral view (Fig. 186).

Variation. None observed.

Type material. Holotype male: Bolivia, Dept. Santa Cruz, 3.7 km SSE Buena Vista, 400m, Hotel Flora y Fauna, 1-20.vii.2000, 17° 29'S 63° 33'W, malaise, R. Morris, site #4. (CSCA). Paratypes; 2, same data as holotype except date 4-12.v.2000m, site #2 (CSCA).

Remarks. This species is somewhat similar to *B. amber* and *B. parva* in male genitalia structure, but is completely dissimilar in external appearance.

33. *Brachiacantha parva* (Mulsant), new status, new combination

Cleothera billoti parva Mulsant, 1850: 620.
Hyperaspis ab. *parva*: Korschefsky 1931: 185.
Hyperaspis billoti parva: Gordon 1987: 28.

Description. **Male** lectotype. Length 2.5 mm, width 1.9 mm; body elongate oval. Color brown except head yellow; pronotum yellow with large, basomedian brown macula truncately projected medially, apex slightly indented with yellow at middle; elytron with 5 small, yellow spots arranged in rows of 2 each with apical spot, all spots more or less round except scutellar spot transversely oval and humeral spot triangular (Fig. 187); ventral surface brown except mouthparts, hypomeron, prosternum, and legs yellow; abdominal ventrites brownish yellow. Head punctures small, separated by less than to twice a diameter, each puncture as large as 1 eye facet; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures as large as on pronotum, separated by 1 to 2 times a diameter. Clypeus truncate apically, lateral angle abruptly rounded, surface sparsely pubescent. Eye canthus short, about 5 eye facets long, slightly angled forward, abruptly rounded apically, yellow. Pronotum narrowed from base to apex, sides rounded, anterior angle broadly rounded, basal angle abruptly rounded, basal margin without bordering line. Epipleuron narrow, grooved, groove sparsely punctured, deeply emarginate for reception of femoral apices. Protibia with short, triangular tooth, narrowly flanged between tooth and sponda; sponda shallow, small, extended beyond protibial margin. Carinae on prosternal process obscured, not examined. Basal abdominal ventrite with postcoxal line curved throughout, extended forward at apex; ventrites 1–4 with sparse, short pubescence, ventrites 1–5 with coarse punctures in median 1/3, punctures becoming small, dense laterally; ventrite 5 broadly, deeply emarginate apically; ventrite 6 finely, densely punctured, broadly emarginate medially at apex. Genitalia with basal lobe as long as paramere, gradually narrowed from base nearly to truncate apex, slightly narrowed immediately before apex; paramere *Psc*, slender, abruptly bent before apex (Fig. 188, 189); sipho short, robust, curved in basal 1/2, with lateral alae in apical 1/6, basal capsule large, inner arm short, wide, outer arm elongate, wide (Fig. 190, 191).

Female. Unknown.

Variation. Unknown.

Type locality. Brazil.

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

Geographical distribution. Brazil.

Specimens examined. l. **Brazil.** The lectotype. (UMZC).

Remarks. *Brachiacantha parva* is separable from other taxa having the same dorsal color pattern only by the elongate, apically truncate basal lobe of the male genitalia.

Mulsant (1850) described *Cleothera billoti* as having three color varieties, or aberrations. The type of *C. billoti*, stated to be in the Pilate collection, cannot be located. The type of *Cleothera billoti groenlandica* is a *Brachiacantha* species in the Copenhagen collection, and the type of *C. bourdini* (collection not stated by Mulsant) has not been found. As stated by Gordon (1987) the single specimen of *C. billoti parva* in the Crotch collection (Cambridge) bears a label with the "TYPE" crossed out, on the underside of that label is "Chev ex Mulsant."
Because this specimen matches Mulsant's description of *C. parva*, Gordon (1987) considered it to be the lectotype.

Although Mulsant (1850) stated that all of his type specimens were from Brazil, Korschefsky (1931) listed "*billoti*" as occurring in Mexico and several Central American countries. This was based on erroneous identifications made by Gorham (1894) when he applied the name "*billoti*" to taxa (probably several species) of Hyperaspini from those countries.

34. ***Brachiacantha amber*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 3.3 mm, width 2.4 mm; body elongate, oval, convex. Dorsal surface with head weakly alutaceous, slightly shiny, pronotum and elytron smooth, shiny. Color yellow except pronotum with narrow, short basomedian macula extended about 1/3 distance to anterior pronotal margin, apex of macula widely, shallowly indented with yellow medially; elytron reddish yellow with entire black border except humeral angle triangularly yellow (Fig. 192); ventral surface with head, prosternum, meso- and metaventrites dark brown; abdomen with median portion of ventrites 1–3 dark brown, remainder of 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 2 times a diameter, 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. 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 medially. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange wider than remainder of protibia, outer margin arcuate, smooth, basal tooth large, length about 1/2 width of tibia at base, sponda not extended beyond protibial flange (Fig. 193). Carinae on prosternal process narrowly separated at apex, convergent toward base, joined just before base of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with narrow, median depression on ventrites 3–5, lateral margin of groove with cusp on each side; apex of ventrites 1–2 with small, triangular depression. Abdomen with postcoxal line on basal abdominal ventrite slightly flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; 5th ventrite with apex broadly, weakly emarginate; 6th ventrite depressed medially, apex weakly emarginate. Apical tergite densely punctured, apex slightly emarginate. Genitalia with basal lobe longer than paramere, penis shaped, slender, symmetrical, sides slightly convergent in basal 1/2, apical 1/2 wider than basal 1/2, sides slightly

curved to truncate apex; paramere short, slightly *Psc*, slender, same width throughout, apex rounded (Fig. 194, 195); sipho robust, strongly curved in basal 1/2, with large lateral alae at apical 1/8, basal capsule heavily sclerotized, inner arm long, narrowed from base to rounded apex, outer arm straight, slightly narrower and same length as inner arm, with small accessory piece, basal border broadly, shallowly emarginate (Fig. 196–198).

Female. Unknown.

Variation. Length 3.0 to 3.3, width 2.2 to 2.4 mm.

Type material. Holotype male; Colombia, Chocó, Istmina, LMMurillo No. 5341, 1.VIII.'40. (USNM). Paratypes; 5, same data as holotype (USNM).

Remarks. This large species has a unique dorsal color pattern by which it may be recognized. It is placed in the debbie group because of the similar genitalic male basal lobe of male genitalia. However, it does not resemble the other species of the group at all in other respects, so this placement must be considered one of convenience only.

leslie group

35. ***Brachiacantha leslie*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.0 mm, width 1.5 mm; body elongate oval, convex. Dorsal surface with head and pronotum slightly alutaceous, shiny, elytron smooth, shiny. Color yellow except pronotum with wide, black basomedian macula extended slightly more than 1/2 distance to anterior pronotal margin, apical border of macula deeply emarginate with yellow, remainder of border somewhat sinuate; elytron black with 5 small, yellow spots, humeral spot triangular, discal spot oval, mediolateral spot irregularly oval, apical spot transversely oval (Fig. 199); ventral surface with head, prosternum, meso- and metaventrites black; abdomen dark brown except lateral 1/3 and 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 1 to 2 times a diameter, elytral punctures larger than on pronotum, separated by 1 to 3 times diameter; metaventral punctures larger than on elytron, separated by about a diameter. Clypeus weakly emarginate apically, 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 rounded, basal margin without trace of bordering line medially. Epipleuron narrow, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange about 1/4 as wide as remainder of protibia, outer margin straight, smooth, basal tooth large, spiniform, about 1/2 width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, parallel, not joined, ended at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along apical ventrite margin, curved forward at apex, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed in median 1/3, apex slightly emarginate; 6th ventrite medially depressed, apex shallowly emarginate. Apical tergite finely, densely punctured, apex weakly emarginate. Genitalia with basal lobe longer than paramere, symmetrical, sides convergent from base to apical 3/4, apical 1/4 narrower, apex weakly triangular, apex abruptly rounded; paramere long, slightly *Psc*, sides parallel in basal 4/5, apical 1/5 abruptly narrowed to rounded apex, upper 1/3 of paramere more heavily sclerotized than lower 2/3 (Fig. 200, 201); sipho robust, strongly curved in basal 2/3, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, narrow, apex widely, weakly emarginate, outer arm slightly sinuate, wider and longer than inner arm, with large accessory piece, basal border abruptly emarginate (Fig. 202, 203).

Female. Similar to male except head with median yellow spot on vertex and base of frons. Genitalia with spermathecal capsule short, wide, narrowed from base to apex; bursal cap widely oval, with 2 short, sclerotized arms, apical strut short, strongly widened apically (Fig. 204).

Variation. Length 2.0 to 2.6 mm, width 1.5 to 2.0 mm. Male pronotum may have basomedian macula reduced in size, leaving lateral 1/4 of pronotum completely yellow.

Type material. Holotype male; Argentina, Prov. Salta, Cerro San Bernardo, Salta, 11.II.1982, 1450m, H. & A. Howden. (USNM). Paratypes; 6, 2, same data as holotype (USNM); 2, Tucuman, R. A., Tucuman1.50 (USNM); 1, Argentina, Prov. Salta, Los Laureles, 1450m, 6.II.1982, H. & A. Howden (USNM); 1, Hist.-Coll. (Coleoptera), Nr. 4428, Hyperaspis spec. var.?, Brasil., Sellow, Zool. Mus. Berlin (ZMHB).

Remarks. *Brachiacantha leslie* does not have external characters that will distinguish it from similar looking appearing species, but the male genitalia with long, slender basal lobe, and paramere abruptly narrowed in apical 1/5 are characters not found elsewhere.

trimaculata group

36. ***Brachiacantha trimaculata* Leng**

Brachyacantha trimaculata Leng, 1911: 289, 295; Korschefsky 1931: 207; Blackwelder 1945: 449.

Description. **Male**. Length 2.6 mm, width 2.0 mm; body oval, convex. Dorsal surface with head and pronotum alutaceous, weakly shiny, elytron smooth, shiny. Color black except pronotum with narrow apical border and anterolateral angle yellow; elytron black with 3 small, pale spots, humeral spot yellow, triangular, mediolateral spot projected onto middle of disc, reddish yellow, apical spot yellow, transversely oval (Fig. 205); venter with antenna, mouthparts, legs yellow; abdomen dark brown. Head punctures large, separated by less than a diameter, each puncture about as large as 2 eye facets; pronotal punctures slightly smaller than head punctures, separated by less than to twice a diameter, elytral punctures as large as on pronotum, separated by 1 to 3 times a diameter; metaventral punctures larger than on elytron, separated by less than a diameter. Clypeus weakly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 5 eye facets long, slightly angled forward, apically rounded, brown. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, slightly grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange narrower than remainder of protibia, outer margin straight, smooth, basal tooth small, length about 1/10 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, slightly convergent toward base, joined at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite rounded throughout, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite slightly depressed in median 1/3, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex shallowly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe much longer than paramere, wide, symmetrical, sides parallel in basal 1/2, widened in apical 1/2, rounded to acute apex; paramere short, weakly *Psc*, slender, same width throughout, apex rounded (Fig. 206, 207); sipho robust, strongly curved in basal 1/2, with lateral alae posterior to apex, basal capsule heavily sclerotized, inner arm short, narrow, apex rounded, outer arm wider and longer than inner arm, with large accessory piece, basal border not emarginate (Fig. 208–210).

Female. Unknown.

Variation. Elytron with pale spots sometimes nearly invisible, mediolateral spot subject to reduction in size, and it often blends in with black background.

Type locality. Sapucay, Paraguay.

Type depository. USNM (holotype).

Geographical distribution. Argentina, Paraguay.

Specimens examined. 8. **Argentina**. Misiones. **Paraguay**. Sapucay. (USNM) (ZMHB).

Remarks. *Brachiacantha trimaculata* has distinctive dorsal coloration that will separate it from other *Brachiacantha* species.

Leng (1911) had a single specimen of this species, the holotype in the USNM collection labeled "Sapucay, Paraguay, March, W.F. Foster."

tucumanensis group

37. ***Brachiacantha eleanor*** **Gordon and Canepari, new species**

Description. **Male** holotype. Length 2.1 mm, width 1.6 mm; body oval, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, slightly shiny, elytron smooth, shiny. Color black except head yellow, pronotum yellow with large, oval mediobasal macula extended 2/3 distance to anterior pronotal margin, macula slightly indented with yellow on apex, lateral 1/4 of pronotum yellow; elytron black with 1 small, triangular, yellow spot on humeral angle (Fig. 211); ventral surface with antenna, mouthparts, legs yellow; abdomen 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 a diameter or less, 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. 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 medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth small, length about 1/10 width of tibia at base, sponda slightly extended beyond protibial flange (Fig. 212). Carinae on prosternal process widely separated at apex, slightly convergent toward base, not joined, ended at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; ventrites 3–5 depressed medially with tuft of setae on each side of emargination, 5th ventrite with apex broadly, weakly emarginate; 6th ventrite depressed medially, apex broadly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe about as long as paramere, slender, symmetrical, slightly "pinched" laterally at basal 1/3, widened in apical 1/2, sides rounded to acute apex; paramere weakly *Psc*, slender, sinuate in dorsal view, apex rounded (Fig. 213, 214); sipho robust, strongly curved in basal 1/2, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, narrow, apex bifid, outer arm wider and longer than inner arm, with small accessory piece, basal border broadly, shallowly emarginate (Fig. 215, 216).

Female. Similar to male except head entirely black, pronotum with anterior border black. Genitalia with spermathecal capsule short, wide, widened from base to apex; bursal cap without sclerotized arms, apical strut short, base wide, narrow medially, apex minutely enlarged (Fig. 217).

Variation. None observed.

Type material. Holotype male; Paraguay, Sapucay, Zool. Mus. Berlin. (ZMHB). Paratypes; 2, same data as holotype (ZMHB).

Remarks. This species is highly distinctive because of the black elytron with only a small, triangular spot at the humeral angle. It somewhat resembles *B. buckleyi*, but that species is much larger and has a yellow ring almost completely around the elytron.

38. ***Brachiacantha tucumanensis*** **Weise**

Brachyacantha tucumanensis Weise, 1910: 58; Korschefsky 1931: 207: Blackwelder 1945: 449.

Description. **Male**. Length 2.4 mm, width 1.6 mm; body elongate oval, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, slightly shiny, elytron weakly alutaceous, shiny. Color black except head yellow, pronotum yellow with small, oval mediobasal macula extended 2/3 distance to anterior pronotal margin, macula narrowly indented with yellow on apex, lateral 1/4 of pronotum yellow; elytron black with 5 small yellow spots, scutellar spot removed from scutellum, humeral spot long, slender, discal spot small, oval, obliquely angled, reddish yellow (Fig. 218); ventral surface with antenna, mouthparts, legs yellow; abdomen dark 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 1 to 2 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or less medially, larger, separated by less than a diameter laterally. 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 medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth small, length about 1/5 width of tibia at base, sponda not extended beyond protibial flange (Fig. 219). Carinae on prosternal process narrowly separated at apex, slightly convergent toward base, not joined, ended at middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; ventrites 3–5 depressed medially with tuft of setae on each side of emargination, 5th ventrite with apex broadly, deeply emarginate; 6th ventrite depressed medially, apex broadly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe about as long as paramere, slender, symmetrical, sides slightly "pinched" at basal 1/3, widened in apical 2/3, sides rounded to acute apex, paramere short, weakly *Psc*, wide, twisted at base so paramere is at 45 degree angle, slender, sinuate in dorsal view, apex rounded (Fig. 220. 221); sipho robust, strongly curved in basal 1/2, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, narrow, apex broadly bifid, rounded, outer arm wider and longer than inner arm, with small accessory piece, basal border not emarginate (Fig. 222, 223).

