

# INSECTA MUNDI

A Journal of World Insect Systematics

---

**0163**

*Oxycheila binotata* Gray (Coleoptera: Carabidae: Cicindelinae),  
information on a little known taxon from Colombia

Mike Kippenhan  
Museum Associate  
C.P. Gillette Museum of Biodiversity  
Colorado State University  
Fort Collins, CO 80523

Date of Issue: April 15, 2011

Mike Kippenhan

*Oxycheila binotata* Gray (Coleoptera: Carabidae: Cicindelinae), information on a little known taxon from Colombia

Insecta Mundi 0163: 1-4

**Published in 2011 by**

Center for Systematic Entomology, Inc.

P. O. Box 141874

Gainesville, FL 32614-1874 U. S. A.

<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 editor:** Michael C. Thomas & Ian Stocks, e-mail: [insectamundi@gmail.com](mailto:insectamundi@gmail.com)

**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

**Printed copies 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 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/>

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

**Electronic copies in PDF format** (On-Line ISSN 1942-1354, CDROM ISSN 1942-1362)

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/>

*Oxycheila binotata* Gray (Coleoptera: Carabidae: Cicindelinae),  
information on a little known taxon from Colombia

Mike Kippenhan

Museum Associate

C.P. Gillette Museum of Biodiversity

Colorado State University

Fort Collins, CO 80523

kip@compoundmotion.com

**Abstract.** Two specimens of *Oxycheila binotata* Gray (Coleoptera: Carabidae: Cicindelinae) in the Field Museum of Natural History offer additional information on the morphology and distribution of this rare species. One of the specimens, a female, is considered to be the first known specimen of this species.

### Introduction

The Neotropical tiger beetle genus *Oxycheila* Dejean presently includes 47 species ranging in distribution from southern Mexico southward to east central Argentina (Wiesner 1999; Wiesner 2003). Adults of this genus are nocturnal and are most often encountered clinging to emergent rocks of fast flowing streams (Pearson and Vogler 2001).

Presently, 11 species of *Oxycheila* are known from Colombia, with two additional species considered possible (Vitolo-L. 2004). Of the 11 confirmed Colombian species, one, *O. binotata* Gray (type locality = “Columbia”) is known from only two specimens—the lectotype male (designated by Wiesner 1999) and a female specimen collected in Guatemala (Wiesner 1999). Wiesner (1999) presented a re-description of this species based on these two specimens, noting that the identification of the female was tentative due to the lack of additional material and definite association of sexes.

