

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Insecta Mundi

Center for Systematic Entomology, Gainesville,  
Florida

---

4-6-2012

## Two species of *Compsus* Schoenherr, new citrus pests from Colombia (Coleoptera: Curculionidae: Entiminae)

Charles W. O'Brien

Green Valley, Arizona, cobrien6@cox.net

Jorger Peña

TREC, Homestead, FL, jepena@ufl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/insectamundi>



Part of the [Entomology Commons](#)

---

O'Brien, Charles W. and Peña, Jorger, "Two species of *Compsus* Schoenherr, new citrus pests from Colombia (Coleoptera: Curculionidae: Entiminae)" (2012). *Insecta Mundi*. 736.

<https://digitalcommons.unl.edu/insectamundi/736>

This Article is brought to you for free and open access by the Center for Systematic Entomology, Gainesville, Florida at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Insecta Mundi by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

# INSECTA MUNDI

A Journal of World Insect Systematics

---

**0227**

Two species of *Compsus* Schoenherr, new citrus pests from Colombia  
(Coleoptera: Curculionidae: Entiminae)

Charles W. O'Brien  
2313 W. Calle Balaustre  
Green Valley, AZ 85622  
cobrien6@cox.net

Jorge Peña  
TREC  
18905 SW 280th Street  
Homestead, FL 33031  
jepena@ufl.edu

Date of Issue: April 6, 2012

Charles W. O'Brien and Jorge Peña  
Two species of *Compsus* Schoenherr, new citrus pests from Colombia (Coleoptera:  
Curculionidae: Entiminae)  
Insecta Mundi 0227: 1–13

**Published in 2012 by**

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

**Managing editor:** Paul E. Skelley, e-mail: [insectamundi@gmail.com](mailto:insectamundi@gmail.com)

**Production editors:** Michael C. Thomas, Brian Armitage and Ian Stocks

**Editorial board:** J. H. Frank, M. J. Paulsen

**Subject editors:** G.B. Edwards, J. Eger, A. Rasmussen, F. Shockley, G. Steck, Ian Stocks, A. Van Pelt, J. Zaspel

**Spanish editors:** Julieta Brambila, Angélico Asenjo

**Printed copies (ISSN 0749-6737) deposited in libraries of:**

CSIRO, Canberra, ACT, Australia  
Museu de Zoologia, São Paulo, Brazil  
Agriculture and Agrifood Canada, Ottawa, ON, Canada  
The Natural History Museum, London, Great Britain  
Muzeum i Instytut Zoologiczny 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 (On-Line ISSN 1942-1354, CDROM ISSN 1942-1362) in PDF format:**

Printed CD mailed to all members at end of year.

Florida Center for Library Automation: <http://purl.fcla.edu/fcla/insectamundi>

University of Nebraska-Lincoln, Digital Commons: <http://digitalcommons.unl.edu/insectamundi/>

Goethe-Universität, Frankfurt am Main: <http://edocs.ub.uni-frankfurt.de/volltexte/2010/14363/>

**Author instructions** available on the Insecta Mundi page at:

<http://www.centerforsystematicentomology.org/insectamundi/>

Copyright held by the author(s). This is an open access article distributed under the terms of the Creative Commons, Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited. <http://creativecommons.org/licenses/by-nc/3.0/>

---

---

Two species of *Compsus* Schoenherr, new citrus pests from Colombia  
(Coleoptera: Curculionidae: Entiminae)

Charles W. O'Brien  
2313 W. Calle Balaustre  
Green Valley, AZ 85622  
cobrien6@cox.net

Jorge Peña  
TREC  
18905 SW 280<sup>th</sup> Street  
Homestead, FL 33031  
jepena@ufl.edu

**Abstract.** Two species of the weevil genus *Compsus* Schoenherr (Coleoptera: Curculionidae: Entiminae) from Colombia are redescribed: *C. obliquatus* Hustache and *C. viridivittatus* (Guérin-Méneville). A key by Hustache in 1938, to 33 of the 34 recognized species of Colombian *Compsus* then known, is modified to include the one additional species. Habitus illustrations of males and females of the two species and illustrations of selected parts of the male and female genitalia are included. Nearly all of the specimens of these two species were collected on various species or varieties of citrus, indicating their potential as citrus pests in the future.

**Resumen.** Se describen dos especies de picudos del género *Compsus* Schoenherr (Coleoptera: Curculionidae: Entiminae) colectadas en Colombia: *C. obliquatus* Hustache y *C. viridivittatus* (Guérin-Méneville). Se modifica la clave de identificación de Hustache de 1938 la cual incluye 33 a 34 especies conocidas de *Compsus* en ese entonces en Colombia. Se incluyen ilustraciones con las características físicas de machos y hembras de ambas especies e ilustraciones de partes seleccionadas de la genitalia de machos y hembras de las dos especies. Casi todos los especímenes de estas dos especies fueron colectadas en varias especies o variedades de cítricos, lo cual indica su futuro potencial como plagas de cítricos.

**Key words.** weevil, key, Eustylini

### Introduction

*Compsus* Schoenherr (1823) is a genus of medium-sized to large weevils (6.30–21.70 mm) fully flighted and placed in the Curculionidae, Entiminae, Eustylini (Alonso-Zarazaga and Lyal 1999). They may be identified by the combination of the following traits: rostrum gradually widened anteriorly, nasal plate glabrous; scrobe superior and short, ending well before eyes; eyes dorsolateral, rounded or with truncate angled anterior margin; lacking ocular vibrissae; antennal scape elongate, usually extending well beyond eyes; anterior margin of elytra bisinuate expanding over posterior margin of prothorax; humeri well developed, angulate to rounded; striae 9 and 10 coalescing above hind coxae; foretibiae strongly to weakly mucronate; hind tibiae with articulating area squamose, and corbelle with very narrow glabrous space; and fully winged (Champion 1911; Anderson 2002).

The two species in this paper were sent to CWOB for identification and taken to European museums to be compared with types and authoritatively identified weevils. They were found to match specimens labeled as *C. viridilineatus* Jekel and *C. biramus* Jekel, which are both *nomina nuda*. However, Dr. Joachim Rheinheimer, who has a collection of hundreds of type photos as well as photos of other authoritatively identified specimens in numerous European museums, found that our two species were named validly as *C. obliquatus* Hustache and *C. viridivittatus* (Guérin-Méneville). Based on their potential to become serious pests of citrus, Colombian researchers need an authoritative identification of these species with valid scientific names to publish data on their life history, behavior, and control methods.