Female. Similar to male except head entirely black, pronotum with anterior border narrowly yellow, lateral border narrowly yellow. Genitalia with spermathecal capsule short, wide, widened from base to apex; bursal cap without sclerotized arms, apical strut short, base wide, apically slender (Fig. 224).

Variation. Length 2.1 to 2.4, width 1.5 to 1.6 mm. Humeral spot on elytron often connected to mediolateral spot along lateral elytron margin, elytral spots variable in size, often larger than typical.

Type locality. Argentina, Province Tucuman.

Type depository. ZMHB (holotype).

Geographical distribution. Argentina, Salta.

Specimens examined. 8. **Argentina**. Province Salta; Rosario del la Frontera, Salta; Salta, Metan. (JEBC) (USNM) (ZMHB)

Remarks. *Brachiacantha tucumanensis* is similar to several other *Brachiacantha* species in external appearance, but the scutellar spot is distinctly separated from the scutellum toward the humeral angle, and the elytral spots are usually very small. The discal spot is also unusual in that it is obliquely oval.

The holotype in the ZMHB is a female labeled "Rep. Argentina, Prov. Tucuman, 9.XI.1903, C. Bruch/ Brachiacantha tucumanen. m. (handwritten)." The abdomen, including genitalia, is missing from the holotype. Weise (1910) based his description of *B. tucumanensis* on a single specimen he had previously (1906) included under the name *Hyperaspis scapulata* Mulsant.

39. *Brachiacantha valerie* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.4 mm, width 1.7 mm; body elongate oval, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, shiny, elytron smooth, shiny. Color black except head yellow, pronotum yellow with large, wide mediobasal macula extended 4/5 distance to anterior pronotal margin, macula slightly indented with yellow on apex, anterolateral angle of macula broadly emarginate with yellow; elytron black with 5 small, yellow spots, most spots rounded, humeral spot triangular, apical spot transversely oval with anterior border emarginate (Fig. 225); ventral surface with antenna, mouthparts, legs yellow; abdomen brown. Head punctures small, separated by about a diameter, each puncture slightly larger than 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 2 to 3 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or less. Clypeus truncate 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 weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin arcuate, smooth, basal tooth long, length about 1/2 width of tibia at base, sponda slightly extended beyond protibial flange. Carinae on prosternal process widely separated at apex, slightly convergent toward base, joined at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; ventrites 3–5 depressed medially with tuft of setae on each side of emargination, 5th ventrite depressed medially, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex broadly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe much longer than paramere, symmetrical, sides parallel in basal 1/2, widened in apical 1/2, sides rounded to acutely rounded apex; paramere *Psc*, slender, curved, apex obliquely truncate, slightly emarginate medially (Fig. 226, 227); sipho robust, strongly curved in basal 2/3, with lateral alae just behind apex, basal capsule lightly sclerotized, inner arm short, slender, apex broadly bifid, outer arm wider and longer than inner arm, with small accessory piece, basal border broadly, shallowly emarginate (Fig. 228, 229).

Female. Unknown.

Variation. Unknown.

Type material. Holotype male; Brasilien, Nova Teutonia, 27° 11' B. 52° 23' L, Jan 1939, Fritz Plaumann, Brit.Mus. 1946-191. (BMNH). Paratype; 1, Brazil, Nova Teutonia.lat.27°-11 S lon.52°-23, IX-4-1948, F. Plaumann (USNM).

Remarks. This species is similar in color pattern to several other *Brachiacantha* species, but distinct from them and others in the tucumanensis group by the male genitalia with basal lobe wide, longer than paramere.

bahiensis group

40. ***Brachiacantha bahiensis* Brèthes**

Brachyacantha bahiensis Brèthes, 1925a: 159; Korschefsky 1931: 103; Blackwelder 1945: 448.

Description. **Male**. Length 2.6 mm, width 2.0 mm; body oval, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, slightly shiny, elytron smooth, shiny. Color dark except head yellow, pronotum yellow with large, wide, black mediobasal macula extended 3/4 distance to anterior pronotal margin, macula not indented with yellow on apex, anterolateral angle widely emarginate with yellow; elytron dark brown with 5 small yellow spots, discal spot obliquely oval, mediolateral spot oval, projected inward, apical spot transversely oval with anterior border emarginate (Fig. 230); ventral surface dark brown with antenna, mouthparts, legs yellow; abdomen dark brown with lateral 1/4 and ventrites 5–6 slightly paler 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 slightly more than a diameter, elytral punctures slightly 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, larger, separated by less than a diameter laterally. Clypeus 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 medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth small, length about 1/5 width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process widely separated at apex, slightly convergent toward base, joined at basal 1/3 of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite with apex broadly, weakly emarginate; 6th ventrite depressed medially, apex broadly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe longer than paramere, wide, symmetrical, dorsal surface with large, arcuate, median keel, sides weakly arcuate in basal 5/6, apical 1/6 triangular, sides angled to acute apex, paramere short, weakly *Psc*, wide, slender, sinuate in dorsal view, apex rounded (Fig. 231, 232); sipho robust, strongly curved in basal 2/3, with lateral alae just behind apex, basal capsule lightly sclerotized, inner arm short, triangular, apex rounded, outer arm wider and longer than inner arm, with small accessory piece, basal border feebly emarginate (Fig. 233–235).

Female. Similar to male except head entirely black, pronotum with basomedian macula extended to anterior pronotal margin, anterolateral angle narrowly yellow. Genitalia with spermathecal capsule short, wide, widened from base to apex; bursal cap without sclerotized arms, apical strut short, base wide, apically slender (Fig. 236).

Variation. Length 2.3 to 3.0 mm, width 2.4 mm. Elytron sometimes with black background, elytral spots variable in size, often larger or smaller than typical, female head may be entirely black or have a yellow spot at base of the frons.

Type locality. Bahia, Brazil.

Type depository. BMNH (lectotype here designated).

Geographical distribution. Brazil.

Specimens examined. 24. **Brazil**. Chapada; Mato Grosso; Santarem; Taquara. (BMNH) (CMNH).

Remarks. This species is another *Brachiacantha* with 5 yellow spots on a dark background. Most easily confused with *B. groendali*, males may usually be separated by the dark brown background and obliquely oval discal spot on each elytron, male pronotum usually without apical emargination of the basomedian macula, and male genitalia with a distinctive dorsal keel on the basal lobe. Females are more difficult to distinguish except by examination of genitalia, although even the genitalia are very similar in structure. Characters that distinguish this species and the bahiensis group are male genitalia with basal lobes having a sort of triangular apex and a large, arcuate dorsal keel.

The male lectotype in the BMNH is labeled. "Type(orange bordered disc)/ Type (handwritten)/ Bahia (handwritten)/58.60 (blue disc)/ Brachyacantha bahiensis Brethes (handwritten)."

41. *Brachiacantha pseudoarrowi* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.0 mm, width 1.4 mm; body oval, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, slightly shiny, elytron smooth, shiny. Color dark brown except head yellow, pronotum yellow with large, oval, dark brown mediobasal macula extended 3/5 distance to anterior pronotal margin, macula triangularly indented with yellow on apex, anterolateral angle widely emarginate with yellow; elytron dark brown with 5 yellow spots, discal spot on apical declivity oval, mediolateral spot somewhat rectangular, apical spot large, round (Fig. 237); ventral surface with antenna, mouthparts, legs yellow; abdomen yellowish brown. Head punctures small, separated by a diameter or less, each puncture slightly larger than an eye facet; pronotal punctures slightly larger than head punctures, separated by less than to slightly more than a diameter, elytral punctures slightly larger than on pronotum, separated by less than to 2 times a diameter; metaventral punctures larger than on elytron, separated by a diameter or less. 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 weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin slightly curved, smooth, basal tooth small, length about 1/6 width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, slightly convergent toward base, joined at base of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite with apex broadly, weakly emarginate; 6th ventrite depressed medially, apex broadly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe slightly shorter than paramere, wide, symmetrical, sides "pinched" at basal 1/3, apical 2/3 lunulate, apex acute, dorsal surface with large, arcuate, dorsal median keel; paramere short, *Psc*, wide, narrowed from middle to rounded apex (Fig. 238, 239); sipho robust, strongly bent in basal 1/2, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, straight, apex rounded, outer arm wider and longer than inner arm, with small accessory piece, basal border not emarginate (Fig. 240).

Female. Unknown.

Variation. Length 2.0 to 2.4, width 1.4 to 1.6 mm.

Type material. Holotype male; Brazil, Santarem. (BMNH). Paratype; 1, Brazil, Santarem, Acc.No.2966 (CMNH).

Remarks. This small taxon is outwardly similar to many other *Brachiacantha* species, but the short, wide, basal lobe of the male genitalia is quite different from that of any presently known example of that genus.

The holotype is a syntype of *Brachiacantha arrowi* labeled "Santarem (blue disc)/SYNTYPE (blue bordered disc)/Brachyacantha arrowi Brethes (handwritten). Of the 18 syntypes of *B. arrowi* examined, 15 were true *B. arrowi*, two were females probably not belonging to that species, and the single male newly described here.

42. *Brachiacantha danielle* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.3 mm, width 1.6 mm; body elongate oval, convex. Dorsal surface with head alutaceous, dull, pronotum weakly alutaceous, shiny, elytron smooth, shiny. Color black except head yellow, pronotum yellow with large, wide mediobasal macula extended 4/5 distance to anterior pronotal margin, macula not indented with yellow on apex, anterolateral angle of macula broadly emarginate with yellow; elytron dark brown with 5 small, yellow spots, humeral spot triangular, discal spot on apical declivity slightly obliquely oval, mediolateral spot projected inward, apical spot transversely oval (Fig. 241); ventral surface with antenna, mouthparts, legs yellow; abdomen brown. Head punctures small, separated by about a diameter, each puncture slightly larger than an eye facet; pronotal punctures slightly 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 larger than on elytron, separated by about a diameter. Clypeus truncate 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 medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia widely flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth short, length about 1/5 width of tibia at base, sponda not extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined just anterior to middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle; 5th ventrite depressed medially, apex broadly, weakly emarginate; 6th ventrite depressed medially, apex broadly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe slightly shorter than paramere, symmetrical, sides parallel in basal 7/8, widened in apical 1/8, sides angled to acutely rounded apex, dorsal surface with arcuate carina on each side of middle; paramere *Psc*, wide, curved from base to rounded apex (Fig. 242, 243); sipho robust, strongly bent in basal 1/2, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, slender, apex rounded, outer arm wider and longer than inner arm, with small accessory piece, basal border broadly, shallowly emarginate (Fig. 244, 245).

Female. Similar to male except head black with reddish yellow spot at base of frons, pronotum with basomedian macula nearly reaching anterior pronotal margin, lateral 1/6 of pronotum yellow. Genitalia with spermathecal capsule short, wide, narrowed from base to anterior 2/3, apical 1/3 slightly widened with apical beak (Fig. 246).

Variation. Length 2.0 to 2.6, width 1.3 to 1.7 mm.

Type material. Holotype male; Argentina, prov. Córdoba, dpto. Calamuchita, El Sauce, oct 1976, leg. M. Viana, Coleccion J.E. Barriga, Chile 116929. (JEBC). Paratypes, 7; 5, same data as holotype (JEBC); 2, Argentina, prov. Córdoba, dpto. Calamuchita, El Sauce, oct 1971, leg. M. Viana, Coleccion J.E. Barriga, Chile101838 (JEBC).

Remarks. This species is similar in color pattern to several other *Brachiacantha* species, including *B. bahiensis*. It is distinct from all by the male genitalia having an arcuate carina on each side of the middle of the basal lobe. That character is very similar to the single carina noted for *B. bahiensis*.

43. *Brachiacantha gail* Gordon and Canepari, new species

Description. **Male** holotype. Length 2.0 mm, width 1.6 mm; body rounded, somewhat oval, convex. Dorsal surface with head alutaceous, dull, pronotum and elytron smooth, shiny. Color black except head yellow, pronotum yellow with large, wide mediobasal macula extended 3/4 distance to anterior pronotal margin, macula not indented with yellow on apex, anterolateral angle of macula broadly emarginate with yellow; elytron black with lateral margin narrowly yellow from humeral angle nearly to apex, with single small, reddish yellow spot at apex just inside yellow border (Fig. 247); ventral surface with antenna, mouthparts, legs yellow; abdomen dark brown except ventrites 5–6 yellowish brown. Head punctures small, dense, nearly contiguous, 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 larger than on pronotum, separated by a diameter or less; metaventral punctures larger than on elytron, separated by less than a diameter. 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 medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth short, length about 1/6 width of tibia at base, sponda not extended beyond protibial flange (Fig. 248). Carinae on prosternal process narrowly separated at apex, convergent toward base, joined just anterior to middle of prosternum. Metaventrite without setal tuft. Basal abdominal ventrite without setal tuft. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrite 3 without cusp on each side of middle, ventrites 1–6 emarginate medially with clump of setae on each side of depression; 5th ventrite with apex broadly, weakly emarginate; 6th ventrite with apex broadly emarginate. Apical tergite densely punctured, apex emarginate. Genitalia with basal lobe slightly longer than paramere, symmetrical, sides weakly "pinched" in basal 7/8, widened in apical 1/8, sides angled to acutely rounded apex, dorsal surface with arcuate carina on each side of middle; paramere *Psc*, wide, nearly straight from base to obliquely truncate apex (Fig. 249); sipho robust, curved in basal 1/2, without visible lateral alae, basal capsule lightly sclerotized, inner arm short, triangular, apex rounded, outer arm wider and longer than inner arm, with accessory piece, basal border broadly, shallowly emarginate (Fig. 250, 251).

Female. Unknown.

Variation. None observed.

Type material. Holotype male; Brazil, Dianópolis, GO, 16-22.I.1962, J. Bechyné col. (DZUP). Paratypes; 2, same data as holotype except date "11-14.I.1962 (DZUP).

Remarks. This species has the same type of male genitalia as *B. danielle*, but is distinguished from that species and all other *Brachiacantha* by the elytral color pattern that consists of a narrow, yellow lateral margin and a small, apical spot. This color pattern is slightly similar to that of *B. eleanor*, and strongly similar to that of the much larger *B. buckleyi*.

Females unassociated with males, having genitalia that do not allow group placement

44. *Brachiacantha appropinquata* (Mulsant), new status, new combination

Hyperaspis flavoguttata appropinquata Mulsant, 1850: 653.
Hyperaspis flavoguttata ab. *appropinquata*: Korschefsky 1931: 189; Blackwelder 1945: 447.

Description. **Female** holotype. Length 3.3 mm, width 2.4 mm; body elongate, oval. Dorsal surface with head and pronotum alutaceous, dull, elytron smooth, shiny. Color black except anterior pronotal margin yellow; elytron with lateral margin bordered with yellow from base to posterior 2/3, apex of border enlarged, 3 yellow spots present, basal spot round, discal spot oblong, spot on apical declivity oval (Fig. 252); ventral surface with epipleuron brown, meso-, metaventrite, abdomen brown; legs with dark brown femora, tibiae brown with outer side yellow. Head punctures small, separated by 3 to 4 times a diameter, each puncture as large as an eye facet; pronotal punctures smaller than on head, sparse, separated by 8 to 10 times a diameter; elytral punctures larger than on pronotum, separated by about 3 times a diameter. Clypeus truncate apically, lateral angle weakly rounded, lateral margin obliquely angled to eye canthus, surface nearly glabrous, with few sparse, long setae at apical margin. Pronotum narrowed from base to apex, side curved, basal and anterior angles abruptly rounded, basal margin without bordering line. Protibia with short, triangular tooth, narrowly flanged (Fig. 253). Carinae on prosternal process sinuately convergent, joined at basal 2/5 of prosternum. Abdomen with postcoxal line on basal abdominal ventrite angled to apical margin of ventrite, abruptly rounded in median 1/5, then angled forward at apex. Genitalia with spermathecal capsule long, slender, bulbous at base, apex of cornu acute; bursal cap triangular, with 3 sclerotized arms, apical strut missing (Fig. 254).

