

ZOOTAXA

338

**Synopsis of the Neotropical *Dissomphalus*
(Hymenoptera, Bethylidae)**

C. O. AZEVEDO



Magnolia Press
Auckland, New Zealand

C. O. AZEVEDO

Synopsis of the Neotropical *Dissomphalus* (Hymenoptera, Bethyridae)

(*Zootaxa* 338)

74 pp.; 30 cm.

24 October 2003

ISBN 1-877354-18-X (Paperback)

ISBN 1-877354-19-8 (Online edition)

PUBLISHED BY

Magnolia Press

P.O. Box 41383 St. Lukes

Auckland 1030

New Zealand

e-mail: zootaxa@mapress.com

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

© 2003 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)

Synopsis of the Neotropical *Dissomphalus* (Hymenoptera, Bethyridae)

C. O. AZEVEDO

Universidade Federal do Espírito Santo, Departamento de Biologia, Av. Marechal Campos 1468, Maruípe,
29.040-090 Vitória ES, Brazil. cazevedo@npd.ufes.br

Table of contents

Abstract	5
Introduction	6
Collections	7
Terminology and Measurements	8
Results and Discussion	8
Key to males of Neotropical species of <i>Dissomphalus</i>	8
<i>laticephalus</i> species-group	14
<i>Dissomphalus lobicephalus</i> sp. nov. (Figs. 1–6)	15
<i>Dissomphalus contractus</i> sp. nov. (Figs. 7–10)	16
<i>Dissomphalus laticephalus</i> sp. nov. (Figs. 11–15)	17
<i>Dissomphalus mandibulatus</i> sp. nov. (Figs. 16–19)	19
<i>gilvipes</i> species-group	20
<i>Dissomphalus krombeini</i> Azevedo, 1999 (Figs. 20–22)	20
<i>Dissomphalus gilvipes</i> Evans, 1979	22
<i>Dissomphalus alticypeatus</i> sp. nov. (Figs. 23–25)	23
<i>Dissomphalus bicerutus</i> sp. nov. (Figs. 26–28)	23
<i>tuberculatus</i> species-group	25
<i>Dissomphalus tuberculatus</i> Ashmead, 1894 (Figs. 29–32)	26
<i>Dissomphalus plaumanni</i> Evans, 1964	26
<i>rufipalpis</i> species-group	27
<i>Dissomphalus infissus</i> Evans, 1969	27
<i>Dissomphalus rufipalpis</i> Kieffer, 1910	28
<i>punctatus</i> species-group	28
<i>Dissomphalus napo</i> Evans, 1979	28
<i>Dissomphalus punctatus</i> (Kieffer, 1910)	28
<i>conicus</i> species-group	30
<i>Dissomphalus cervoides</i> sp. nov. (Figs. 33–36)	30

<i>Dissomphalus conicus</i> sp. nov. (Figs. 37–40)	32
<i>Dissomphalus curviventris</i> sp. nov. (Figs. 41–43)	33
<i>Dissomphalus manus</i> sp. nov. (Figs. 44–46)	35
<i>Dissomphalus filus</i> sp. nov. (Figs. 47–49, 57–59)	36
<i>Dissomphalus truncatus</i> sp. nov. (Figs. 50–52)	37
<i>Dissomphalus umbilicus</i> sp. nov. (Figs. 53–56)	39
<i>hemisphaericus</i> species-group	41
<i>Dissomphalus vampirus</i> sp. nov. (Figs. 63–66)	42
<i>Dissomphalus hemisphaericus</i> sp. nov. (Figs. 67–71)	43
<i>Dissomphalus ferocus</i> sp. nov. (Figs. 72–76)	44
<i>Dissomphalus undatus</i> sp. nov. (Figs. 77–81)	46
<i>Dissomphalus gordus</i> sp. nov. (Figs. 82–87)	46
<i>guttus</i> species-group	47
<i>Dissomphalus latimerus</i> sp. nov. (Figs. 88–90)	48
<i>Dissomphalus guttus</i> sp. nov. (Figs. 91–93)	49
<i>strabus</i> species-group	50
<i>Dissomphalus thysanus</i> sp. nov. (Figs. 94–99)	50
<i>Dissomphalus strabus</i> sp. nov. (Figs. 100–103)	52
<i>incomptus</i> species-group	53
<i>dumosus</i> species-group	53
<i>bicavatus</i> species-group	54
<i>Dissomphalus falcatus</i> Evans, 1962 (Fig. 104–105)	54
<i>bisulcus</i> species-group	55
<i>bifoveatus</i> species-group	55
<i>rasissimus</i> species-group	55
<i>vallensis</i> species-group	55
<i>Dissomphalus digitatus</i> Azevedo, 1999	56
<i>Dissomphalus dilatatus</i> Azevedo, 1999	56
<i>Dissomphalus extrarramis</i> Azevedo, 1999	56
<i>Dissomphalus strictus</i> Azevedo, 1999	57
<i>Dissomphalus triangularis</i> Azevedo, 1999	57
<i>longyclypeus</i> species-group	57
<i>Dissomphalus gigantus</i> Azevedo, 1999	57
<i>Dissomphalus scamatus</i> Azevedo, 1999	58
<i>ulceratus</i> species-group	58
<i>Dissomphalus concavatus</i> Azevedo, 1999	58
<i>Dissomphalus rectilineus</i> Azevedo, 1999	58
<i>linearis</i> species-group	59
<i>Dissomphalus linearis</i> Azevedo, 1999	59
<i>curvifoveatus</i> species-group	59
<i>Dissomphalus curvifoveatus</i> Azevedo, 1999	60
<i>altivolans</i> species-group	60
<i>Dissomphalus altivolans</i> Evans, 1954	60