## Materials and Methods

Due to the diligence and efforts of many Colombian entomologists over several years, we have good series of freshly collected adult specimens of both species. In addition these collectors made a special effort to cite the hosts of the many populations sampled. Samples from most populations of both species were dissected to provide us with the genitalia of both sexes and the opportunity to use the sclerotized parts of the genitalia to assist in the objective identification of this difficult group.

The method of preparing specimens for dissection and clearing the genitalia is as follows: with dry specimens it is necessary to wet and soften the muscle and fat tissue that makes the specimens and their genitalia brittle. The entire adult specimen is placed in a beaker filled with distilled water with a few drops of liquid detergent added and then heated on a hot plate, stove or alcohol lamp. It is best to heat the solution to just below a bubbling boil, to avoid excessive bubbles, which make it more difficult to take the specimens out of the liquid. If a sample of specimens has the same data, a number of specimens can be prepared together in the same beaker, but material with different data should be prepared separately. Once the specimens are softened, the abdomen can be removed, leaving the rest of the specimen intact and the membranous tergum can be removed with forceps and the genitalia separated from the sternum and placed in a 10 to 20% solution of KOH, and left in the liquid to clear away all muscle and soft tissues to produce the clean sclerotized and membranous parts of the genitalia for drawing, photography or comparison with other samples or illustrations.

Photographs were taken with a Syncroscopy Automontage system and retouched using Corel Paint Shop Pro™ Photo X2.

Label data are presented verbatim for most specimens, including the lack of decimal points in the minutes of many latitudes and longitudes. Any other label data changed for clarification is indicated with brackets, [ ]. The following codens are used to indicate the collection in which the specimens are deposited (Arnett et al. 1993):

**ASUT**—Arizona State University, Tempe, Arizona

**BMNH**—The Natural History Museum, London, United Kingdom.

**CASC**—California Academy of Sciences, Golden Gate Park, San Francisco, CA.

**CMNC**—Canadian Museum of Nature Collection, Ottawa, ON, Canada.

**CWOB**—Charles W. O'Brien Collection, private, Green Valley, AZ.

**FSCA**—Florida State Collection of Arthropods, Gainesville, FL.

**UNCM**—Museo de Entomología "Francisco Luis Garcia", Universidad de Antioquia, Medellin, Colombia

**USNM**—National Museum of Natural History, Smithsonian Institution, Washington, DC.

The descriptive approach largely follows the format and style of O'Brien (1977). Terminology and spelling follow the Torre-Bueno Glossary of Entomology (Nichols 1989). Body length is measured along the midline of the pronotum plus elytron and the length of the head and rostrum combined to give the total length. This is done to get accurate length when the head and rostrum are bent downward or to the side changing the true length. Pronotal width is measured across the widest point on the pronotal disk. The width of the elytra is measured at their widest point.

## Taxonomy

*Compsus* is a speciose genus with 101 valid species. These are mainly Neotropical with only one in the USA, four in the West Indies, six in Mexico and Central America, and 90 in South America (O'Brien and Wibmer 1982; Wibmer and O'Brien 1986). There have been a number of varieties described, but these have no nomenclatural standing. The last significant study on Neotropical *Compsus* was by Hustache (1938), in which he treated and keyed 40 species. This is the best study we have even though several of those species were synonymized and some placed in related genera. The current placement is indicated in the key in square brackets [ ]. The problem is that he keyed only his 40 new species and that is less than half of the known South American *Compsus*. The Guérin-Ménéville species of *Compsus*

was not included by Hustache, probably because it was unknown to him and it had been described in another genus, *Platyomus* Sahlberg (1823). Kuschel (1955) synonymized several of these species and some genera as well. We are modifying the key of Hustache to indicate the placement of both of these citrus species in relation to 20 of the 35 known Colombian species. There are 14 species of pre-1938 Colombian *Compsus* not included in the Hustache key, namely *C. aeruginosus* (Boheman), *C. ater* Kirsch, *C. bicarinatus* Kirsch, *C. bituberculatus* Kirsch, *C. bituberosus* Kirsch, *C. canescens* (Boheman), *C. deplanatus* Kirsch, *C. glaucus* (Boheman), *C. iris* Marshall, *C. lebasii* (Boheman), *C. placidus* (Boheman), *C. popayanus* Kirsch, *C. pugionatus* Marshall, and *C. zebra* Marshall. Only one species has been described from Colombia since the Hustache (1938) work and that species is *C. zebrinus* Voss (1953). This species is not closely related to the two species redescribed herein and can be distinguished from them by its convex black usually glabrous alternate intervals, with the remainder clothed with scintillating metallic green scales and with the third interval on the declivity forming a very strong tooth like tubercle. In addition, we know of 6 other probably new species from Colombia and it should be noted that there are a number of look-alike species in *Exorides* Pascoe and *Oxyderces* Schoenherr.

### Key to Colombian *Compsus* Schoenherr

The following key was modified extensively from Hustache (1938), after translation from the original French.

1. Antennal scape clavate, subcylindrical. Elytra with 3rd interval lacking tubercle on summit of declivity. .... **2**
- Antennal scape pedunculate at base, compressed, wide, its sides parallel. Elytra with 3<sup>rd</sup> interval ending at summit of declivity with usually nacreous tubercle, in some specimens fawn colored. Length. 11–13mm. .... **27. *C. eustylodes* Hustache**
  
- 2(1). Scutellum large to medium-sized, distinctly visible. .... **3**
- Scutellum minute and scarcely visible or absent. .... **36**
  
- 3(1). Anterior femora more or less swollen but unarmed. Antennal scape slender to moderately thick. Dorsum various in color, not as in following species. .... **4**
- Anterior femora strongly swollen, armed with triangular and obtuse tooth. Antennal scape very thick. Dorsum lightly brown tinted, with white mark. Length. 7mm. .... **34. *C. parvus* Hustache**
  
- 4(3). Third interval of elytra not or feebly costate but sharply raised in form of compressed tooth or tubercle at summit of declivity. .... **5**
- Third interval behind middle of disc not or gradually raised and lacking tubercle. .... **10**
  
- 5(4). Posterior tubercle of third interval rounded or elongate, color not as in following species. .... **6**
- Same tubercle in shape of flattened and horizontal tooth. Elytra white, suture in front, middle of thorax, head and rostrum of rusty brown color. Length. 19–23mm. .... **2. *C. otti* Hustache [now *C. niveus* (Fabricius)]**
  
- 6(5). Elytra at declivity having at most three tubercles, color not as in following species, undulate to flattened, apex usually mucronate to rounded. .... **7**
- Each elytron behind apical 2/3 with 7 separate tubercles, with largest on 3<sup>rd</sup> interval. Elytra white, convex, shortly rounded at apex. Length. 12mm. .... **1. *C. tuberculatus* Hustache [now *Neoericydeus* Hustache]**