Male. Unknown.

Variation. Unknown.

Type locality. Brazil.

Type depository. MNHP (holotype).

Geographical distribution. Brazil.

Specimens examined. l. **Brazil.** The holotype. (MNHP).

Remarks. *Brachiacantha appropinquata* was described as a species of *Hyperaspis* by Mulsant (1850), and he considered it probably a variation of *Hyperaspis* (*Cyra*) *flavoguttata* Mulsant. Examination of the type specimen indicated that it is a species of *Brachiacantha*.

The MNHP holotype is labeled "Museum Paris (printed)/des Mines (handwritten)/ des Mines (handwritten, round)/ Hyperaspis flavoguttata MULS. var. appropinquata MULS/ Auct. Det./ Hyperaspis appropinquata Gordon, 1971."

45. ***Brachiacantha argentinica* (Weise), new combination**

Hyperaspis argentinica Weise, 1922: 34.
Hyperaspis argentina: Korschefsky 1931: 184; Blackwelder 1945: 446.

Description. **Female**. Length 3.6 mm, width 2.7 mm; body elongate oval, convex. Dorsal surface with head alutaceous, dull, pronotum and elytron smooth, shiny. Color black except head with clypeus dark reddish brown, pronotum with anterolateral angle and lateral margin narrowly yellow; elytron reddish yellow except humeral angle narrowly yellow, sutural margin bordered with irregular black vitta extended from base to apex, 1 elongate black spot near humeral angle extended posteriorly from near base over humeral callus, 1 black spot on lateral margin on apical declivity narrowly connected to sutural border along apical margin (Fig. 255); ventral surface with antenna, mouthparts yellow, legs yellow except basal 2/3 of femur brown; abdomen dark brown. Head punctures small, dense, separated by a diameter or less, each puncture about as large as 2–3 eye facets; pronotal punctures slightly larger than head punctures, separated by less than to 2 times diameter, elytral punctures as large as on pro-

notum, separated by 1 to 3 times diameter; metaventral punctures larger than on elytron, separated by about a diameter. Clypeus slightly emarginate apically, lateral angle rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, straight, apically rounded, black. Pronotum narrowed from base to apex, basal and anterior angles abrupt, lateral margin weakly rounded, basal margin without trace of bordering line medially. Epipleuron narrow, grooved, not descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth short, length about 1/6 width of tibia at base, sponda extended beyond protibial flange (Fig. 256). Carinae on prosternal process narrowly separated at apex, convergent toward base, not joined, ended at basal 1/4 of prosternum. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense. Genitalia with spermatheca short, wide, widened from base to apex, cornu apically beaked; bursal cap without sclerotized arms, apical strut short, narrowed from base to apex (Fig. 257, 258).

Male. Unknown.

Variation. Length 3.4 to 3.7 mm, width 2.6 to 2.9 mm.

Type locality. Argentina, Gobernacion Misiones.

Type depository. MBR (lectotype here designated).

Geographical distribution. Argentina, Uruguay.

Material examined. 4. **Argentina**. Corrientes, Gobernacion Misiones; Misiones, Piñalito; San Roque; Santa Maria. **Uruguay**. Rivera, Sierra de la Aurora, Arroyo de la Aurora. (BMNH) (JEBC) (USNM).

Remarks. This species is separated from other *Brachiacantha* taxa by the large size and distinctive dorsal color pattern. One specimen from Misiones, Piñalito, is the same size as *B. argentinica* but with a differing dorsal color pattern described as: elytron reddish yellow with sutural margin bordered with irregular black vitta widened on disc, small black spot present on humeral callus, wide, black, irregular vitta present on apical declivity extended from lateral margin to sutural margin. This specimen is tentatively considered as *B. argentinica*.

Weise (1922) had more than one specimen of this species, so a type specimen in the MBR labeled "Rep. Argentina, Gob. Misiones, 189, C. Bruch/TYPUS/Hyperaspis argentinica Weise" is designated the lectotype. A second type specimen in the MBR labeled "Rep. Argentina, Prov. Corrientes, 190, C. Bruch/Corrientes, San Roquel, II-1920, Bosq/typus/Hyperaspis argentinica Weise" is designated a paralectotype.

46. ***Brachiacantha bilineata*** Weise

Brachyacantha bilineata Weise, 1902: 170; Leng 1911: 295; Korschefsky 1931: 203; Blackwelder 1945: 449.

Description. **Female** lectotype. Length 3.5 mm, width 2.6 mm; body slightly elongate, convex. Dorsal surface with head and pronotum alutaceous, dull, elytron smooth, shiny. Color black except head with anterolateral clypeal angle narrowly brown, vertex and narrow strip along eye dark brown; pronotum yellow with black, basomedian area extended laterally along base, extended anteriorly nearly to apical pronotal margin, roundly excised by yellow area laterally; scutellum black; elytron yellow with base, sutural and lateral margins narrowly black, narrow black vitta extended posteriorly from base across humeral callus to apical 1/3 of elytron (Fig. 259), ventral surface with mouthparts and legs yellow (Fig. 259). Head punctures large, separated by a diameter or less, each puncture as large as 2 eye facets; pronotal punctures large 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. Clypeus weakly emarginate apically, lateral angle abruptly rounded, surface with sparse, long pubescence. Eye canthus about 6 eye facets long, slightly angled forward, carinate dorsally, abruptly rounded apically, dark brown. Pronotum narrowed from base to apex, sides nearly straight, basal and anterior angles abruptly rounded, basal margin without bordering line. Epipleuron narrow, grooved, deeply emarginate for reception of femoral apices. Protibia with flange wide, about as wide as remainder of protibia, outer margin slightly arcuate, smooth, basal tooth large, length about 2/3 width of protibia at base, sponda extended beyond protibial flange. Carinae on prosternal process parallel nearly to apex, apex not examined. Metaventrite without setal tuft. Basal abdominal ventrite without median setal tuft. Basal abdominal ventrite with postcoxal line on basal abdominal ventrite rounded to apical margin of ventrite at middle, flattened along margin, then angled forward at apex; ventrites 1–4 with sparse, long pubescence, punctures sparse medially, becoming dense laterally; pubescence becoming dense on sterna 5, 6. Genitalia not examined.

Male. Unknown.

Variation. Unknown.

Type locality. Bolivia.

Type depository. ZMHB (lectotype here designated).

Geographical distribution. Bolivia (only the lectotype specimen seen).

Specimens examined. **Bolivia**. "Bolivia." (ZMHB).

Remarks. The dorsal color pattern is extremely distinctive, no other species as yet examined is remotely similar. The lectotype was glued together at some time in its history, so it was not dissected in order to prevent complete disintegration of the specimen.

The female lectotype is labeled "Bolivia (second word illegible) (green paper, handwritten)/Bolivia (handwritten)/ Brachyacantha bilineata m. (handwritten)." This specimen may be the only one Weise had, but that cannot be determined from the original description. Therefore it is designated as the lectotype.

47. ***Brachiacantha egae*** **(Crotch), new combination**

Hyperaspis egae Crotch, 1874: 223: Korschefsky 1931: 188; Blackwelder 1945: 447; Gordon 1987: 28.

Description. **Female** holotype. Length 2.8 mm, width 2.4 mm; body round, slightly oval. Color brown except head yellow; pronotum dark brown with lateral 1/5 yellow, yellow macula wide apically, narrowed posteriorly, inner margin of macula sinuate; elytron with large, unevenly oval, yellow discal spot occupying most of elytron and 2 small, indistinct spots in anterior 1/2, 1 spot at base near scutellum, 1 spot on humeral callus (Fig. 260); ventral surface light brown except prothoracic hypomeron and legs yellow; abdominal ventrites yellow. Head punctures small, separated by less than to twice a diameter, each puncture as large as 1 eye facet; pronotal punctures larger than on head, separated by less than to about twice a diameter; elytral punctures as large as on pronotum, separated by about a diameter. Clypeus feebly, broadly emarginate, nearly truncate apically, lateral angle abruptly rounded, surface nearly glabrous, with few sparse, long setae at apical margin. Eye canthus short, about 5 eye facets long, slightly angled forward, abruptly rounded apically, yellow. Pronotum narrowed from base to apex, sides straight, anterior angle broadly rounded, basal angle abruptly rounded, basal margin without bordering line. Epipleuron narrow, grooved, groove densely punctured, deeply emarginate for reception of femoral apices, outer margin slightly descending. Protibia with short, triangular tooth, narrow, emarginate between tooth and sponda; sponda shallow, small, extended beyond protibial margin (Fig. 261). Carinae on prosternal process widely divergent apically, convergent, joined just before prosternal

apex, single carina extended to apex. Abdomen with postcoxal line on basal abdominal ventrite angled to apical margin of ventrite, flattened along margin, then rounded forward at apex; ventrites 1–4 with sparse, short pubescence, ventrites 1–5 with coarse punctures in median 1/3, punctures becoming small, dense laterally; ventrite 5 broadly, weakly emarginate apically; ventrite 6 finely, densely punctured, apical margin rounded. Genitalia with spermathecal capsule long, wide, curved, thickened in basal 1/3, cornu slightly enlarged; bursal cap rounded with 2 outer arms; apical strut short, apical 1/3 flattened in lateral view (Fig. 262).

Male. Unknown.

Variation. Unknown.

Type locality. Brazil, Ega.

Type depository. UMZC.

Geographical distribution. Brazil.

Specimens examined. l. **Brazil.** The holotype. (UMZC).

Remarks. *Brachiacantha egae* is distinguished by the unusual elytral color pattern similar only to that of *B. sally* and *B. regina*.

The female holotype was the only specimen available for examination.

48. ***Brachiacantha sicardi*** Leng

Brachyacantha sicardi Leng, 1911: 295; Korschefsky 1931: 207; Blackwelder 1945: 449.

Description. **Female** holotype. Length 3.2 mm, width 2.4 mm; body elongate, oval. Color dark brown, nearly black except clypeal apex narrowly reddish brown; pronotum with anterolateral angle triangularly yellow, yellow area extend along lateral margin nearly to posterolateral angle; elytron with anterolateral angle narrowly yellow, long, irregular, median yellow macula extended from base nearly to apex, lateral margin with small, narrow, median spot (Fig. 263); ventral surface with mouthparts reddish yellow, hypomeron, epipleuron, and legs yellow, abdominal ventrites dark reddish brown. Head punctures small, separated by less than a diameter, each puncture as large as 4 eye facets; pronotal punctures larger than on head, separated by a diameter or less; elytral punctures as large as on pronotum, separated by a diameter or less. Clypeus truncate apically, lateral angle weakly rounded, lateral margin obliquely angled to eye canthus, surface nearly glabrous, with few sparse, long setae at apical margin. Eye canthus elongate, about 6 eye facets long, slightly angled forward, abruptly rounded apically, dark brown. Pronotum narrowed from base to apex, sides nearly straight, basal and anterior angles abruptly rounded, basal margin without bordering line. Epipleuron narrow, grooved, groove densely punctured, weakly emarginate for reception of femoral apices. Protibia with short, triangular tooth, narrow, sinuate between tooth and sponda; sponda shallow, small. Carinae on prosternal process slightly divergent apically, nearly parallel to base, joined before prosternal apex, lacking single carina extended to apex. Abdomen with postcoxal line on basal abdominal ventrite angled to apical margin of ventrite, abruptly rounded in median 1/5, then angled forward at apex; ventrites 1–4 with sparse, long pubescence, punctures sparse medially becoming dense laterally; pubescence becoming dense on ventrites 5, 6. Genitalia with spermathecal capsule short, curved apically, base wide; bursal cap lacking arms, with slightly elongate, sinuate apical strut (Fig. 264).

Male. Not known.

Variation. Not known.

Type locality. Sapucay, Paraguay.

Type depository. USNM.

Geographical distribution. Paraguay.

Specimens examined. l. **Paraguay**. The holotype. (USNM).

Remarks. *Brachiacantha sicardi* is known only from the female holotype. Dorsal color is distinctive for this specimen, but is somewhat similar to *B. eva*, the holotype of which is only 2.9 mm long, and usually has a narrow vitta on the lateral margin in the basal 1/2.

49. *Brachiacantha steineri* Gordon and Canepari, new species

Description. **Female** holotype. Length 3.4 mm, width 2.8 mm; body rounded, slightly oval, convex. Dorsal surface weakly alutaceous, slightly shiny. Color black except head yellow with vertex, basal and inner margin of eye black, pronotum with narrow, black basomedian macula extended to anterior pronotal margin at middle, macula abruptly narrowed medially; elytron with lateral border narrowly yellow from humeral angle nearly to apex, 1 narrow, yellow vitta extended obliquely inward nearly to suture just anterior to middle of elytron, another narrow, yellow vitta extended obliquely inward nearly to suture on apical declivity (Fig. 265); ventral surface with antenna, mouthparts, legs yellow; abdomen with ventrites 1–2 dark brown in median 1/3, remainder of abdomen yellowish brown. Head punctures small, dense, separated by a diameter or less, each puncture about as large as 2 eye facets; pronotal punctures slightly larger than head punctures, separated by less than to about a diameter, elytral punctures larger than on pronotum, separated by 1 to 3 times diameter; metaventral punctures present only in lateral 1/2, larger than on elytron, separated by about a diameter. 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 rounded, basal margin without trace of bordering line medially. Epipleuron narrow, grooved, slightly descending externally, deeply emarginate for reception of femoral apices. Protibia narrowly flanged, flange less than width of remainder of protibia, outer margin straight, smooth, basal tooth short, length about 1/10 width of tibia at base, sponda extended beyond protibial flange. Carinae on prosternal process narrowly separated at apex, convergent toward base, joined at base of prosternum. Abdomen with postcoxal line on basal abdominal ventrite flattened along posterior ventrite margin, extended forward apically, ventrite with sparse, long pubescence and small, dense punctures; ventrites 2–6 pubescent throughout, punctures fine, dense; ventrites 4–5 flattened in median 1/3. Genitalia lost.

Male. Unknown.

Variation. Unknown.

Type material. Holotype female; Ecuador, Napo, Limonchocha, 3 June 1977, W. E. Steiner. (USNM).

Remarks. This is perhaps the most distinctive species of *Brachiacantha* thus far known because of the 2 transverse, long, obliquely narrow vittae on each elytron.

Etymology. The species is named for the collector, Warren Steiner, an accomplished coleopterist at the Smithsonian Department of Entomology, Washington, D. C, and a longtime colleague.

Acknowledgments

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

We are indebted to Roger Booth (BMNH), Lúcia Massutti de Almeida (DZUP), Olaf Jaeger (SNSD), Willam Foster and Russell Stebbings (UMZC), Bernd Jaeger and Manfred Uhlig (ZMHB), Nikolai Nikitskii (ZMMU), and Ole Martin and Alexey Solodovnikov (ZMUC) for the loan of type specimens.

