



Zootaxa 2702: 1–106 (2010)
www.mapress.com/zootaxa/

Copyright © 2010 · Magnolia Press

Monograph

ISSN 1175-5326 (print edition)

ZOOTAXA

ISSN 1175-5334 (online edition)

ZOOTAXA

2702

Taxonomic review of the genus *Osbornellus* Ball (Hemiptera: Cicadellidae) in Central America

EDWIN DOMÍNGUEZ^{1,2} & CAROLINA GODOY^{3,4}

¹*Insect Collection, Smithsonian Tropical Research Institute, Panama City, Republic of Panama*

²*Laboratory of Biological Study from Crop Pest, Estafeta Universitaria, Universidad de Panamá, Panama City, Republic of Panama.*

E-mail: dominguezee@si.edu

³*Universidad Estatal a Distancia (UNED) Apto postal 474-2050, Mercedes de Montes de Oca, San José Costa Rica*

⁴*Museo de Zoología, Escuela de Biología, Universidad de Costa Rica, San Pedro de Montes de Oca, Apartado postal 2060.*

E-mail: cgodoy@uned.ac.cr



Magnolia Press
Auckland, New Zealand

Accepted by C. Dietrich: 11 Aug. 2010; published: 3 Dec. 2010

EDWIN DOMINGUEZ & CAROLINA GODOY

Taxonomic review of the genus *Osbornellus* Ball (Hemiptera: Cicadellidae) in Central America
(*Zootaxa* 2702)

106 pp.; 30 cm.

3 Dec. 2010

ISBN 978-1-86977-621-3 (paperback)

ISBN 978-1-86977-622-0 (Online edition)

FIRST PUBLISHED IN 2010 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

<http://www.mapress.com/zootaxa/>

© 2010 Magnolia Press

All rights reserved.

No part of this publication may be reproduced, stored, transmitted or disseminated, in any form, or by any means, without prior written permission from the publisher, to whom all requests to reproduce copyright material should be directed in writing.

This authorization does not extend to any other kind of copying, by any means, in any form, and for any purpose other than private research use.

ISSN 1175-5326(Print edition)

ISSN 1175-5334 (Online edition)

Table of contents

Abstract	4
Introduction	4
Material and methods	4
Key to species of <i>Osbornellus</i> (Costa Rica)	6
Genus <i>Osbornellus</i> Ball 1932	9
<i>Osbornellus trinax</i> Domínguez & Godoy, sp. nov.	13
<i>Osbornellus eberhardi</i> Domínguez & Godoy, sp. nov.	16
<i>Osbornellus pseudopuniceus</i> . Domínguez & Godoy, sp. nov.	16
<i>Osbornellus aielloae</i> Domínguez & Godoy, sp. nov.	19
<i>Osbornellus quirosae</i> Domínguez & Godoy, sp. nov.	22
<i>Osbornellus bifurcatus</i> Domínguez & Godoy, sp. nov.	24
<i>Osbornellus emmeni</i> Domínguez & Godoy, sp. nov.	24
<i>Osbornellus springerae</i> Domínguez & Godoy, sp. nov.	27
<i>Osbornellus bartletti</i> Domínguez & Godoy, sp. nov.	27
<i>Osbornellus ligatus</i> Domínguez & Godoy, sp. nov.	30
<i>Osbornellus divaricatus</i> Domínguez & Godoy, sp. nov.	30
<i>Osbornellus anonae</i> Linnavuori	33
<i>Osbornellus sineprocessus</i> Domínguez & Godoy, sp. nov.	36
<i>Osbornellus afflexus</i> Domínguez & Godoy, sp. nov.	37
<i>Osbornellus latus</i> Domínguez & Godoy, sp. nov.	39
<i>Osbornellus expositus</i> Domínguez & Godoy, sp. nov.	41
<i>Osbornellus freytagi</i> Domínguez & Godoy, sp. nov.	41
<i>Osbornellus coopertus</i> Domínguez & Godoy, sp. nov.	44
<i>Osbornellus costaricensis</i> Domínguez & Godoy, sp. nov.	46
<i>Osbornellus thompsoni</i> Domínguez & Godoy, sp. nov.	47
<i>Osbornellus maesi</i> Domínguez & Godoy, sp. nov.	49
<i>Osbornellus lewisi</i> Domínguez & Godoy, sp. nov.	51
<i>Osbornellus fuentesi</i> Domínguez & Godoy, sp. nov.	52
<i>Osbornellus diamantinus</i> Domínguez & Godoy, sp. nov.	54
<i>Osbornellus transversus</i> Domínguez & Godoy, sp. nov.	56
<i>Osbornellus lanceolatus</i> Domínguez & Godoy, sp. nov.	58
<i>Osbornellus bitelum</i> Domínguez & Godoy, sp. nov.	59
<i>Osbornellus villamillsiensis</i> Domínguez & Godoy, sp. nov.	61
<i>Osbornellus cruxatus</i> Domínguez & Godoy, sp. nov.	62
<i>Osbornellus obamai</i> Domínguez & Godoy, sp. nov.	64
<i>Osbornellus linetteae</i> Domínguez & Godoy, sp. nov.	66
<i>Osbornellus inbio</i> Domínguez & Godoy, sp. nov.	66
<i>Osbornellus chichiziensis</i> Domínguez & Godoy, sp. nov.	69
<i>Osbornellus ichnoscapitatus</i> Domínguez & Godoy, sp. nov.	71
<i>Osbornellus trifurcatus</i> Domínguez & Godoy, sp. nov.	72
<i>Osbornellus corcovadiensis</i> Domínguez & Godoy, sp. nov.	73
<i>Osbornellus albocinctus</i> De Long	75
<i>Osbornellus hansonii</i> Domínguez & Godoy, sp. nov.	77
<i>Osbornellus affinis</i> (Osborn)	79
<i>Osbornellus blantoni</i> Linnavuori	83
<i>Osbornellus fulvomaculatus</i> (Osborn)	86
<i>Osbornellus compressus</i> Linnavuori	89
<i>Osbornellus libratus</i> DeLong	92
<i>Osbornellus lineatus</i> Beamer	93
<i>Osbornellus pallidus</i> Beamer	95
<i>Osbornellus nielsoni</i> Domínguez & Godoy, sp. nov.	97
<i>Osbornellus rarus</i> DeLong	97