- 7(6). Elytra wide, much wider than prothorax, with strongly produced humeri, with strong apical mucrones, tubercle of 3rd interval rounded, color not as in following species..... **8**  
 – Elytra narrow, scarcely wider than prothorax, with weakly developed not produced humeri, mucrones short, 3rd interval elevated suddenly behind middle of disc forming thickened costa. Greenish color, matte, partially tinted with brownish yellow. Length. 11mm. .... **26. *C. viridulus* Hustache**
- 8(7). Disk of elytra smooth, not pustulate, color not as in following species, at most costate, not tuberculate. .... **9**  
 – Elytra green, disk with some pink pustules, posterior tubercles very large. Length. 12–15mm. .... **23. *C. pustulosus* Hustache**
- 9(8). Elytra with large foveoles, more or less confluent on sides, intervals rugulose and transversely undulate, 3rd interval slightly elevated but not costate, coating white. Length. 18mm..... **21. *C. latifrons* Hustache**  
 – Elytra with distinct foveoles, aligned in double series, 3<sup>rd</sup>, 5<sup>th</sup>, 7<sup>th</sup> intervals elevated, feebly costate, 2nd costa (5<sup>th</sup> interval) effaced in anterior half. Coating grayish brown, in some specimens part green. Length. 12–17mm..... **16. *C. pertinax* Hustache**
- 10(4). Antennal funicle with 2<sup>nd</sup> article at least one third longer than 1<sup>st</sup>. .... **11**  
 – Antennal funicle with 2<sup>nd</sup> article not or very little longer than 1<sup>st</sup>. .... **38**
- 11(10). Elytra with at least 3<sup>rd</sup> interval costate. .... **12**  
 – Elytra with intervals not costate, in some specimens 3<sup>rd</sup> elevated behind middle of disc. .... **26**
- 12(11). Elytra white with or without metallic blue or green markings..... **13**  
 Elytra of other coloration..... **16**
- 13(12). Elytra unicolored..... **14**  
 – Elytra with markings..... **15**
- 14(13). Intervals convex (except suture in front), odd-numbered intervals more elevated, all provided with numerous white short setae, anterior edge of humeri feebly sinuate towards base. Length. 17–18mm. .... **3. *C. candidus* Hustache**  
 – Intervals 3, 5, 7 costate, suture in front and other intervals flat, dorsal setae microscopic, anterior edge of humeri strongly sinuate before base. Length. 13–18mm..... **4. *C. albus* Hustache**
- 15(13). Tarsi white, femora with small green macula, median fascia of elytra oblique. Elytra with green or blue vittae and/or fasciae. .... **15a**  
 – Tarsi in major part, head, and rostrum green. Elytra with six small maculae. Length. 15mm. .... **5. *C. affinis* Hustache**
- 15a(15). Prothorax with blue or green vittae, median vitta not extending onto head, elytra with variable length sutural vitta, often laterally extending behind onto 2<sup>nd</sup> and 3<sup>rd</sup> intervals, 4<sup>th</sup> interval with interrupted vitta, transverse oblique fascia near middle (Fig. 1–4) Length. 10 mm.(8.40–16.70mm)..... **6. *C. obliquatus* Hustache**  
 – Prothorax with broad blue or green vittae, median vitta extending onto head as triangular macula, elytra with complete vittae on intervals 3–4 and 8–9 (Fig. 5–8) Length. 9.00–15.70 mm. .... ***C. viridivittatus* (Guérin-Méneville)**

- 16(12). Edge of elytra normal. .... 17  
 – Elytra with 3rd, 5th, and 8th intervals costate, 8th towards middle bifurcate in two costae prolonged behind, one on 8th, other on 7th interval, latter two intervals provided with two feeble lines of punctures. Coating blue opaline. Length 13–18mm. .... 11. *C. divisus* Hustache
- 17(15). Elytra with alternate intervals pale or very dark, forming blue, white, green, or brown vittae. .... 18  
 – Intervals of elytra not forming alternately colored vittae. .... 22
- 18(17). Intervals of elytra alternately white or pale blue and white. .... 19  
 – Elytra with uneven intervals green, even intervals chocolate brown. Length. 14–15mm. .... 10. *C. lineatus* Hustache
- 19(18). Vittae white, and others very distinct blue or green. .... 20  
 – Coating of elytra ashy grayish green, slightly tinted with grey-pearl, vittae not very distinct. Length. 20mm. .... 9. *C. deliciosus* Hustache
- 20(20). Prothorax rather strongly rugose, squamulose or not, declivity at posterior of elytra at 60°. Antennae, rostrum, and major part of legs blue or green. .... 21  
 – Prothorax feebly rugose, densely squamulose, declivity at posterior of elytra at 45°. Tibia, tarsi, antennae, head and rostrum golden. Length. 18mm. .... 8. *C. delicatulus* Hustache
- 21(20). Elytra feebly costate with punctures small, densely squamulose, scarcely visible except along borders of intervals, there slightly grooved. Length. 11–16mm. .... 12. *C. alternevittatus* Hustache  
 – Elytra with costae strongly raised, with borders strongly notched with foveoles, latter posteriorly much larger. Length. 12–16mm. .... 13. *C. attenuatus* Hustache
- 22(17). Elytra at apex with at least rather elongate mucrones, color not as in following species. .... 23  
 – Elytra at apex narrowly acuminate but not mucronate, 1st interval costate but flat in anterior third. Head and rostrum purple violet. Length. 12–16mm. .... 20. *C. violaceus* Hustache
- 23(22). Second costa (5th interval) of elytra effaced in front, color not as in following species, not notched on 5<sup>th</sup> interval, not arched to form arc on declivity.  
 – Elytra with costae little elevated but entire, white, ornate with line of brown-black, notched, on 5<sup>th</sup> interval just at posterior third, arched then within and itself united with opposite line forming wide arc at summit of declivity. Length. 11–12mm. .... 18. *C. azureipes* Hustache
- 24(23). Elytra with coating brown or grayish, sometimes in part bluish, intermingled with numerous setae, costae strongly prolonged behind at summit. .... 25  
 – Elytra with coating brown tinted reddish brown in foveoles, costae little elevated, ending or beginning on declivity, setae microscopic. Length. 12–15mm. .... 19. *C. bellus* Hustache [now *C. adonis* Marshall]
- 25(24). Even intervals flat or slightly convex, with dispersed, short, pale setae. .... 14. *C. canescens* Boh. var. *dorsalis* Hustache  
 – Intervals convex, all provided with two rows of quite regular and quite long white setae, Length. 13–15mm. .... 15. *C. albosetosus* Hustache