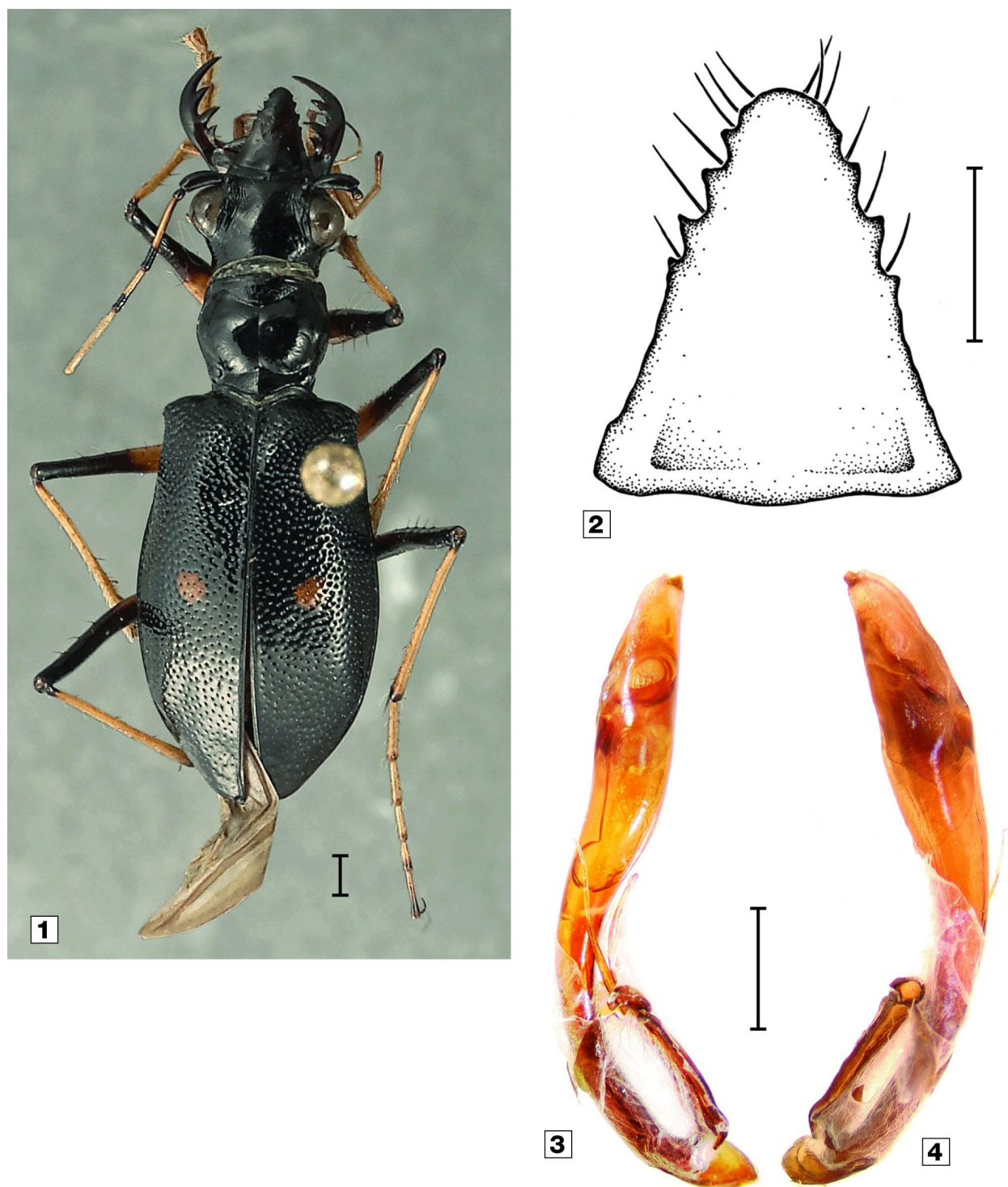
During the course of identifying tiger beetles for the Field Museum of Natural History (FMNH, Chicago, Illinois), two previously unidentified specimens of *Oxycheila*—one male and one female, both of which were collected in Colombia (Fig. 9), key to and closely match the description of *O. binotata* as presented by Wiesner (1999). The male is labeled: “Colombia: Cauca; Quebrada, Huanqui, Rio Sonja area, 100m, X:20-31-1971, leg. B. Malkin”. The female is labeled: “Nariño, Pasto, X:1:19:1971, leg. B. Malkin and P. Burchard at light”.

### Discussion

A comparison of the FMNH male specimen to the photo and illustrations of the lectotype male in Wiesner (1999) indicates that the FMNH male (Fig. 1) differs only in the following: elytral maculation slightly smaller, unpigmented areas of legs and antennae slightly darker, black covering larger percentage of femur, labrum black brown, labral teeth more distinct (Fig. 2), and length = 15.5 mm. This specimen has numerous missing antennomeres and tarsi in addition to the apex of the aedeagus being broken (Fig. 3, 4).