We thank Boris Korotyaev, Zoological Institute Russian Academy of Science, for facilitating the loan of type specimens from the ZMMU collection; 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; Lúcia Almeida (DZUP) for gathering and loaning specimens from Brazilian institutions. For additional loan of specimens we are indebted to Roger Booth and Max Barclay (BMNH), David Kavanaugh and Jere Schweikert (CASC), Charles Bellamy and Andrew Cline (CSCA), Eric Rickey, (CNC), Robert Davidson (CMNH), Natalia Vandenberg (USNM), and Bernd Jaeger and Manfred Uhlig (ZMHB).

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

In particular we thank Roger Booth (BMNH) for providing type information, manuscript improvement suggestions, and his availability for consultation on manuscript preparation. For formal manuscript reviews we thank Adriano Giorgi, University Federal do Pará, Altamira, Brasil, and J. Poorani, National Bureau of Agriculturally Important Insects, Bangalore, Karnataka, India.

Literature Cited

Belicek, J. 1976. Coccinellidae of western Canada and Alaska with analyses of the transmontane zoogeographic relationships between the fauna of British Columbia and Alberta (Insecta: Coleoptera: Coccinellidae). Quaestiones Entomologicae 12: 283–409.

Blackwelder, R. E. 1945. Checklist of the Coleopterous Insects of Mexico, Central America, the West Indies and South America. Part 3, Bulletin of the United States National Museum 185: 343–550.

Bréthes, J. 1925a. Sur une collection de Coccinellides (et un Phalacridae) du British Museum. Anales del Museo Nacional de Historia Natural de Buenos Aires 33: 145–175.

Brèthes, J. 1925b. Coleopteres, Principalement Coccinellides, du British Museum. Nunquam Otiosus III: 3–16.

Canepari, C., R. D. Gordon, and G. A. Hanley. 2013. South American Coccinellidae (Coleoptera), Part XV: Systematic revision of *Dilatitibialis* Duverger (Coccidulinae; Hyperaspidini). Insecta Mundi 0312: 1–92.

Casey, T. L. 1899. A revision of the American Coccinellidae. Journal of the New York Entomological Society 7: 7–169.

Chapuis, F. **1876**. Histoire naturelle des insectes. Genera des Coléoptères, Paris 1112: 1–424.

Chevrolat, L. A. A. 1842. Description of the genus *Brachyacantha*. *In* d'Orbigny, Dictionnaire Universel d'Histoire Naturelle volume 2, Paris, 796 p.

Crotch, G. R. 1874. A revision of the coleopterous family Coccinellidae. London, 311 p.

Dejean, P. F. M. A. 1837. Catalogue des Coléptères de la Collection de M. le Comte Dejean. Troisieme edition, revue, corrigée et augmentée, livr. 1–4, Paris, 468 p.

Duverger. C. 2001. Contribution à la connaissance des Hyperaspidinae (2ème note). Bulletin del la Société linnéene Bordeaux 29(4) 2001: 221–228.

Fabricius, J. C. 1801. Systema Eleutheratorum. Kiliae, Vol. 1, 506 p., Vol. 2, 687 p.

Gordon, R. D. 1985. The Coccinellidae (Coleoptera) of America North of Mexico. Journal of the New York Entomological Society 93: 1–912.

Gordon, R. D. **1987**. A catalogue of the Crotch collection of Coccinellidae (Coleoptera). Occasional Papers on Systematic Entomology 3: 1–46.

Gordon, R. D., C. Canepari, and G. A. Hanley. **2008**. South American Coccinellidae (Coleoptera), Part XI: a systematic revision of Hyperaspidini (Hyperaspidinae). Annali del Museo Civico di Storia Naturale "G. Doria" XCIX: 245–512.

Gordon, R. D., and C. Canepari. **2013**. South American Coccinellidae (Coleoptera), Part XIV: New name for *Cyra* Mulsant, review of Brachiacanthini genera, and systematic revision of *Cleothera* Mulsant, *Hinda* Mulsant and *Serratitibia* Gordon and Canepari, new genus. Insecta Mundi 0278: 1–150.

Gorham, H. S. 1894. Biologia Centrali-Americana, Insecta, Coleoptera, Coccinellidae 7: 177–208.

Kirsch, T. F. W. 1876. Beiträge zur Kenntnis der Peruanischen Käferfauna auf Dr. Abendroth's Sammlungen basirt. Deutsche Entomologische Zeitschrift 20: 81–133.

Korschefsky, R. 1931. Coccinellidae I. Coleopterorum Catalogus. Part 118: 1–224.

Leng, C. W. 1911. The species of *Brachyacantha* of North and South America. Bulletin of the American Museum of Natural History 30: 279–333.

Mulsant, M. E. 1850. Species de Coléoptères trimères sécuripalpes. Annales des Sciences Physiques et Naturelles, Lyon 2: 1–1104.

Nunenmacher, F. W. 1912. The Stanford Expedition to Brazil, 1911. Studies amongst the Coccinellidae. No. 3. Psyche 19: 149–151.

Seago, A. E., J. A. Giorgi, L. Jiahui, and A. Slipinski. **2011**. Phylogeny, classification and evolution of ladybird beetles (Coleoptera: Coccinellidae) based on simultaneous analysis of molecular and morphological data. Molecular Phylogenetics and Evolution 60: 137–151.

Schilder, F. A., and M. Schilder.1928. Die Nahrung der Coccinelliden und ihre Beziehung zur Verwandschaft der Arten. Sonderabdruck aus den Arbeiten aus der Biologischen für Land- und Forstwirtschaft 16: 189–193.

Slipinski, A. 2007. Australian Ladybird Beetles (Coleoptera: Coccinellidae). Their biology and classification. p. v–xvii, 1–286.

Weise, J. 1885. Beschreibung einiger Coccinelliden. Stettiner Entomologische Zeitung 46: 227–241.

Weise J. 1902. Coccinelliden aus Südamerica. III. Deutsche Entomologische Zeitschrift 1: 161–176.

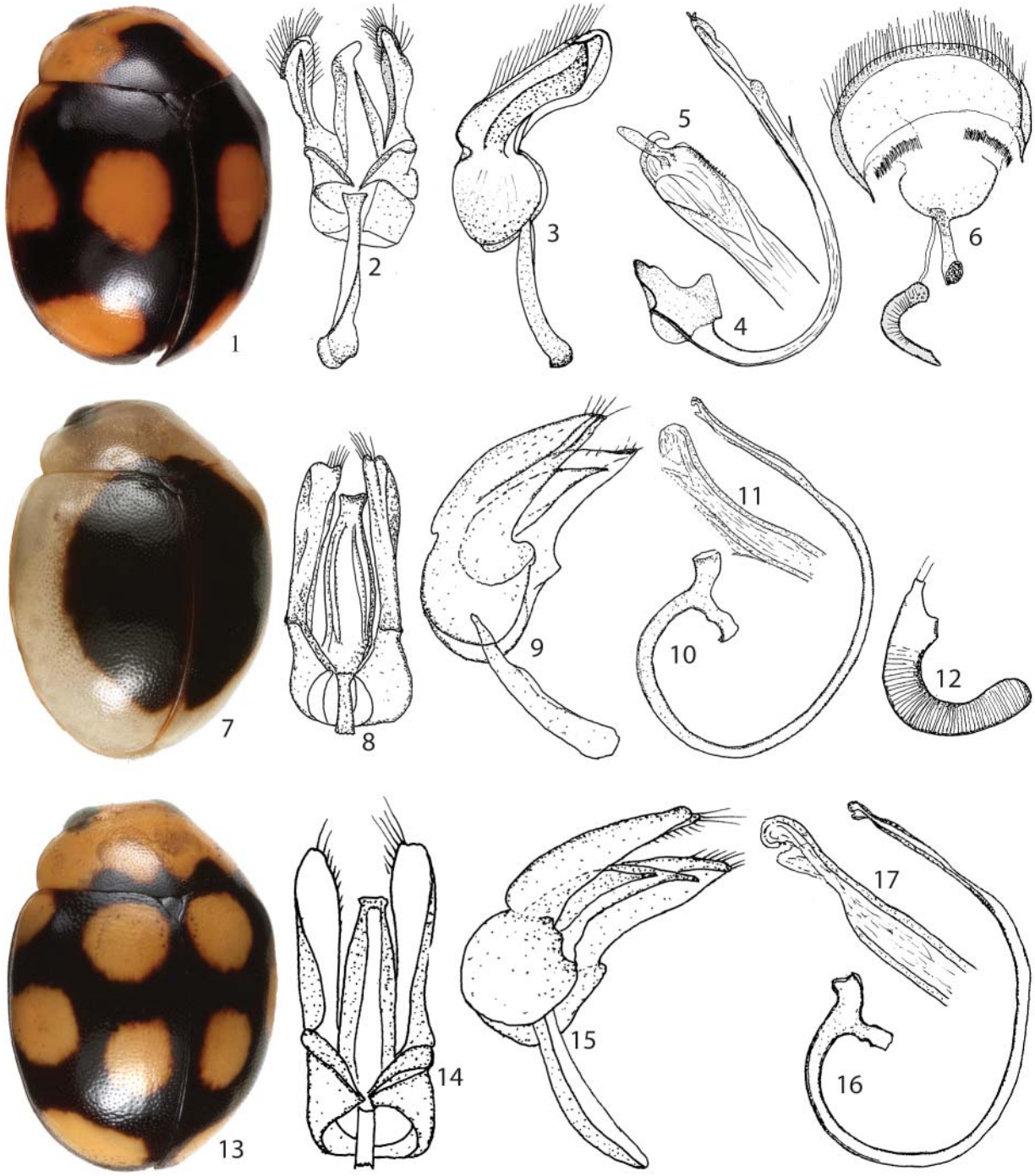
Weise, J. 1906. Coccinellidae in Argentina, Chili et Brasilia e collectione domini Caroli Bruchi. Revista del Museo de La Plata 11: 193–198.

Weise, J. 1910. Aufzaehlung von Coccinellen aus dem Museu Paulista. Revista do Museu Paulista 8: 54–63.

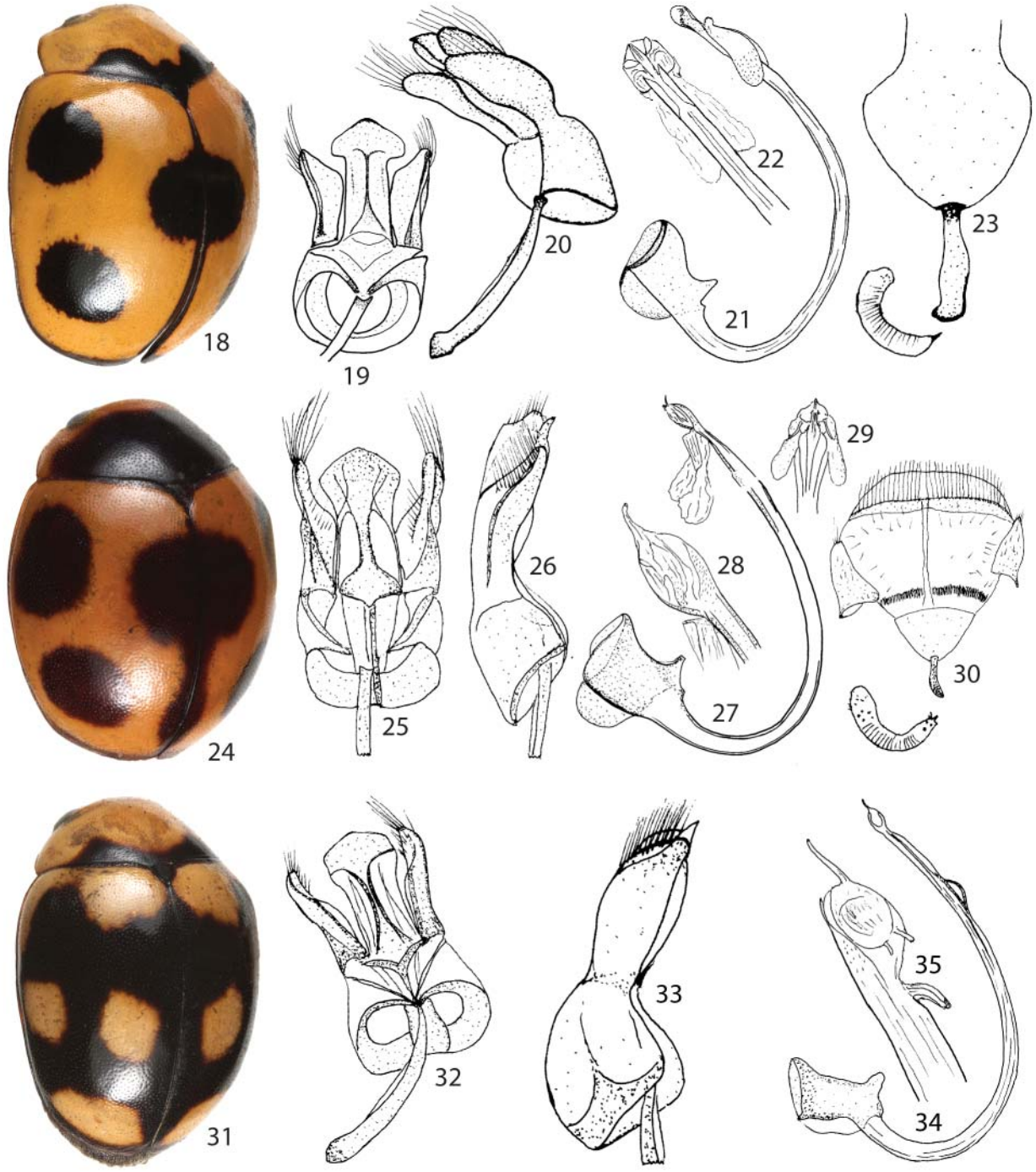
Weise, J. 1922. Coleoptera e collectione Bruchiana. Anales Societe Cientifica Argentina, Buenos Aires 94: 30–40.

Received February 2, 2014; Accepted September 30, 2014.
Review Editor Paul Skelley.