26(11). Elytral coating dense and green.....	27
– Elytral coating of other colors. ....	30
27(25). Elytra without maculae, intervals on disc flat or slightly convex and not rugose. Entirely green.	28
– Elytra with maculae or with undulations black.....	29
28(27). Elytra with large punctures transverse and black, declivity at posterior of elytra at 60°. Length. 17–18mm. ....	39. <i>C. viridissimus</i> Hustache
– Elytra with small punctures, squamulose, declivity at posterior of elytra at 80°. Length. 16 mm. ....	40. <i>C. cyphoides</i> Hustache
29(27). Elytra with transverse black undulations, coating glossy green; tibiae, mid- and hind femora, femorotibial joint and apex of elytra coppery gold. Length. 13 mm. ....	35. <i>C. nigroundulatus</i> Hustache [now <i>Oxyderces mirandus</i> (Pascoe)]
– Elytra finely punctate, not undulate, each elytron with 5 large black maculae, declivital summit, head, rostrum, and femora in part pearly reddish. Length. 11–13mm. ....	38. <i>C. benoisti</i> Hustache
30(26). Dorsal coating dense. ....	31
– Black pitch, coating beneath not very dense, small, round scales. not completely covering the integument, elytra shortly acuminate at the summit, its foveoles large. Length. 8-13mm. ....	28. <i>C. scrutator</i> Hustache
31(30). Dorsal coating not white, extremities not blue, apex variable in presence or absence processes.....	32
– Coating dense, white, antennal funicle, extremities of tibiae and tarsi blue. Elytra coarsely foveolate, at apex shortly and feebly acuminate. Length. 7–12mm.....	24. <i>C. cyanitarsis</i> Hustache
32(31). Elytra mucronate at apex. ....	33
– Elytra conjointly rounded or obtusely acuminate at apex.....	35
33(32). Dorsal setae of elytra microscopic and sparse, 3 <sup>rd</sup> interval at declivital summit gradually disappearing. Length. 11–13mm. ....	34
– Elytra reticulate on entire surface with very small maculae, with short bristles, 3 <sup>rd</sup> interval shortly costate behind middle of disc, costa distinct but ending abruptly posterior of declivity. Coating beige slightly tinted with green, on tarsi and funicle ashy blue. Length. 13mm.....	32. <i>C. sulcicollis</i> Hustache
34(33). Coating matte reddish copper, intermixed with some scintillating green scales, green on antennae and tarsi. Length. 13–16mm. ....	29. <i>C. aurisquamosus</i> Hustache
– Dorsal coating brown, mate, very dense, lacking scintillating scales, same on appendages.....	30. <i>C. subcostatus</i> Hustache
35(32). Elytra strongly widened behind middle of disc, coating yellowish green, third interval at summit of declivity more elevated and connected between by undulate feeble transverse partition, each with arcuate branch behind. Length. 16mm. ....	22. <i>C. sylvaticus</i> Hustache
– Elytra widened slightly behind middle of disc, coating pearlescent, iridescent, 3 <sup>rd</sup> and 5 <sup>th</sup> intervals costate behind and 3 <sup>rd</sup> abruptly ending at summit, 5 <sup>th</sup> at middle of declivity, 7 <sup>th</sup> elevated for entire length. Length. 12.5mm. ....	31. <i>C. roseomicans</i> Hustache

- 36(2). Coating green, dense and matte, with or without white setae, elytral costae absent or feeble. . . . . **37**  
 – Oblong, dark chestnut, coating grayish, provided with numerous white setae, 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup> intervals costate. Length. 12–16mm. . . . . **17. *C. peruvianus* Hustache**
- 37(36). Elytra lacking discrete punctures, with large deep foveoles in series both regular and irregular, lateral intervals rugose, 3<sup>rd</sup> raised behind middle of disc. Length. 12–16mm. . . . . **25. *C. parviscutum* Hustache**  
 – Elytra on each elytron with three small black punctures, provided with series of not very regular small foveoles, intervals of equal and feeble convexity, feebly undulate on sides. Length. 9–12mm. . . . . **37. *C. tripunctatus* Hustache**
- 38(10). Dorsal coating white, at least in part, elytra not transversely undulate. . . . . **39**  
 – Dorsal coating green, in part golden on head and rostrum, elytra with undulations transverse and black. Length. 13mm. . . . . **36. *C. cicatricosus* Hustache [now *Oxyderces mirandus* (Pascoe)]**
- 39(38). Dorsal coating white, each elytron with 5 green punctures (each brown black in center). Length. 9mm. . . . . **7. *C. viridipunctatus* Hustache [now *C. quadrisignatus* (Boheman)]**  
 – Dorsal coating pale brown ocher, elytra ornate with white pattern including one cruciform macula, and some other maculae. Length. 9–12mm. . . . . **33. *C. alboguttatus* Hustache [now *C. servus* (Fabricius)]**

### ***Compsus obliquatus* Hustache 1938**

Figures 1–4, 9–10, 13–14

*Compsus obliquatus* Hustache 1938: 77

*Compsus biramifer*: Jekel (nomen nudum)

**Description.** Body elongate-oblong; integument black, nearly concealed by scales; clothed densely with nacreous white and metallic blue and/or green often scintillating, round to oval, recumbent scales forming three distinct incomplete vittae on prothorax and elytra with narrow vitta on sutural interval from base to just anterior of declivity, there moving onto interval 2 and onto 3 on declivity, short vitta on interval 4 on declivity, short broken vitta on interval 6 behind humerus and on declivity, and narrow vitta on intervals 9 and 10, and with short obliquely angled posteriorly directed branch on posterior 3/5 on intervals 4–7; medial prothoracic vitta not extending onto head; with moderately sparse, scarcely evident, recumbent, strap-like white setae; dorsal surface uneven, undulating; areas with dense colored scales distinctly impressed, areas of white scales flattened or moderately convex.