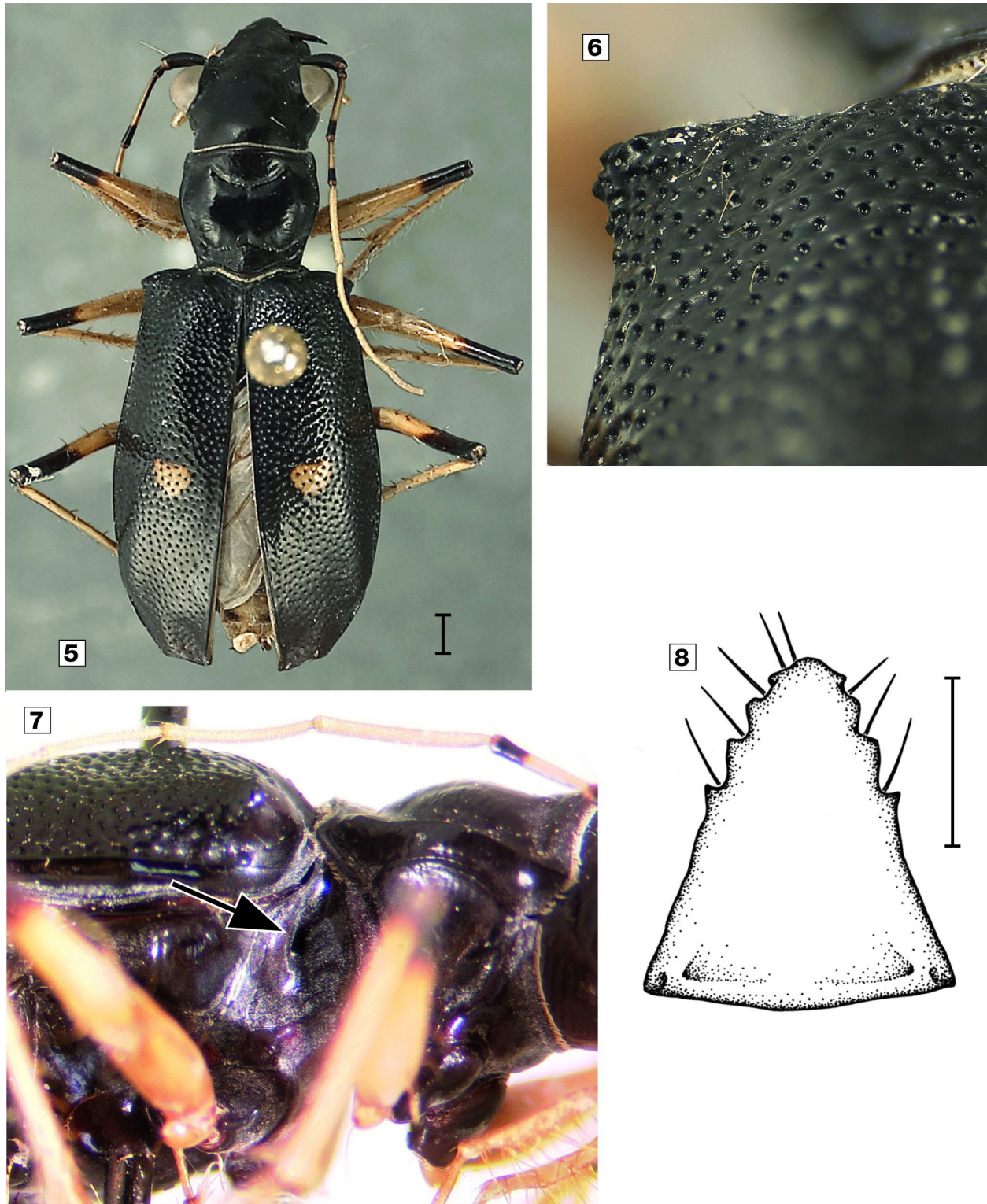
The single female specimen examined by Wiesner (1999) differed from the lectotype male in the uniformly tapered elytral apex and the fact that it did not have the pronounced humeral angle; therefore it was tentatively identified as *O. binotata*. In sharp contrast to the female specimen examined by Wiesner (1999), the FMNH female exhibits a truncated elytral apex and a pronounced anterolateral projection on the humeral angle, both of which are found in the lectotype male. The FMNH female (Fig. 5) has elytral maculation of similar size as the lectotype (Wiesner 1999, fig. 81) and lighter unpigmented areas when compared to the FMNH male. The FMNH female specimen exhibits a deep depression in the center of the mesoepisternum (Fig. 7), Wiesner (1999) noted a similar depression on the female specimen he examined; however the labrum appears more elongated (Fig. 8).

It should be noted that the key to the species of *Oxycheila* provided by Wiesner (1999) does not utilize the characters of the shape of elytra humeri, or the shape of the elytra apex. Due to this, the Guatemalan female examined by Wiesner (1999) keys out to *O. binotata*. However, the pronounced humeral angle of



**Figure 1-4.** *Oxycheila binotata* male in FMNH. **1)** Habitus (scale bar = 1mm). **2)** Labrum (scale bar = 1mm). **3)** Aedeagus, left lateral view (scale bar = 1mm). **4)** Aedeagus, right lateral view (scale bar = 1mm).





**Figure 5-8.** *Oxycheila binotata* female in FMNH. **5)** Habitus (scale bar = 1mm). **6)** Left humerus, illustrating anterolateral projection. **7)** Mesoepisternum, illustrating deep depression (arrow). **8)** Labrum (scale bar = 1mm).

the FMNH female (Fig. 6), along with collecting data of Colombia indicates that this specimen more likely represents the female of *O. binotata* than the Guatemalan female which may, in fact, represent a yet undescribed species.