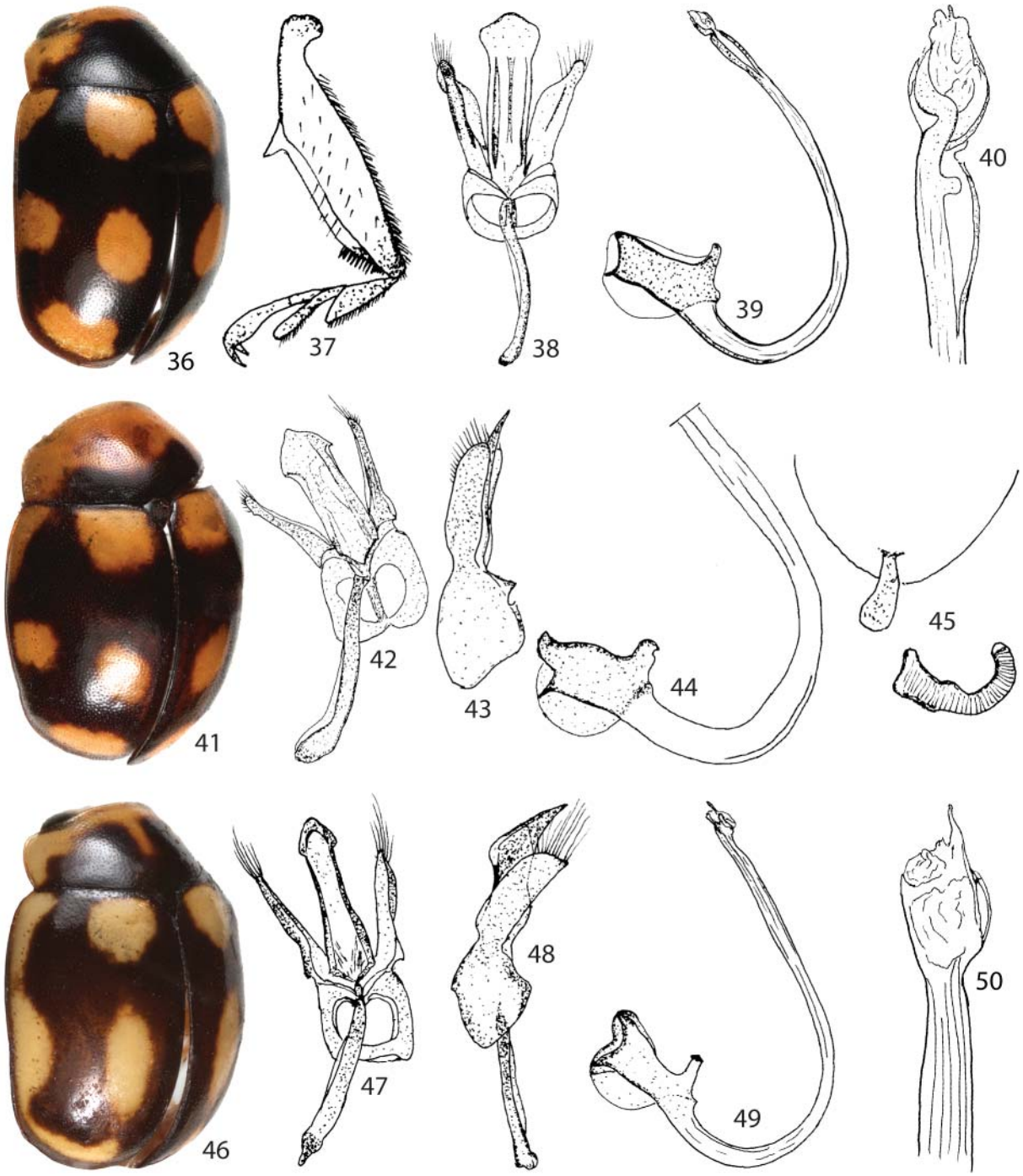
Index to scientific names, valid names in bold, synonyms in italics



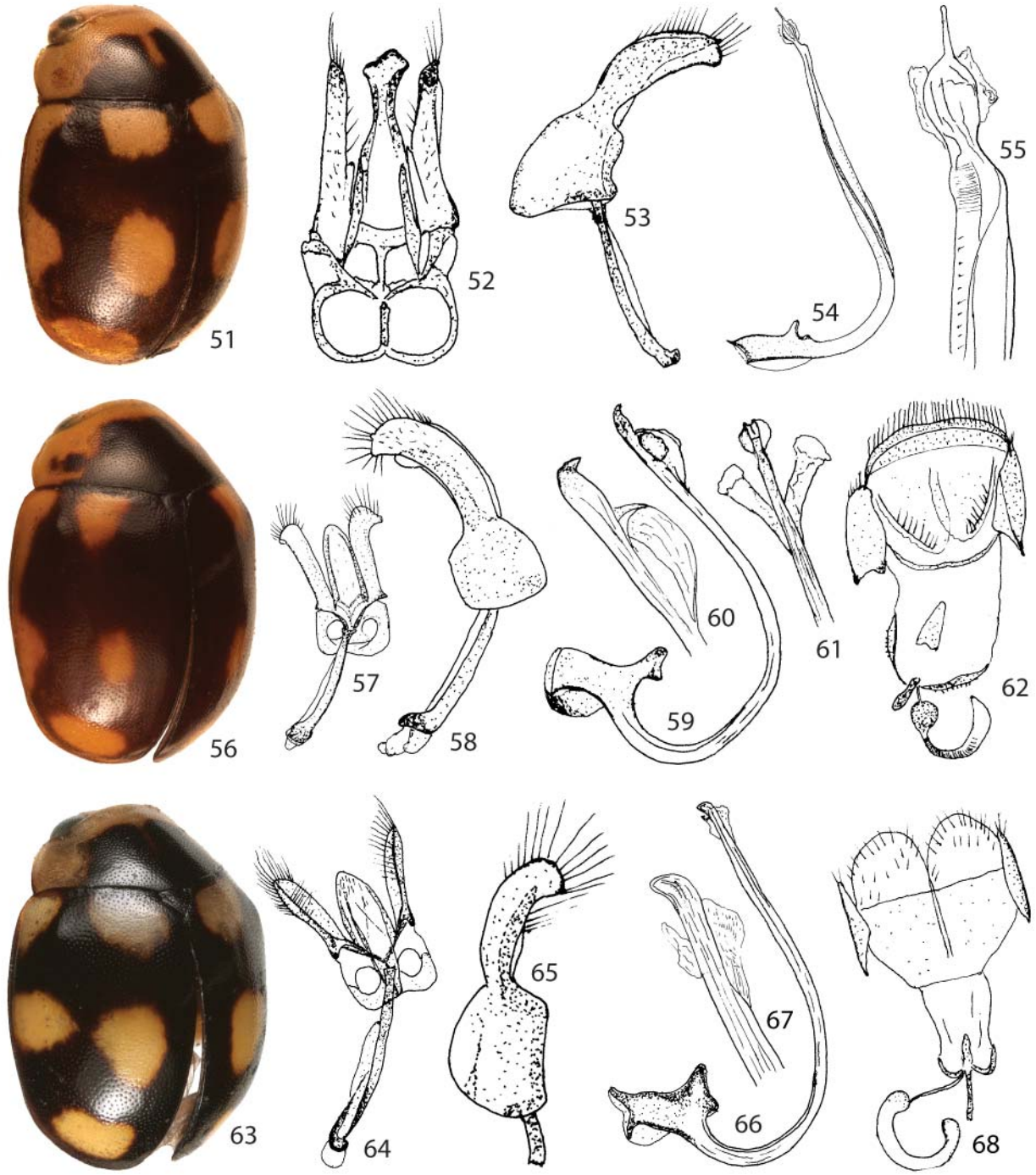
Figures 1–17. 1–6. *Brachiacantha bistripustulata*. **1)** Habitus. **2)** Phallobase ventral. **3)** Phallobase lateral. **4)** Sipho. **5)** Enlarged siphonal apex. **6)** Female genitalia. 7–12. *Brachiacantha buckleyi*. **7)** Habitus. **8)** Phallobase ventral. **9)** Phallobase lateral. **10)** Sipho. **11)** Enlarged siphonal apex. **12)** Female spermathecal capsule. 13–17. *Brachiacantha charlotte*. **13)** Habitus. **14)** Phallobase ventral. **15)** Phallobase lateral. **16)** Sipho. **17)** Enlarged siphonal apex.



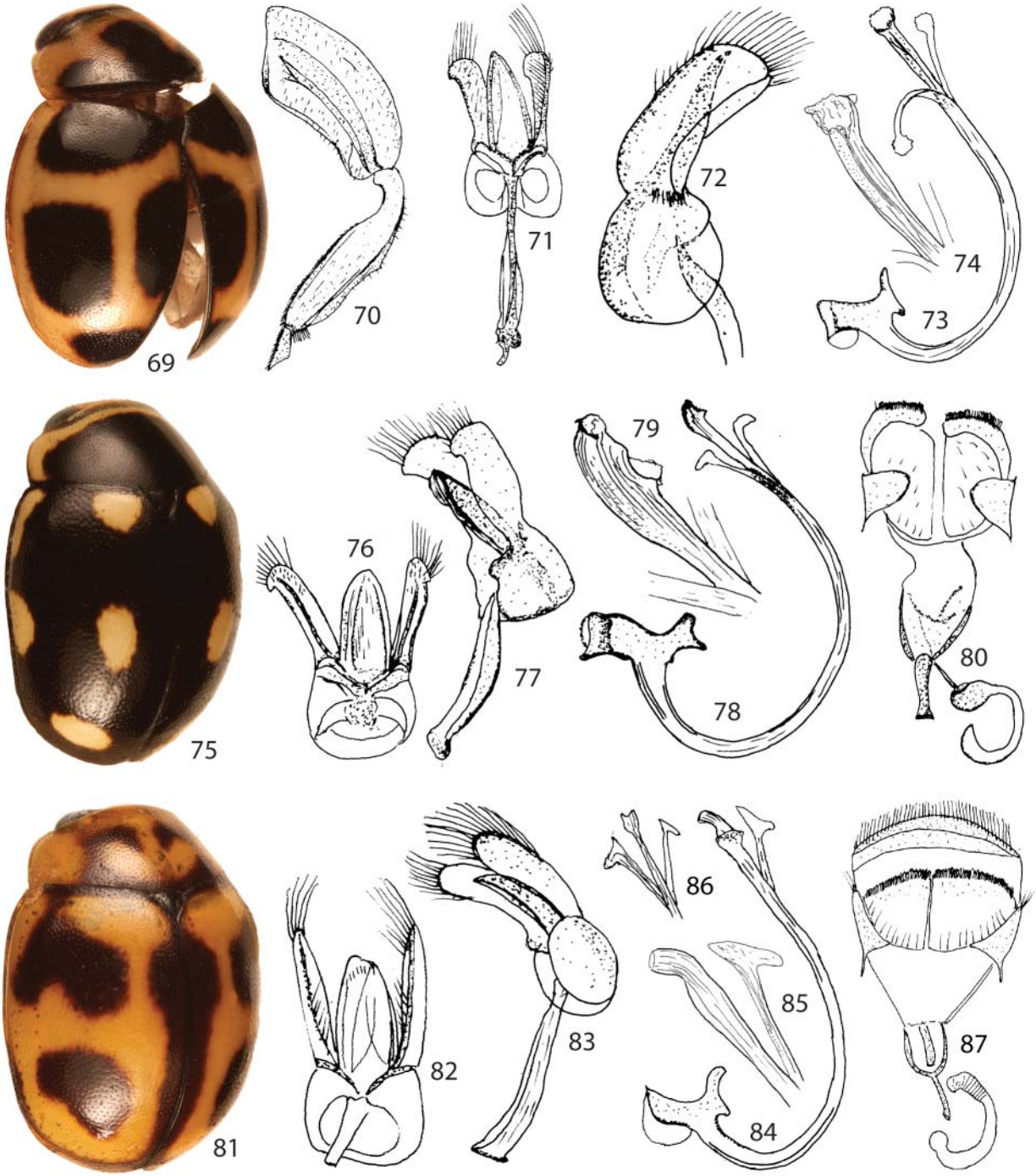
Figures 18–35. 18–23. *Brachiacantha sellata*. **18)** Habitus. **19)** Phallobase ventral. **20)** Phallobase lateral. **21)** Sipho. **22)** Enlarged siphonal apex. **23)** Female genitalia. 24–30. *Brachiacantha bruchi*. **24)** Habitus. **25)** Phallobase ventral. **26)** Phallobase lateral. **27)** Sipho. **28)** Enlarged siphonal apex lateral. **29)** Enlarged siphonal apex dorsal. **30)** Female genitalia. 31–35. *Brachiacantha esther*. **31)** Habitus. **32)** Phallobase ventral. **33)** Phallobase lateral. **34)** Sipho. **35)** Enlarged siphonal apex.



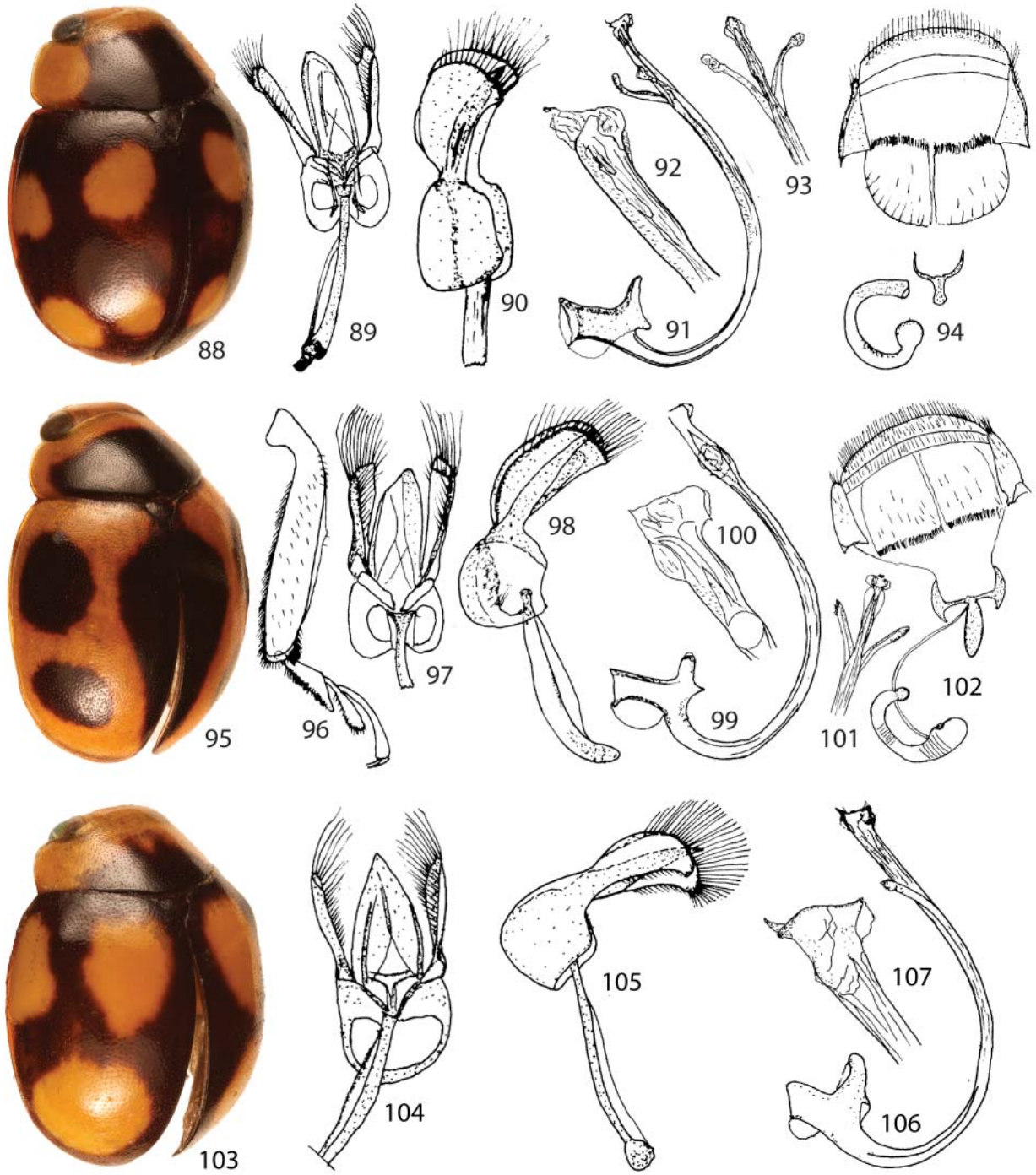
Figures 36–50. 36–40. *Brachiacantha pauline*. **36)** Habitus. **37)** Phallobase ventral. **38)** Phallobase lateral. **39)** Sipho. **40)** Enlarged siphonal apex. 41–45. *Brachiacantha emma*. **41)** Habitus. **42)** Phallobase ventral. **43)** Phallobase lateral. **44)** Sipho (basal 2/3). **45)** Female spermathecal capsule and bursal cap. 46–50. *Brachiacantha jamie*. **46)** Habitus. **47)** Phallobase ventral. **48)** Phallobase lateral. **49)** Sipho. **50)** Enlarged siphonal apex.