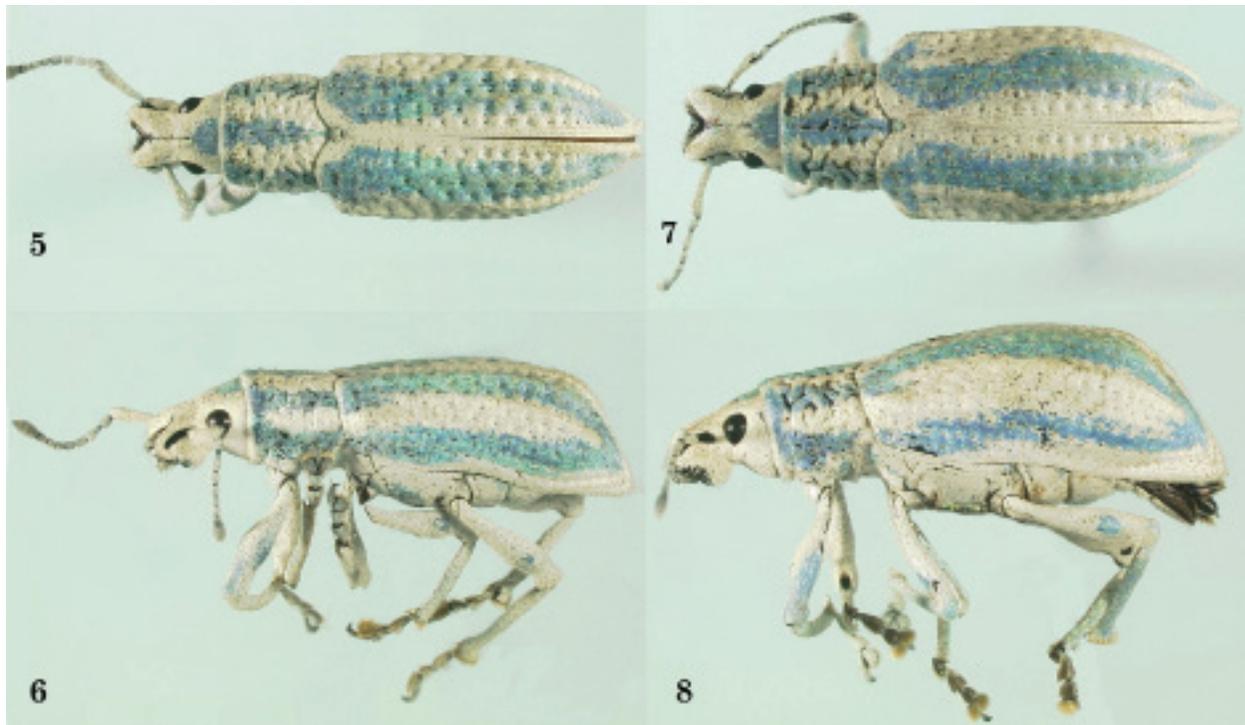
**MALE: Rostrum** 0.44× wider than long; with narrow, deep, median sulcus and lacking lateral sulci; completely clothed with dense recumbent imbricate scales, concealing integument, apical 1/2 with golden rosaceous scales, remaining scales white; with sparse, indistinct, short, strap-like setae; nasal plate glabrous, deeply triangular, with sharply carinate margins; base of triangular impression behind nasal plate with low but evident transverse carina between antennal insertions. **Head** with frons nearly flat, lacking evident fovea and with narrow sulcus, completely densely clothed uniformly with imbricate white scales, concealing integument; lacking evident punctures, with sparse indistinct pale recumbent strap-like setae. **Antennae** with scape moderately clavate, with dense elongate recumbent scales and moderately dense long coarse scale-like suberect white setae; funicular antennomeres elongate, 1 about 0.94× as long as 2 and scarcely wider, 3 two thirds as long as 2, 4–7 subequal in length, about 1/2 as long as 2; 1–6 clothed densely with recumbent scales and coarse long setae, 7 clothed with dense fine recumbent setae, and ring of subapical moderately fine erect setae; club elongate-oval acute, 2× as long as 1 and 2, and 2× as wide as funicular antennomere 1. **Prothorax** transverse, 1.04× as wide as long, sides subparallel, weakly divergent behind apical third, there nearly straight to weakly nar-



**Figures 1–4.** Habitus. 1) *C. obliquatus*–male dorsal. 2) *C. obliquatus*–male lateral. 3) *C. obliquatus*–female dorsal. 4) *C. obliquatus*–female lateral.

rowed base; basal margin strongly bisinuate; disc unevenly flattened, medially longitudinally broadly shallowly impressed; disc clothed with dense, recumbent, imbricate, round to oval, nacreous white, and metallic blue and green scales, many iridescent, forming three complete narrow vittae from apex to base; with small to elongate, unevenly spaced, very deep punctures; disc with moderately sparse, short, coarse, recumbent, strap-like setae. (Fig. 1–4) **Scutellum** large, narrowly rounded apically, and basally broad with straight margin; clothed with glossy, recumbent, blue scales. **Elytra** elongate-oval, subparallel behind moderately rounded projecting humeri, then sides narrowed gradually at declivity and evenly narrowed to emarginate, projecting apices; intervals clothed with dense, recumbent, imbricate, nacreous white, and vittate with blue and green, metallic scales, many scintillating; sutural interval narrowly vittate on basal 1/3, there dividing and moving laterally onto 2 and near declivity onto 3; 4 with short declivital vitta; 6 with short broken vitta, just behind humeri and continued just behind middle; with narrow vitta on basal 1/2 of intervals 9 and 10, narrowed apically to interval 9 only; with short obliquely angulate posteriorly directed vitta on 4–7; remainder of area with nacreous white scales; striae punctures small, deep, round and distinct, unevenly distributed, separated by 5–20× own diameter; intervals uneven in width, each with sparse scarcely evident short strap-like recumbent seta; intervals 3, 5, and 7 moderately strongly unevenly raised. **Venter** completely clothed with dense recumbent, imbricate scales and moderately dense, subrecumbent, short, strap-like setae, with moderately fine, dense, unevenly spaced punctures; propleuron with broad, metallic, blue and green vitta; all sterna clothed with white and golden rosaceous scales; abdominal sternum I weakly impressed on medial basal 1/2, 1.30× as long as II; III and IV subequal in length, together 0.76 as long as II; sternum V subequal in length with II; V flattened, short and broadly truncately rounded. **Legs** stout; fore femur very strongly, asymmetrically swollen at apical 1/3; all femora with 1 or 2 blue and green maculae of scales, remaining area with dense imbricate nacreous white scales; tibiae with similar white scales and areas with metallic blue and green scales mixed with white and with long, dense, suberect, white setae on inner margin; all tibiae with strong, acute, apical, inner mucrone. **Genitalia:** Median lobe dorsally with base as wide as weakly expanded subtruncate apical 1/6, sides weakly curved; dorsally apical 1/6 open, not sclerotized (Fig. 9); ventrally evenly curved, lacking swelling (Fig. 10). **Length, pronotum and elytron:** 8.10mm. **Length, head and rostrum:** 2.40mm. **Total length:** 12.50mm.