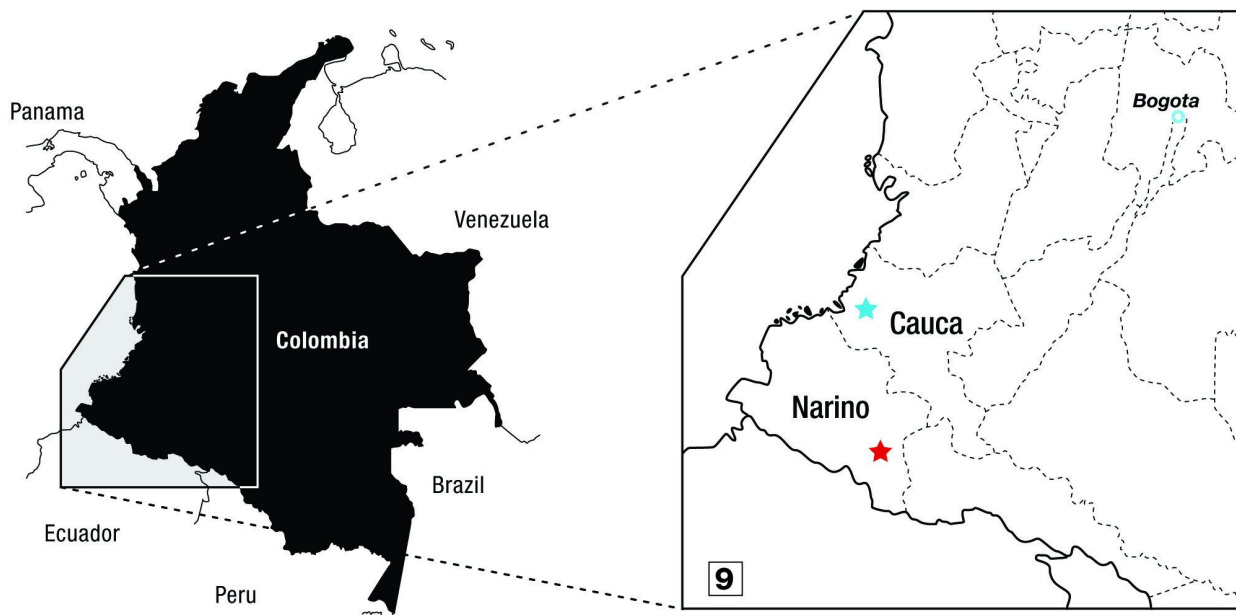
### Acknowledgments

Fabio Cassola (Rome, Italy), Boris Kondratieff (Colorado State University, Fort Collins, CO), David Pearson (Arizona State University, Tempe, AZ) and Jürgen Wiesner (Wolfsburg, Germany) reviewed the manuscript and offered numerous suggestions. James Boone (Field Museum of Natural History, Chicago, IL) provided specimens and facilities during the course of this project. Gracen Brilmyer (FMNH) photographed figures one, five, and six. Michael Ivie (Montana State University, Bozeman, MT) provided facilities and access to the photomontage system.

### Literature Cited

- Pearson, D.L., and A.P. Vogler. 2001.** Tiger beetles: the evolution, ecology, and diversity of the cicindelids. Cornell University Press; Ithaca, New York. xiii + 333 p.
- Vitolo-L., A. 2004.** Guía de la identificación de los escarabajos tigre (Coleoptera: Cicindelidae) de Colombia. Instituto de Investigación de Recursos Biológicas Alexander von Humboldt; Bogotá, Colombia. 198 p.
- Wiesner, J. 1999.** The tiger beetle genus *Oxycheila* (Insecta: Coleoptera: Cicindelidae). *Coleoptera* 3:1-81.
- Wiesner, J. 2003.** A new *Oxycheila* species from Brazil (Coleoptera: Cicindelidae). *Entomologische Zeitschrift* 113: 166-167.

Received January 16, 2011; Accepted March 8, 2011.



**Figure 9.** Map of Colombia illustrating approximate collecting locals for FMNH *Oxycheila binotata* male (blue star) and female (red star).