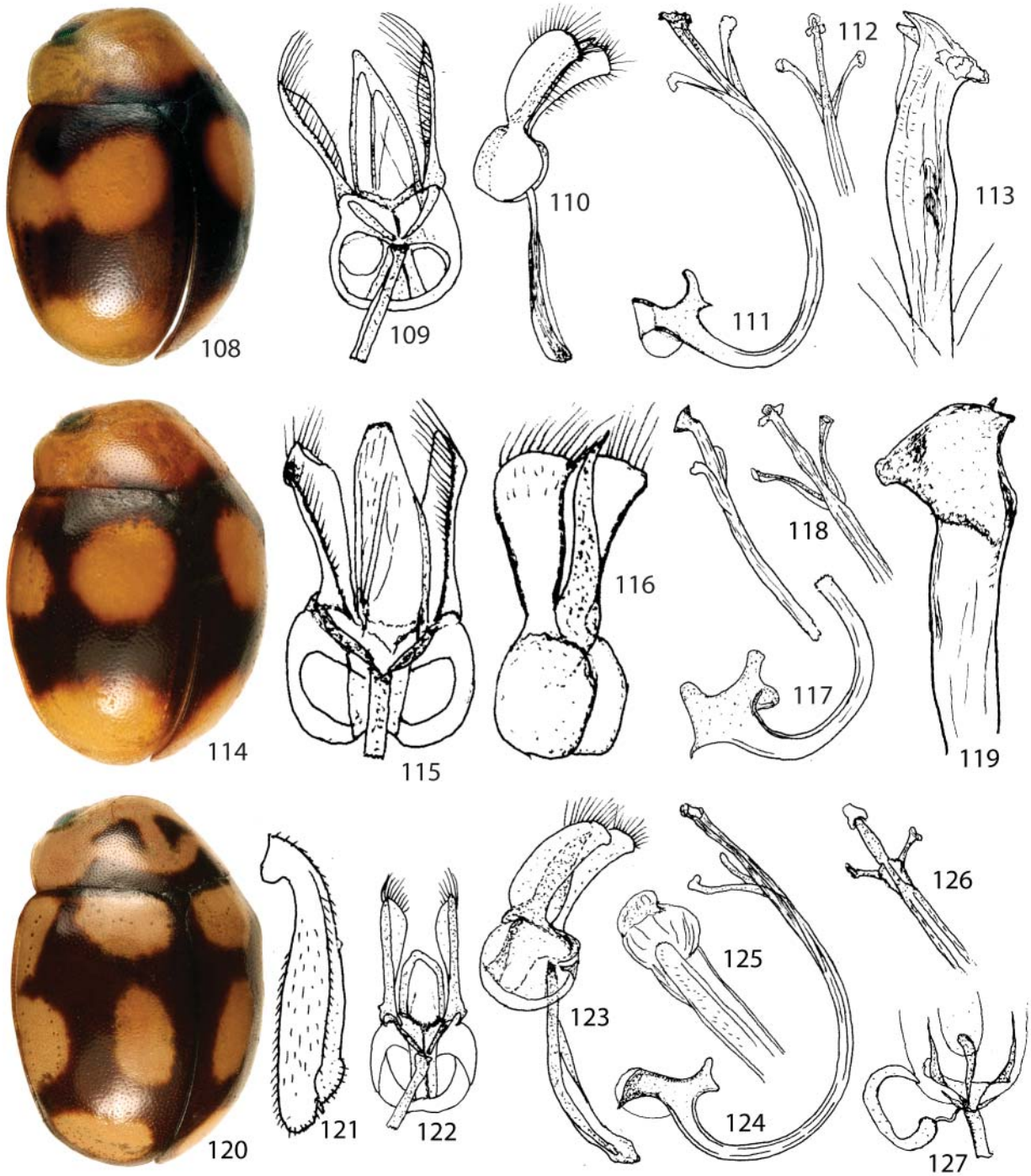
Figures 51–68. 51–55. *Brachiacantha joanne*. **51)** Habitus. **52)** Phallobase ventral. **53)** Phallobase lateral. **54)** Sipho. **55)** Enlarged siphonal apex. 56–62. *Brachiacantha juanita*. **56)** Habitus. **57)** Phallobase ventral. **58)** Phallobase lateral. **59)** Sipho. **60)** Enlarged siphonal apex lateral. **61)** Enlarged siphonal apex dorsal. **62)** Female genitalia. 63–68. *Brachiacantha anita*. **63)** Habitus. **64)** Phallobase ventral. **65)** Phallobase lateral. **66)** Sipho. **67)** Enlarged siphonal apex. **68)** Female genitalia.



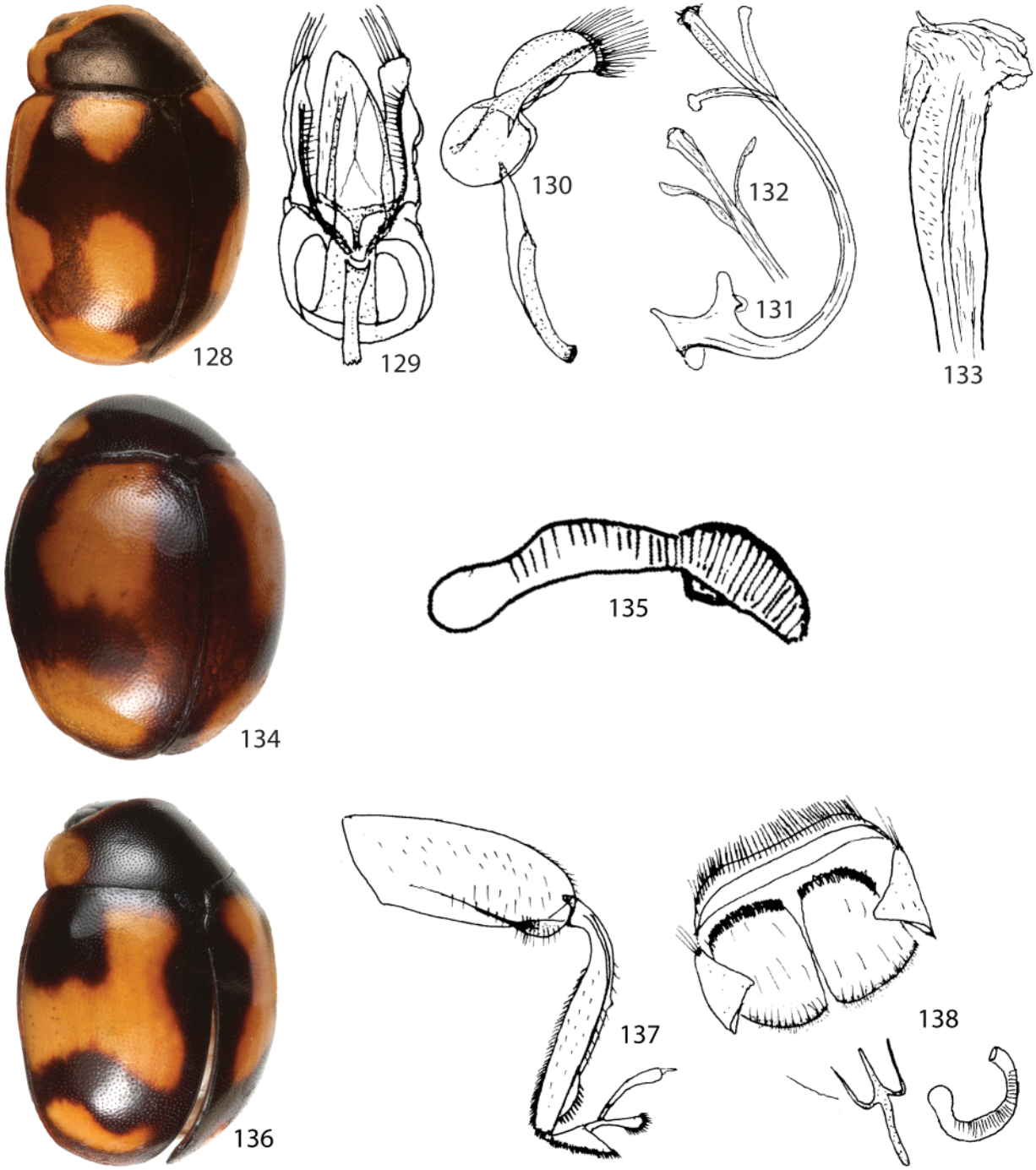
Figures 69–87. 69–74. *Brachiacantha hazel*. **69)** Habitus. **70)** Protibia. **71)** Phallobase ventral. **72)** Phallobase lateral. **73)** Sipho. **74)** Enlarged siphonal apex. 75–80. *Brachiacantha armandi*. **75)** Habitus. **76)** Phallobase ventral. **77)** Phallobase lateral. **78)** Sipho. **79)** Enlarged siphonal apex. **80)** Female genitalia. 81–87. *Brachiacantha margaritae*. **81)** Habitus. **82)** Phallobase ventral. **83)** Phallobase lateral. **84)** Sipho. **85)** Enlarged siphonal apex lateral. **86)** Enlarged siphonal apex dorsal. **87)** Female genitalia.



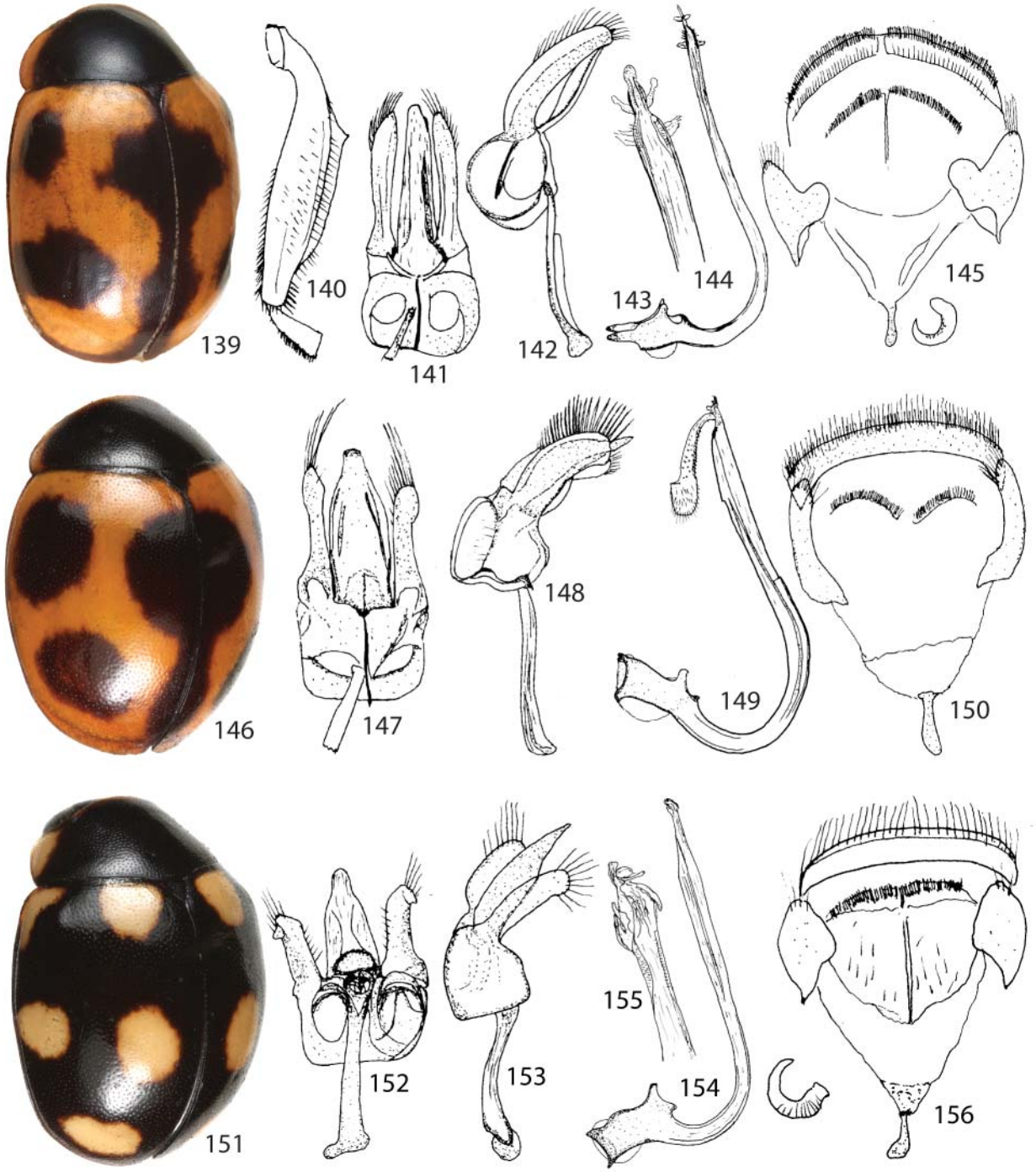
Figures 88–107. 88–94. *Brachiacantha octopustulata*. **88)** Habitus. **89)** Phallobase ventral. **80)** Phallobase lateral. **91)** Sipho. **92)** Enlarged siphonal apex lateral. **93)** Enlarged siphonal apex dorsal. **94)** Female genitalia. 95–102. *Brachiacantha loricata*. **95)** Habitus. **96)** Phallobase ventral. **97)** Phallobase lateral. **98)** Sipho. **99)** Enlarged siphonal apex lateral. **100)** Enlarged siphonal apex dorsal. **101)** Enlarged siphonal apex dorsal. **102)** Female genitalia. 103–107. *Brachiacantha lynn*. **103)** Habitus. **104)** Phallobase ventral. **104)** Phallobase lateral. **106)** Sipho. **107)** Enlarged siphonal apex.