**FEMALE:** Same as male except: **Venter** with metasternum and medial areas of abdominal sterna I and II clothed with recumbent metallic blue and green scales, sternum I broadly flattened basally and



**Figures 5–8.** Habitus. **5)** *C. viridivittatus*–male dorsal. **6)** *C. viridivittatus*–male lateral. **7)** *C. viridivittatus*–female dorsal. **8)** *C. viridivittatus*–female lateral.

convex apically; sternum II strongly, transversely convex; sternum V narrowly, weakly, longitudinally convex along midline. **Genitalia:** Sternum VIII with plate elongate, sclerotized arms narrow, apically subtruncate, narrowly membranous between arms for entire length of plate. Spermatheca C-shaped, cornu slightly turned upward, ramus directed dorsally. **Length, pronotum and elytron:** 11.50mm. **Length, head and rostrum:** 2.80mm. **Total length:** 14.30mm.

**Remarks and comparative notes.** This species is similar to other blue, green and white, vittate or mottled species from Colombia and other South American countries. However, the sutural vitta which divides posteriorly, is directed laterally onto the second and third intervals, and reaches nearly the full length of the elytra which is not found in these other species. In addition, the metallic blue and/or green vitta or macula on interval 4 is obliquely fused across interval 5 with the complete or incomplete vitta on interval 6 just behind the middle of the elytra.

**Intraspecific variation.** This species is most variable in the color of the metallic scales, with some specimens mainly green and others mainly blue, although the mix of blue and green is most common. In general the iridescent scales are most often the green scales. The widths of the vittae are highly variable from very narrow to very wide and the vittae are broken into various lengths, sometimes forming short maculae. The range in total size is great, from 8.40 to 16.70mm.

**Range.** Known only from two departments of Colombia, Cundinamarca and Tolima.

**Material examined.** On hand for this study were 71 specimens, in ASUT, BMNH, CASC, CMNC, CWOB, FSCA, UNCM and USNM. **COLOMBIA: Cundinamarca:** Beltran, Vda. Paquita, Fca. El Limonae, 4° 6'12.2", 74° 8'03.48"W, citrus, M. Zambrano, 268m. no date (10); Girardot, 3 June 1965 (3), 6 June 1965 (8), 11 June 1965 (7), 13 June 1965 (6), J. A. Ramos; Girardot, 17 June 1982, Clark & Cave (2). **Tolima:** Espinal, Vda. Agua Blanca, Finca La Cuba, 4°20'45.5"N, 74°8'16.3"W, 331m, on Tahiti lime, *Citrus aurantifolia*, Legator: W. King (35).



Figures 9–12. Male median Lobe. 9) *C. obliquatus*–dorsal. 10) *C. obliquatus*–lateral. 11) *C. viridivittatus*–dorsal. 12) *C. viridivittatus*–lateral.

***Compsus viridivittatus* (Guérin-Méneville) 1855**

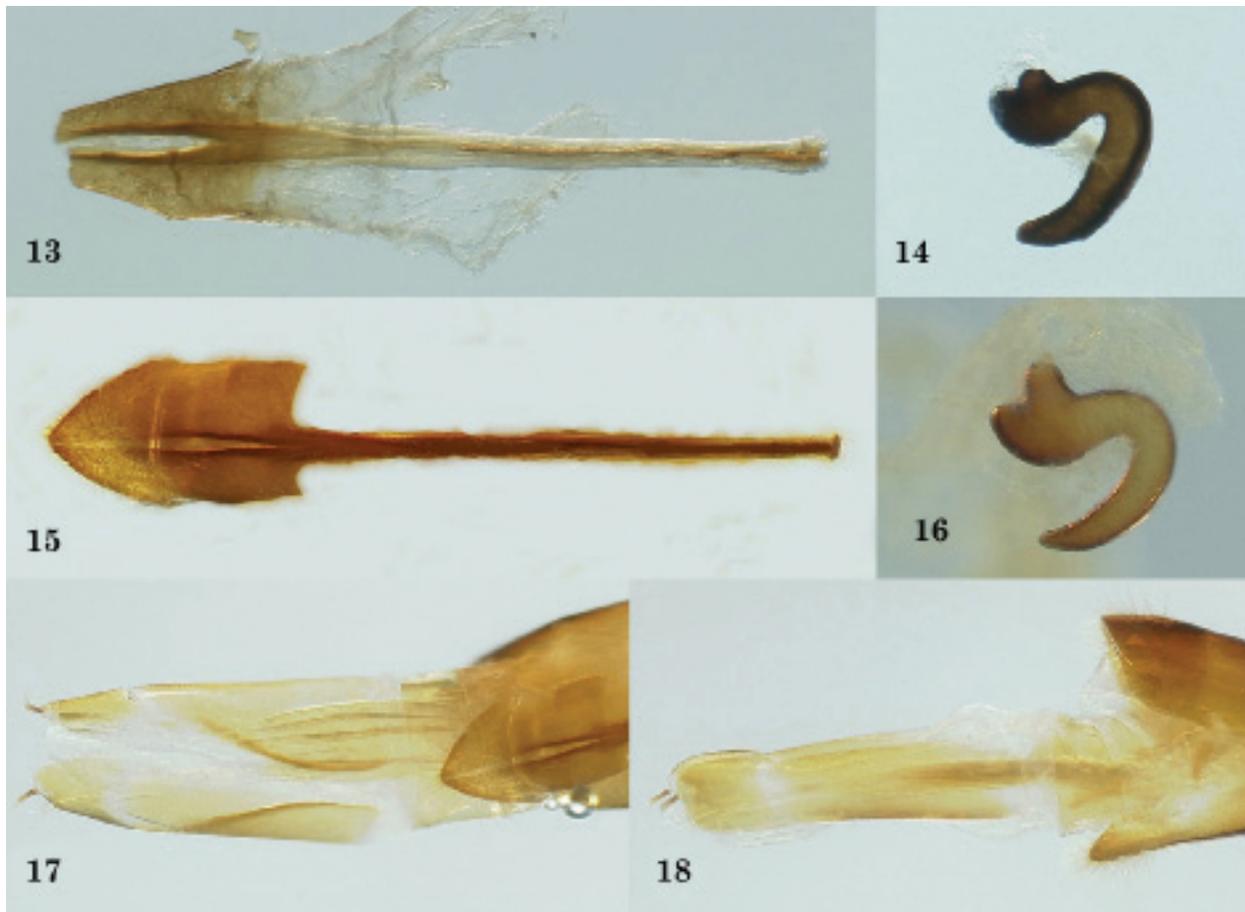
Figures 5–8, 11–12, 15–18

*Platyomus viridivittatus* Guérin-Méneville 1855: 592

*Compsus viridilineatus*: Jekel (nomen nudum)

**Description.** Body elongate-oblong; integument black, nearly concealed by scales; clothed densely with nacreous white and metallic blue and/or green often scintillating, round to oval, recumbent scales forming three distinct vittae on prothorax and elytra; medial prothoracic vitta extending onto head as broad apically acute triangle; and with moderately sparse, scarcely evident, recumbent, strap-like setae; with no areas of white, or of blue and green colored scales raised or impressed, all on same level except for convex elytral intervals 3, 5, 7, and 9.