<i>Osbornellus reversus</i> DeLong	100
Acknowledgements	104
References	106

Abstract

A taxonomic review of the genus *Osbornellus* (Hemiptera: Cicadellidae) in Costa Rica revealed the presence of 48 species, of which 37 are described as new and six are new records for the country. A key for the identification of *Osbornellus* species of Costa Rica is provided. *Osbornellus lacunis* DeLong and Martinson is synonymized with *Osbornellus blantoni* Linnavuori and *Osbornellus separatus* DeLong is synonymized with *Osbornellus pallidus*.

Key words: Leafhopper, morphology, key, description, taxonomy, Costa Rica

Introduction

The genus *Osbornellus* Ball belongs to the subfamily Deltocephalinae and the tribe Scaphoideini (Metcalf 1967). It was separated from *Scaphoideus* Uhler by Ball (1932), who designated *S. auronitens* Provancher as type-species and included five other previously described species, as well as two new species. In 1937, 13 new species were described (Beamer 1937, DeLong and Berry 1937), and 14 more were added in the 1940s (DeLong 1941a, 1941b, DeLong and Knull 1941, DeLong 1942). In the following decade Metcalf (1954) described 1 new species and Linnavuori (1959) recorded several species from South America, five of which were new. In 1967 Metcalf catalogued 56 species, the majority from North America. Subsequently, Linnavuori and Heller (1961) described two additional species, and DeLong and Martinson described several more (DeLong and Martinson 1976a, DeLong 1976, DeLong and Martinson 1976b). Martinson (1977), for her doctoral thesis, revised the genus *Osbornellus* in which she described 22 new species, but this work was never published. Finally, Ghauri (1980) described 1 new species from Jamaica, DeLong (1983) described 2 from Bolivia, and Freytag (2008) described 15 new species from the Dominican Republic (Hispaniola).

Osbornellus occurs from Canada to Argentina, although a few Old World species have been included in the subgenus *Mavromoustaca*: one from Europe (Dlabola 1987b), two from Asia (Dlabola 1984, Dlabola 1987a), and one from Africa (Matsumura 1908, Vilbaste 1976). However, these Old World species require further study to determine whether they are related to the New World species of *Osbornellus* (Nielson and Knight 2000). Eighteen species have been recorded from Central America and only seven from Costa Rica (Ballou 1936, Linnavuori 1959, Metcalf 1967, Martinson 1977, Rojas *et al.* 2001). Here we describe and illustrate 37 new species; six species are recorded from Costa Rica for the first time and two species are placed in synonymy. A key to species of *Osbornellus* of Central America is provided and data on the geographic and altitudinal distribution of each species is summarized (Table 1).

Material and methods

This review was based on the morphological analysis of specimens collected primarily with Malaise traps at different sites in Costa Rica. These specimens were mounted, labelled and deposited in the Instituto Nacional de Biodiversidad and the Universidad de Costa Rica (Museo de Zoología). Other specimens were provided by: Paul Freytag, University of Kentucky (specimens from Honduras); Charles Bartlett, University of Delaware (from Belize); Jean Michel Maes, Museo Entomológico, León (from Nicaragua); Annette Aiello, Smithsonian Tropical Research Institute, Dora Quirós, University of Panama, and Diomedes Quintero, Museo de Invertebrados, Panama (from Panama). Type material was examined from the Ohio State University, Dwight M. DeLong Collection (Ohio State University); the Kansas State University Collection (Manhattan); the Snow Entomological Museum Collection and University of Kansas (Lawrence). The method of preparing