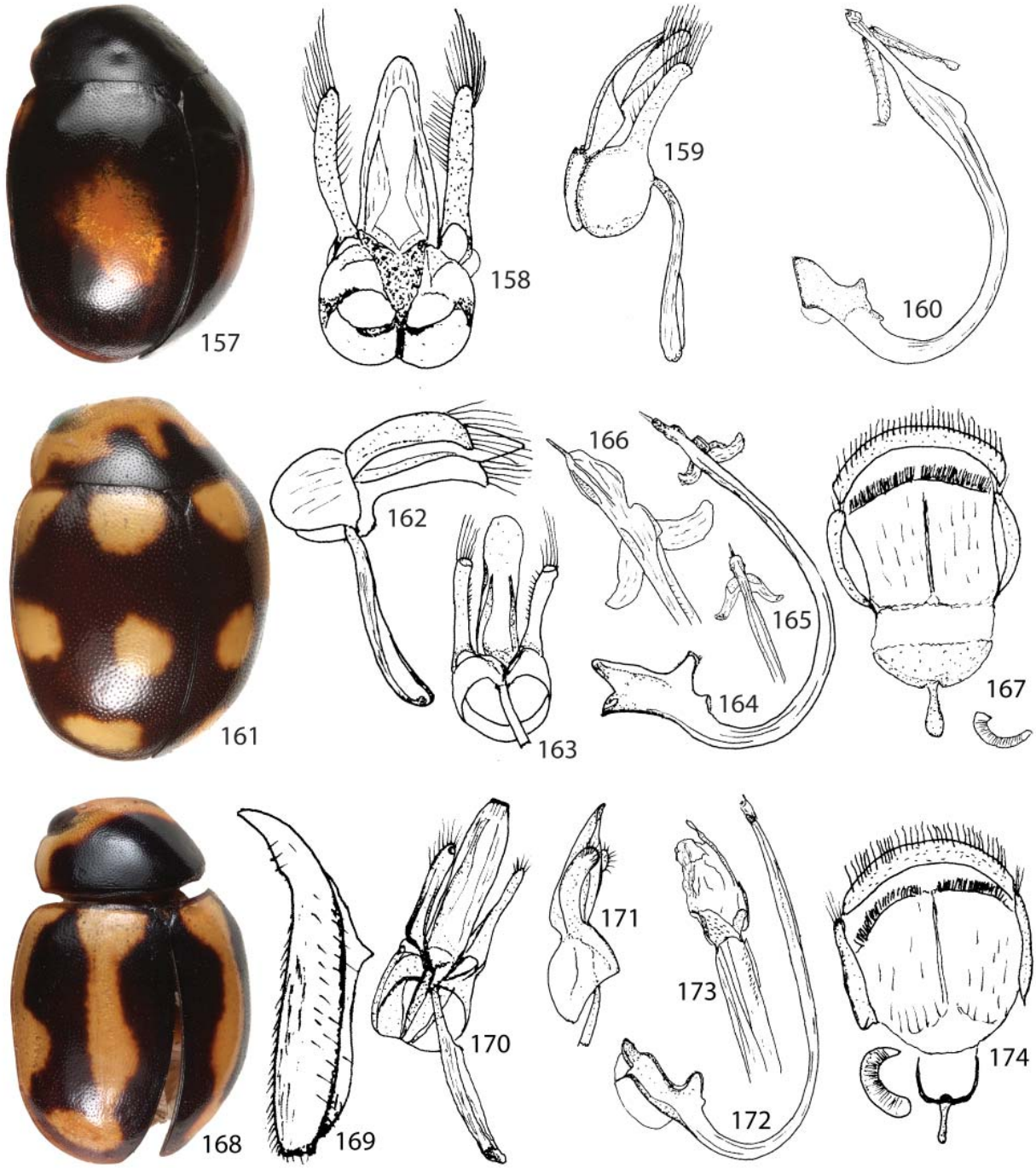
Figures 108–127. 108–113. *Brachiacantha sally*. **108)** Habitus**. 109)** Phallobase ventral. **110)** Phallobase lateral. **111)** Sipho. **112)** Siphonal apex. **113)** Enlarged siphonal apex. 114–119. *Brachiacantha regina*. **114)** Habitus. **115)** Phallobase ventral. **116)** Phallobase lateral. **117)** Sipho. **118)** Siphonal apex dorsal. **119)** Enlarged siphonal apex. 120–127. *Brachiacantha darlene*. **120)** Habitus. **121)** Protibia. **122)** Phallobase ventral. **123)** Phallobase lateral. **124)** Sipho. **125)** Enlarged siphonal apex lateral. **126)** Siphonal apex dorsal. **127)** Female spermathecal capsule and bursal cap.



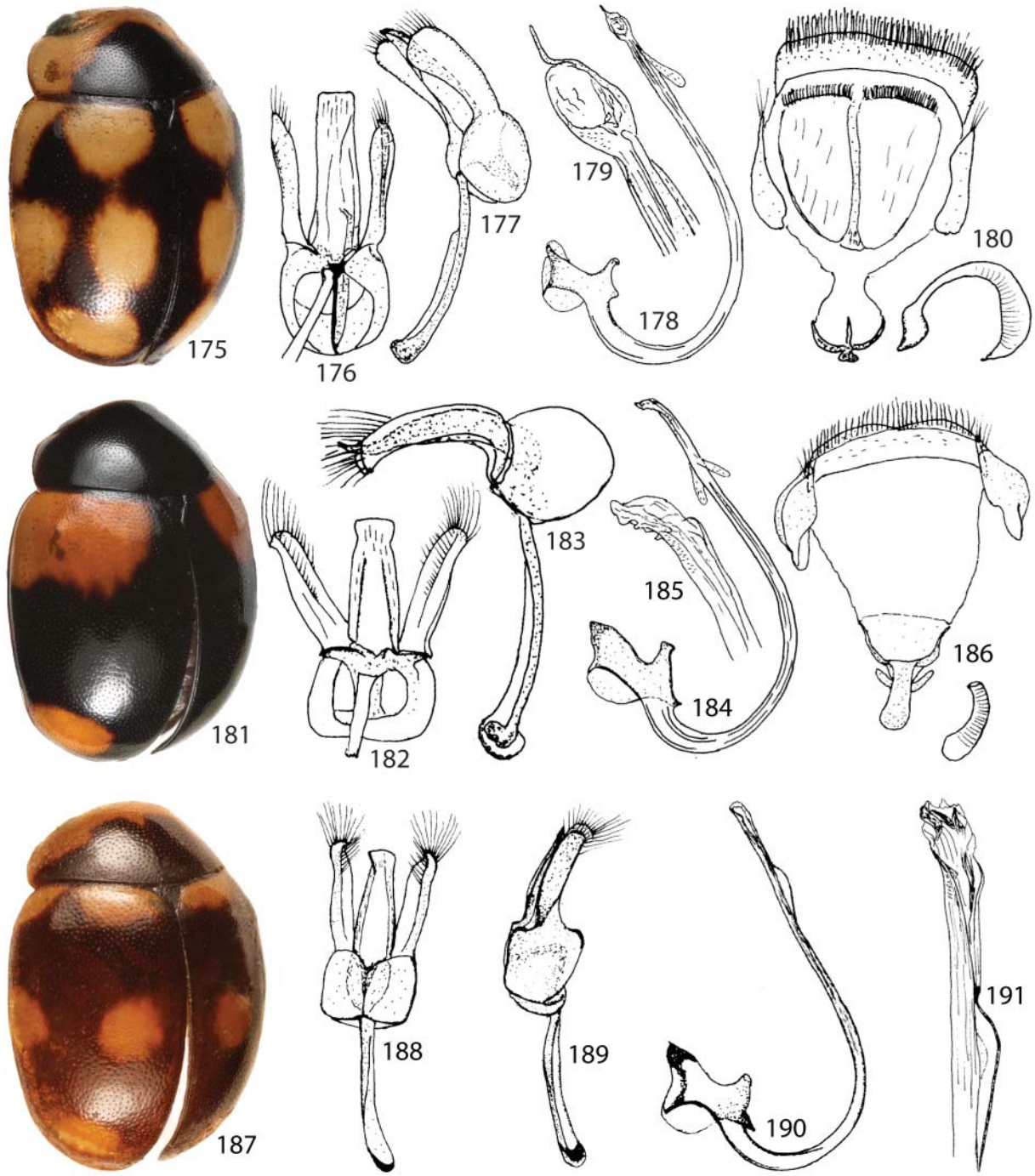
Figures 128–138. 128–133. *Brachiacantha veronica*. **128)** Habitus. **129)** Phallobase ventral. **130)** Phallobase lateral. **131)** Sipho. **132)** Siphonal apex dorsal. **133)** Enlarged siphonal apex lateral. 134–135. *Brachiacantha lauren*. **134)** Habitus. **135)** Female spermathecal capsule. 136–138. *Brachiacantha cathy*. **136)** Habitus. **137)** Protibia. **138)** Female genitalia.



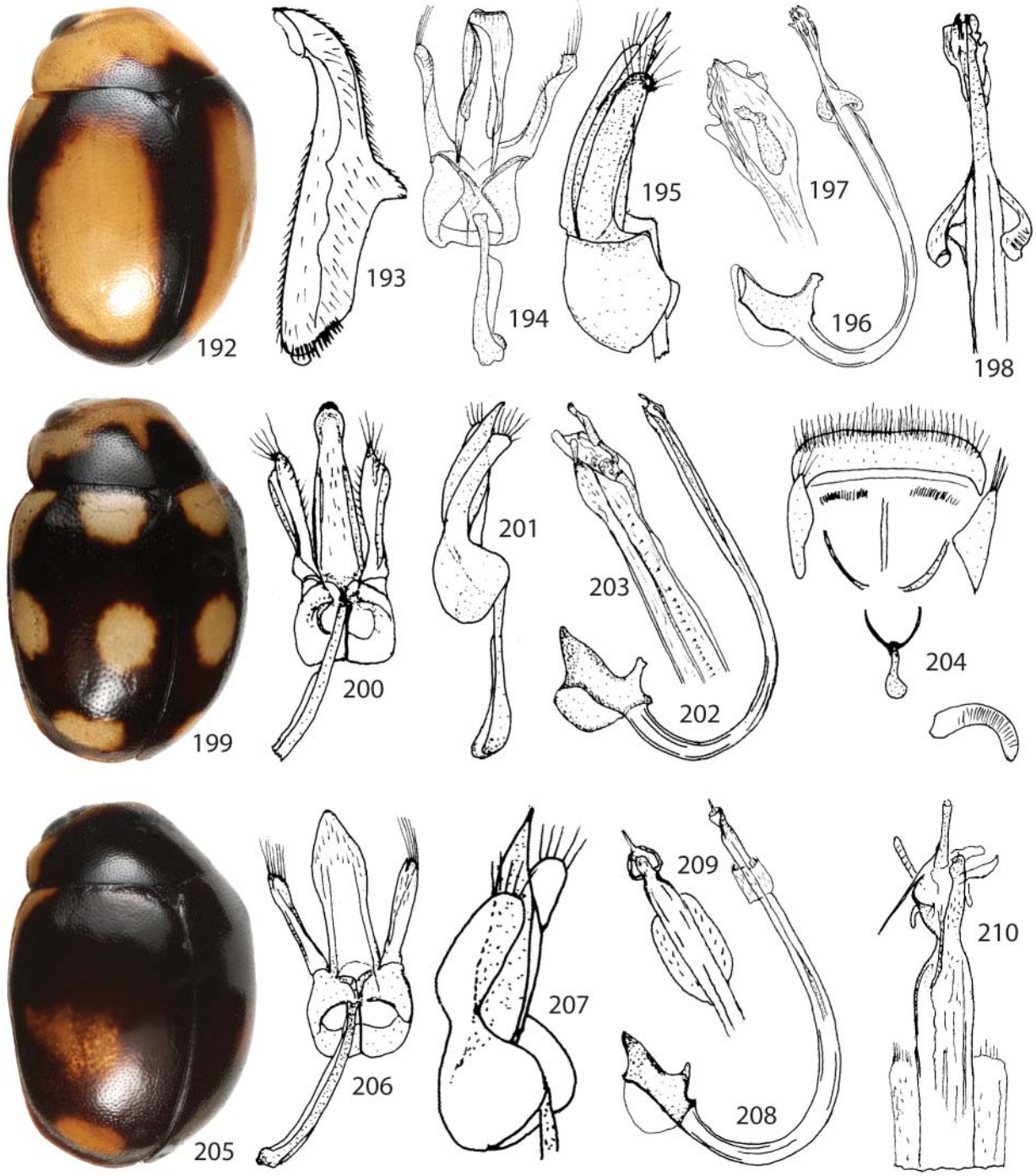
Figures 139–156. 139–145. *Brachiacantha jill*. **139)** Habitus. **140)** Protibia. **141)** Phallobase ventral. **142)** Phallobase lateral. **143)** Sipho. **144)** Enlarged siphonal apex. **145)**. Female genitalia. 146–150. *Brachiacantha blandula*. **146)** Habitus. **147)** Phallobase ventral. **148)** Phallobase lateral. **149)** Sipho. **150)** Female genitalia. 151–156. *Brachiacantha april*. **151)** Habitus. **152)** Phallobase ventral. **153)** Phallobase lateral. **154)** Sipho. **155)** Enlarged siphonal apex. **156)** Female genitalia.



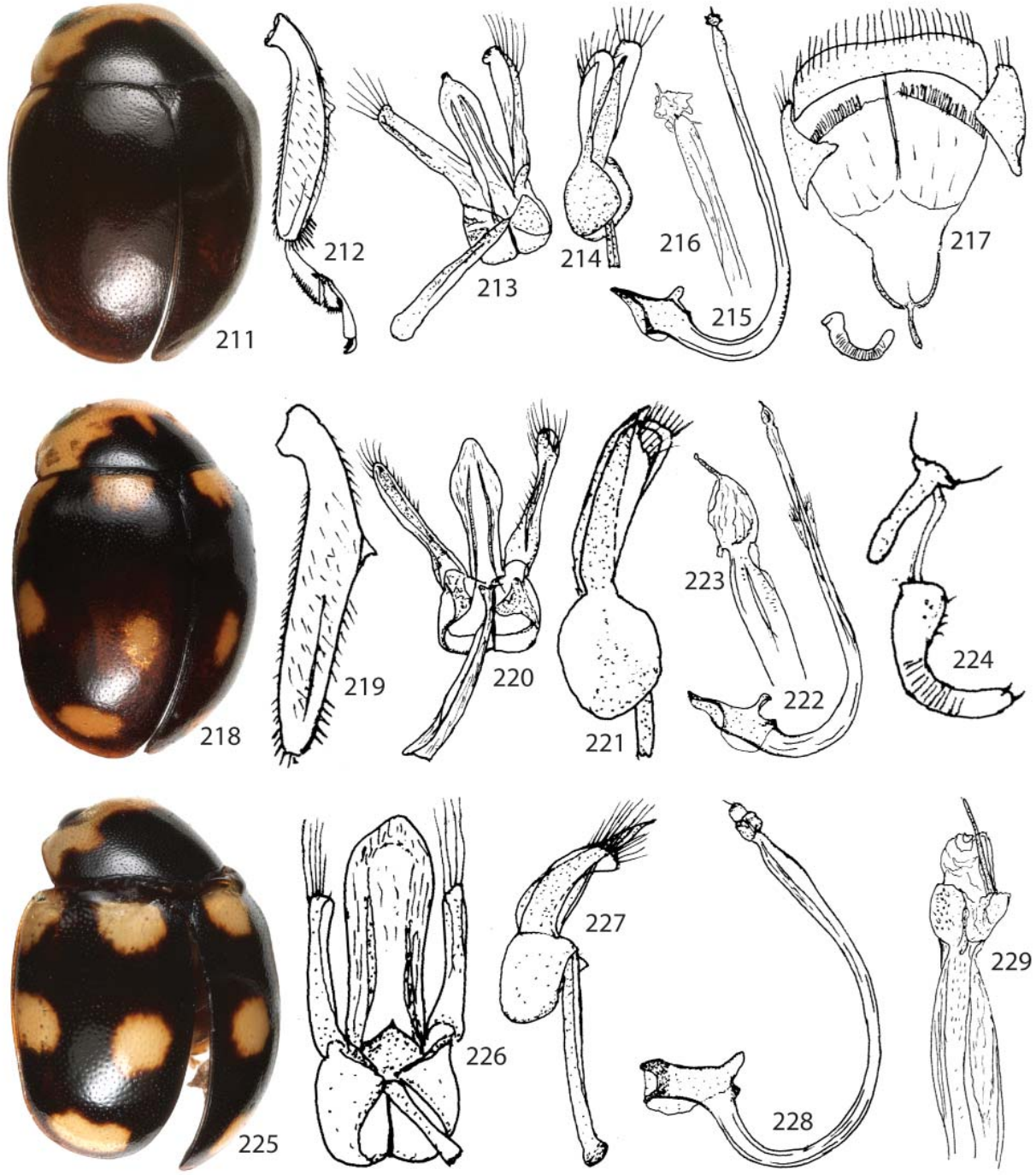
Figures 157–174. 157–160. *Brachiacantha clara*. **157)** Habitus. **158)** Phallobase ventral. **159)** Phallobase lateral. **160)** Sipho. 161–167. *Brachiacantha groendali*. **161)** Habitus. **162)** Phallobase lateral. **163)** Phallobase ventral. **164)** Sipho. **165)** Siphonal apex dorsal. **166)** Enlarged siphonal apex obliquely lateral. **167)** Female genitalia. 168–174. *Brachiacantha eva*. **168)** Habitus. **169)** Protibia. **170)** Phallobase ventral. **171)** Phallobase lateral. **172)** Sipho. **173)** Enlarged siphonal apex. **174)** Female genitalia.