**MALE: Rostrum** 0.33× wider than long; with narrow deep median impression, broader apically; and pair of shorter, obliquely angled, lateral sulci; basal 1/2 completely clothed with dense erect scales, concealing integument, apical 1/2 with recumbent imbricate scales, all scales white; with sparse, indistinct, short, strap-like setae; nasal plate glabrous, deeply triangular, with sharply carinate margins. **Head** with frons weakly convex, flattened medially, with small fovea and narrow sulcus, densely clothed with imbricate white scales, concealing integument; area behind frons with median, sub triangular macula of metallic blue scales reaching base of head; remainder of head clothed with dense white scales; base of head with sparse fine punctures evident, each with indistinct white recumbent strap-like seta. **Antennae** with scape moderately clavate, with dense elongate recumbent mainly white scales, with few blue scales at base, and moderately dense long coarse scale-like suberect white setae; funicular antennomeres elongate, 1 about 0.90× as long as 2 and scarcely wider, 1 about 0.33× longer than 3; 4–6 subequal in length, 1/2 as long as 2; 7 subequal in length to 3; 1–6 clothed densely with recumbent scales and coarse long setae, 7 clothed with dense coarse recumbent setae, and ring of subapical moderately fine erect setae; club elongate-oval acute, 2.0× as long as and 2.0× as wide as funicular antennomeres 1 and 2. **Prothorax** transverse, 1.19× as wide as long, sides weakly rounded behind apical third, then weakly narrowed to base; basal margin very strongly bisinuate; disc unevenly convex, not longitudinally impressed; disc clothed with dense, recumbent, imbricate, round to oval, nacreous white, and metallic blue and green scales, many iridescent, forming three complete narrow vittae from apex to base; with small to elongate, unevenly spaced, very deep punctures; apical margin with transverse narrow band extending to ventral area; disc with moderately sparse, short, coarse, recumbent, strap-like setae (Fig. 5–8). **Scutellum** large, narrowly rounded basally and apically broad with rounded margin; clothed with glossy, recumbent, blue scales. **Elytra** elongate-oval, subparallel behind obliquely angled, subacute humeri, then sides narrowed gradually at declivity and evenly narrowed to emarginate, projecting apices; intervals clothed with dense, recumbent, imbricate, nacreous



**Figures 13–18.** Female genitalia. **13)** *C. obliquatus*–sternum VIII. **14)** *C. obliquatus*–spermatheca. **15)** *C. viridivittatus*–sternum VIII. **16)** *C. viridivittatus*–spermatheca. **17)** *C. viridivittatus*–ovipositor, dorsal view. **18)** *C. viridivittatus*–ovipositor, lateral view.

white, and vittate with blue and green, metallic scales, many scintillating; intervals 2, 3, and 4 behind base forming broad blue and green vitta, reaching to near apex of declivity, extending laterally at base of intervals 5 and 6, just behind humeri; with sinuate similar vitta on parts of intervals 7, 8, and 9, narrowed basally and apically; remainder of nacreous white scale coating; strial punctures small to large, deep, round and distinct, unevenly distributed, separated by 10–12× own diameter; intervals uneven in width, each with sparse scarcely evident short strap-like recumbent seta; intervals 3, 5, and 7 strongly subcarinately raised. **Venter** completely clothed with dense recumbent, imbricate scales and moderately dense, subrecumbent, short, strap-like setae, with fine, sparse, unevenly spaced punctures; propleuron with broad, metallic, blue and green vitta; prosternum behind procoxae and metasternum in medial area with similar colored maculae, remaining scales nacreous white; sternum II with pair of similar, submedian, round maculae; sternum I weakly impressed on medial basal 1/2, 1.40× as long as II; III and IV subequal in length, together 0.70 as long as II; sternum V slightly shorter than II, 0.90× as long; V flattened, short and broadly truncately rounded. **Legs** stout; forefemur very strongly, asymmetrically swollen at apical 1/3; all femora with 1 or more blue and green maculae of scales, remaining area with dense imbricate nacreous white scales; tibiae with similar white scales and with long, dense, suberect, white setae on inner margin; fore- and midtibiae with strong, acute, apical mucrone; hind tibia lacking mucrone. **Genitalia:** Median lobe broadest at base dorsally, sides straight and narrowed to apical 1/5, there rounded to apex; dorsally apical 1/5 open, not sclerotized (Fig. 11); ventrally with subapical, strong, angulate swelling (Fig. 12). **Length, pronotum and elytron:** 8.10mm. **Length, head and rostrum:** 2.40mm. **Total length:** 10.50mm.

**FEMALE:** Same as male except: **Venter** with metasternum and medial areas of abdominal sterna I and II clothed with recumbent metallic blue and green scales, sternum I broadly flattened basally and convex apically; sternum II strongly, transversely convex; sternum V narrowly weakly longitudinally convex along midline. **Genitalia:** Sternum VIII with plate oblong-oval, sclerotized arms broad and apically broadly rounded, narrowly membranous between arms for length of plate (Fig. 15); spermatheca C-shaped, cornu directed subapically, scarcely turned dorsally, ramus strongly directed dorsally, slightly longer than cornu, collum narrowing from narrow base to subacute apex (Fig. 16). Coxites with several long ante-apical setae; styli short, 3.3× longer than width at base, apically rounded (Fig. 17–18). **Length, pronotum and elytron:** 11.50mm. **Length, head and rostrum:** 2.80mm. **Total length:** 14.30mm.

**Remarks and comparative notes.** This species although similar to other blue, green and white vittate or mottled species, can be distinguished from them by the four vittae which extend nearly the full length of the elytra, not found in these other species. The extension of the medial prothoracic vitta as a blue and green triangular macula on the base of the head is diagnostic for this species as well.

**Intraspecific variation.** This species is most variable in the color of the metallic scales, with some specimens mainly green and others mainly blue, although the mix of blue and green is most common. In general the iridescent scales are most often the green scales. The widths of the vittae are extremely variable from very narrow to very wide. The range in total size is great, from 9.00 to 15.70mm.

**Range.** Known only from numerous widespread departments of Colombia, from Antioquia in the North West to Santander in the North East and south through several departments to Valle del Cauca and Tolima.

**Material examined.** On hand for this study were 182 specimens which are deposited in ASUT, BMNH, CASC, CMNH, CWOB, FSCA, UNCM, and USNM. **COLOMBIA: Antioquia:** Tamesia, Finca Cristalina, on tangelo (17); Vda. El Libano, 984m, 5° 90657N, 75° 68961W, Hydrangea, citrus, B. Rengift, no date (25). **Caldas:** Chichina, Finca Indiana, on orange, no date, no collector (14); Chichina, Vda. Morano, 12-19-2008, C. Mejia leg. On orange, Citrus Salustiana (9); Neira, Vda. Los Planes, Dec. 10.2008, on citrus, Albeiro L. (13). **Cundinamarca:** Beltran, Vda. Paquita, Fca. El Limonae, 4° 6122N, 74° 80348W, citrus, M. Zambrano, 268m. no date (8); **Quindio:** Armenia, on citrus, 7-III-1998, J. E. Peña Ref. # 23-98 (6); La Tabaida, Vda. Argentina, Fca. Pernambuco [ca 1200 m] 4° 4622N, 75° 015W, on sweet orange, J. H. Patacino (11); Montenegro, 19-11-1997, J. E. Peña, Citrus, leaves, roots, fruits, Ref. # 17-97 (3); **Risaralda:** Belen de Umbria, Finca Buenos Aires, 12-10-2008, on Citrus, A. Ramirez (18), same except, 11-9-2008 1140m. 5° 1422N, 75° 84373W, on citrus(tangelo), C. Galves (4); Pereira, Feb. 9.2009, 1211m., 4° 80189N, 75° 84781W, on Arachis pintoi, C. Tovar (10), Same except, 4° 82673N, 75° 77531W, 1245m., 2-9-2009, on citrus (Valencia), C. Galves (5), same except, Vda. Combia, Dec. 4, 2008, 1211 m., on Lily grass, G. Galves (1). **Santander:** Lebrija, Vda. La Esmeralda, Fca. Las Palmas, [about. 1100 m], Feb. 3 2009, Tangerine Arrayana 7° 14366N, 73° 22719W, L. Velandia(10). **Tolima:** Armero, Guayabal, Vda. La Palmera, Fca. Limoniales, 286m., Feb. 13 2009 on Tahiti lime W. King 3° 04622N, 74° 85454W. (5); 4km. SE Ibague, 19 June 1982, Clark & Cave (2). **Valle del Cauca:** Caicedonia, Finca Las Brisa & Las Palmas, no date, on Arachis pintoi, 4° 40340N, 75° 86317W, [Patacino ?], 1066m., (7); same except, on Valencia orange, Patacino (8); Sevilla, Vda Palmichal, on sweet orange, leg. Patacino (5).

## Acknowledgments

We thank the following scientists who collected the bulk of the specimens and presented them for this study: J. Palacino, A. Castaneda, H. Guarin, J. Jimenez, J. Cardenas, H. Mateus, and A. Carabali, of ICA and CorpoICA, Colombia. In addition we thank Michael Thomas and Paul J. Skelley, both of the Florida State Collection of Arthropods, Gainesville FL for their assistance with the Automontage equipment used for photography and Nico Franz for invaluable help in producing the plates. In addi-

tion we thank the two reviewers, Nico Franz, Arizona State University, Tempe AZ, and Jens Prena, The Natural History Museum, Washington, DC.

### Literature Cited

- Anderson, R. S. 2002.** Family 131 Curculionidae. p. 722-792. *In*: R. H. Arnett, Jr., M. C. Thomas, P. E. Skelley, and J. H. Frank (eds.). American Beetles, Vol. 2. CRC Press; Boca Raton, FL. 861 p.
- Alonso-Zarazaga, M. A., and C. H. C. Lyal. 1999.** A world catalogue of families and genera of Curculionoidea (Insecta: Coleoptera) (Excepting Scolytidae and Platypodidae). Entomopraxis, S. C.P.; Barcelona, Spain. 325 p.
- Arnett, R. H., Jr., G. A. Samuelson, and G. N. Nishida. 1992.** The insect and spider collections of the world (second edition). Flora and Fauna Handbook No. 11. Sandhill Crane Press; Gainesville, FL. 310 p.
- Champion, G. C. 1911.** Insecta, Coleoptera. Rhynchophora. Curculionidae. Otiiorhynchinae [part, "Alatae"; and supplement to the Thecesterninae and Otiiorhynchinae]. *Biologia Centrali-Americana* 4, part 3: i-vi, 178-354.
- Guérin-Méneville, F. E. 1855.** Catalogue des Insectes Coléoptères, recueillis par M. Gaetano Osculati, pendant son exploration de la région équatoriale, sur les bords de Napo et de l'Amazone. *Verhandlungen der k. k. zoologisch-botanischen Gesellschaft in Wien.* 5: 573-642.
- Hustache, A. 1938.** *Compsus* sud-américains (Coleoptera Curculionidae). *Bulletin de la Société Entomologique de Belgique* 78:67-118.
- Kuschel, G. 1955.** Nuevas sininomias y anotaciones sobre Curculionoidea (Coleoptera). *Revista Chilena de Entomología* 4:261-312.
- Nichols, S. W. 1989.** The Torre-Bueno glossary of entomology, revised edition of a glossary of entomology by J. R. de la Torre-Bueno including supplement A by G. S. Tulloch. The New York Entomological Society; New York, New York. i-xvii, 840 p.
- O'Brien, C. W. 1977.** *Cercopeus komarecki*, new species from Florida and Georgia (Coleoptera: Curculionidae: Otiiorhynchinae). *Florida Entomologist* 60(4): 257-261.
- O'Brien, C. W., and G. J. Wibmer. 1982.** Annotated checklist of the weevils (Curculionidae sensu lato) of North America, Central America, and the West Indies (Coleoptera: Curculionoidea). *Memoirs of the American Entomological Institute* 34: 1-382.
- Sahlberg, C. R. 1823.** Periculi entomographici, species insectorum nondum descriptas proposituri, fasciculus. Typis Frenckelliorum; Aboae. 82 p.
- Schoenherr, C. J. 1823.** Curculionides. *Isis von Oken*, heft X, columns 1132-1146. [2 columns per page].
- Voss, E. 1953.** Neue und bemerkenswerte Curculioniden aus Colombien und Bolivien. (Col. Curc.). (118. Beitrag zur Kenntniss der Curculioniden). *Entomologische Mitteilungen aus dem Zoologischen Staatsinstitute und Zoologischen Museum Hamburg* 1(2): 55-84.
- Wibmer G. J. and C. W. O'Brien. 1986.** Annotated checklist of the weevils (Curculionidae sensu lato) of South America (Coleoptera: Curculionoidea). *Memoirs of the American Entomological Institute* 39: 1-563.

Received January 11, 2012; Accepted March 13, 2012.