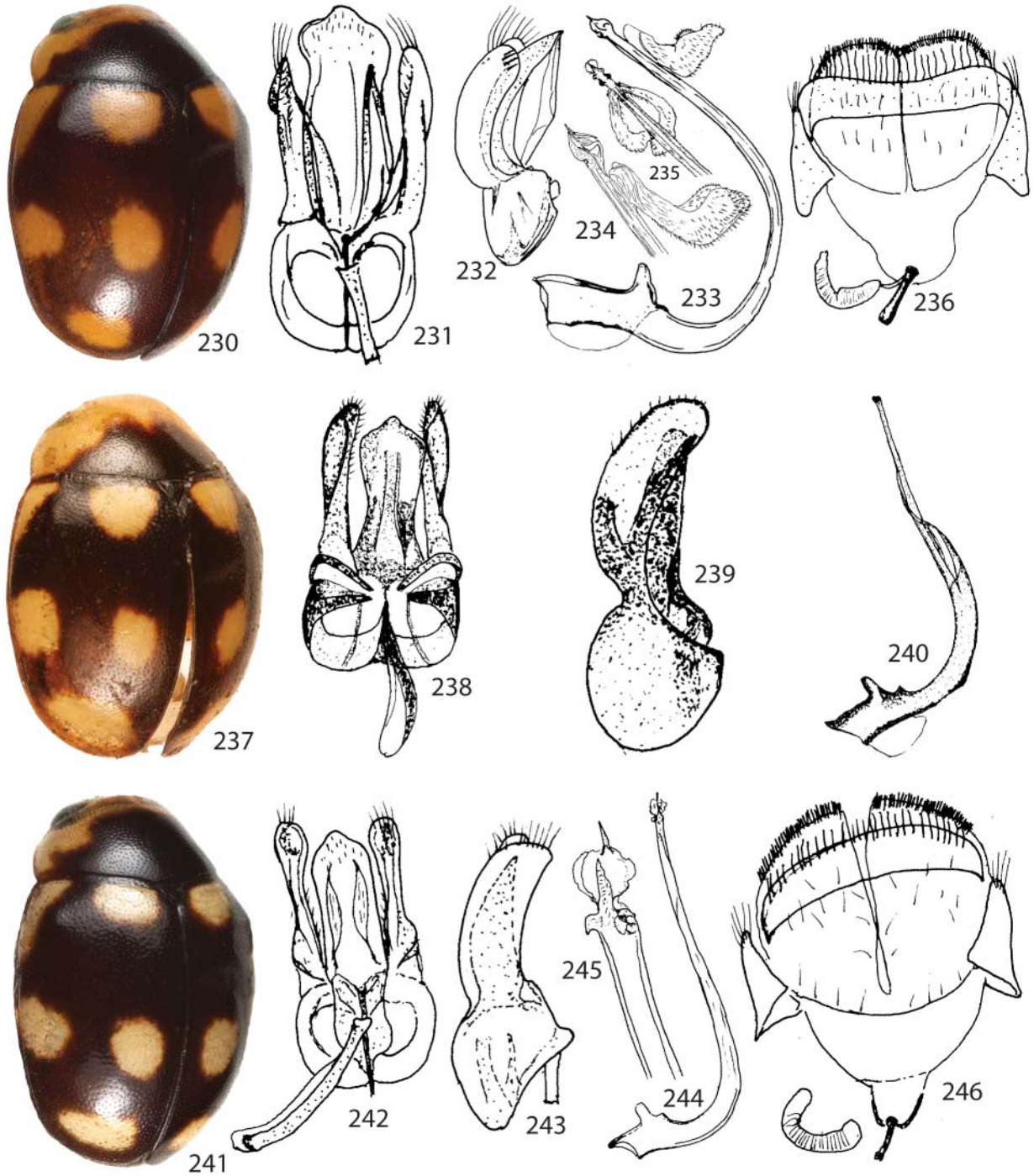
Figures 175–191. 175–180. *Brachiacantha debbie*. **175)** Habitus. **176)** Phallobase ventral. **177)** Phallobase lateral. **178)** Sipho. **179)** Enlarged siphonal apex. **180)** Female genitalia. 181–186. *Brachiacantha monica*. **181)** Habitus. **182)** Phallobase ventral. **183)** Phallobase lateral. **184)** Sipho. **185)** Enlarged siphonal apex. **186)** Female genitalia. 187–191. *Brachiacantha parva*. **187)** Habitus. **188)** Phallobase ventral. **189)** Phallobase lateral. **180)** Sipho. **191)** Enlarged siphonal apex.



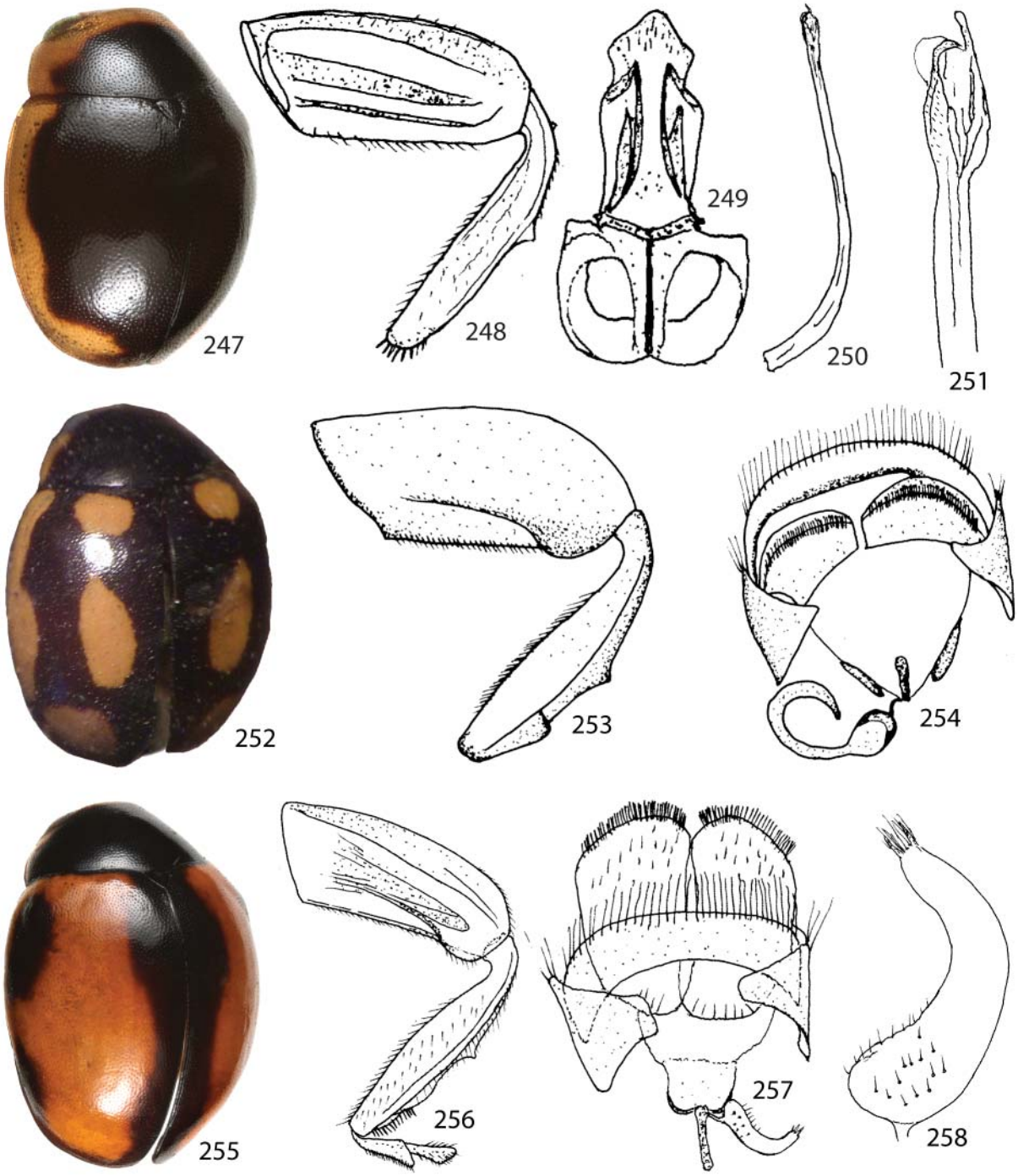
Figures 192–210. 192–198. *Brachiacantha amber*. **192)** Habitus. **193)** Protibia. **194)** Phallobase ventral. **195)** Phallobase lateral. **196)** Sipho. **197)** Enlarged siphonal apex lateral. **198)** Enlarged siphonal apex dorsal. 199–204. *Brachiacantha leslie*. **199)** Habitus. **200)** Phallobase ventral. **201)** Phallobase lateral. **202)** Sipho. **203)** Enlarged siphonal apex. **204)** Female genitalia. 205–210. *Brachiacantha trimaculata*. **205)** Habitus. **206)** Phallobase ventral. **207)** Phallobase lateral. **208)** Sipho. **209)** Enlarged siphonal apex. **210)** Enlarged siphonal apex.



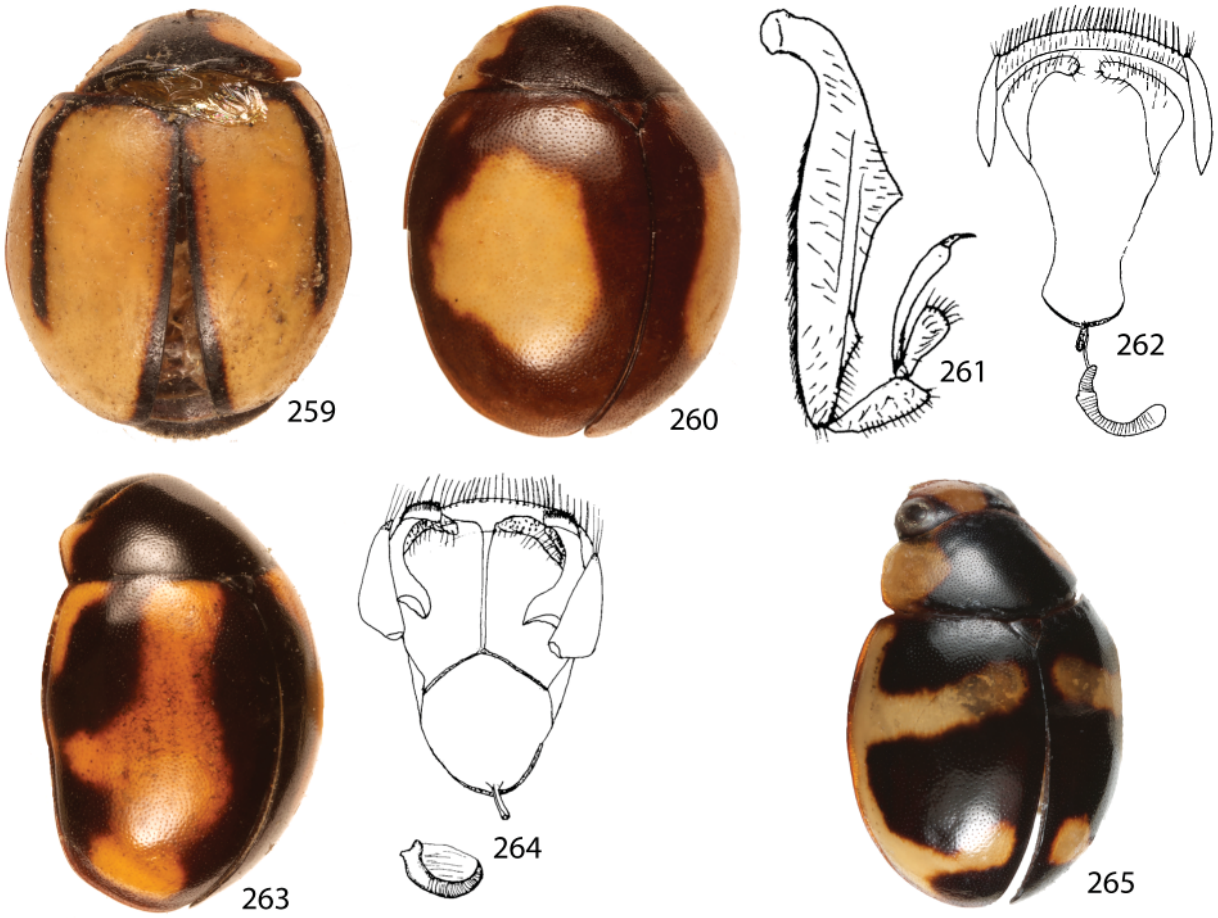
Figures 211–229. 211–217. *Brachiacantha eleanor*. **211)** Habitus. **212)** Protibia. **213)** Phallobase ventral. **214)** Phallobase lateral. **215)** Sipho. **216)** Enlarged siphonal apex. **217)** Female genitalia. 218–224. *Brachiacantha tucumanensis*. **218)** Habitus. **219)** Protibia. **220)** Phallobase ventral. **221)** Phallobase lateral. **222)** Sipho. **223)** Enlarged siphonal apex. **224)** Female spermathecal capsule and bursal cap. 225–229. *Brachiacantha valerie*. **225)** Habitus. **226)** Phallobase ventral. **227)** Phallobase lateral. **228)** Sipho. **229)** Enlarged siphonal apex.



Figures 230–246. 230–236. *Brachiacantha bahiensis*. **230)** Habitus. **231)** Phallobase ventral. **232)** Phallobase lateral. **233)** Sipho. **234)** Enlarged siphonal apex lateral. **235)** Enlarged siphonal apex dorsal. **236)** Female genitalia. 237–240. *Brachiacantha pseudoarrowi*. **237)** Habitus. **238)** Phallobase ventral. **239**) Phallobase lateral. **240)** Sipho. 241–246. *Brachiacantha danielle*. **241)** Habitus. **242)** Phallobase ventral. **243)** Phallobase lateral. **244)** Sipho. **245)** Enlarged siphonal apex. **246)** Female genitalia.



Figures 247–258. 247–251. *Brachiacantha gail*. **247)** Habitus. **248)** Protibia. **249)** Phallobase ventral. **250)** Apical 2/3 of sipho. **251)** Enlarged siphonal apex. 252–254. *Brachiacantha appropinquata*. **252)** Habitus. **253)** Protibia. **254)** Female genitalia. 255–258. *Brachiacantha argentinica*. **255)** Habitus. **256)** Protibia. **257)** Female genitalia. **258)** Enlarged spermathecal capsule.



Figures 259–265. 259. *Brachiacantha bilineata*. **259)** Habitus. 260–262. *Brachiacantha egae*. **260)** Habitus. **261)** Protibia. **262)** Female genitalia. 263–264. *Brachiacantha sicardi*. **263)** Habitus. **264)** Female genitalia. 265. *Brachiacantha steiner*. **265)** Habitus.