<i>Dissomphalus subdeformis</i> Azevedo, 1999	61
<i>apertus</i> species-group	61
<i>Dissomphalus apertus</i> Kieffer, 1914	61
<i>unitus</i> species-group	62
<i>Dissomphalus unitus</i> Azevedo, 1999	62
<i>rasissimus</i> species-group	62
<i>Dissomphalus bilobatus</i> Azevedo, 1999	62
<i>basidentatus</i> species-group	63
<i>Dissomphalus basidentatus</i> Azevedo, 1999	63
<i>stellatus</i> species-group	63
<i>Dissomphalus stellatus</i> Azevedo, 1999	64
Species not inserted in species-group	64
<i>Dissomphalus archboldi</i> Evans, 1969 (Figs. 106–109)	64
<i>Dissomphalus bispinulatus</i> Evans, 1969	64
<i>Dissomphalus brasiliensis</i> Kieffer, 1910	65
<i>Dissomphalus chiapanus</i> Evans, 1962 (Figs. 110–112)	66
<i>Dissomphalus clypeatus</i> Evans, 1954 (Figs. 113–120)	66
<i>Dissomphalus collaris</i> Evans, 1962 (Figs. 121–125)	67
<i>Dissomphalus confusus</i> Ashmead, 1894 (Figs. 126–130)	68
<i>Dissomphalus cornutus</i> Evans, 1964	68
<i>Dissomphalus fungosus</i> Evans, 1979	69
<i>Dissomphalus mirabilis</i> Evans, 1966	69
<i>Dissomphalus nanellus</i> Evans, 1969 (Figs. 131–135)	69
<i>Dissomphalus rettenmeyeri</i> Evans, 1964 (Figs. 136–137)	70
<i>Dissomphalus politus</i> Ashmead, 1894 (Figs. 138–143)	71
Acknowledgment	72
References	72

Abstract

The following 23 new species are described and illustrated: *Dissomphalus alticlypeatus*, *D. biceratus*, *D. cervoides*, *D. conicus*, *D. contractus*, *D. curviventris*, *D. laticephalus*, *D. lobicephalus*, *D. mandibulatus*, *D. manus*, *D. thysanus*, *D. filus*, *D. truncatus*, *D. umbilicus*, *D. spinosus*, *D. vampirus*, *D. hemisphaericus*, *D. ferocus*, *D. undatus*, *D. gordus*, *D. latimerus*, *D. guttus*, *D. strabus*. Species-groups of *conicus*, *guttus*, *hemisphaericus*, *incomptus*, *laticephalus*, *gilvipes*, *punctatus*, *rufipalpis*, *strabus* and *tuberculatus* are defined. Diagnoses, descriptions of genitalia, and illustrations of *D. archboldi* Evans, 1969, *D. chiapanus* Evans, 1962, *D. clypeatus* Evans, 1954, *D. collaris* Evans, 1962, *D. confusus*, Ashmead, 1894, *D. falcatus* Evans, 1962, *D. nanellus* Evans, 1969, *D. politus* Ashmead, 1894, *D. rettenmeyeri* Evans, 1964 and *D. tuberculatus*, Ashmead, 1894 are provided. New data for *D. altivolans* Evans, 1954, *D. apertus* Kieffer, 1914, *D. basidentatus* Azevedo, 1999, *D. bilobatus* Azevedo, 1999, *D. bispinulatus* Evans, 1969, *D. brasiliensis* Kieffer, 1910, *D. concavatus* Azevedo, 1999, *D. curvifoveatus* Azevedo, 1999, *D. cornutus* Evans, 1964, *D. digitatus*

Azevedo, 1999, *D. dilatatus* Azevedo, 1999, *D. extrarramis* Azevedo, 1999, *D. fungosus* Evans, 1979, *D. gilvipes* Evans, 1979, *D. gigantus* Azevedo, 1999, *D. infissus* Evans, 1969, *D. krombeini* Azevedo, 1999, *D. linearis* Azevedo, 1999, *D. mirabilis* Evans, 1966, *D. napo* Evans, 1979, *D. plaumanni* Evans, 1964, *D. punctatus* (Kieffer, 1910), *D. rectilineus* Azevedo, 1999, *D. rufipalpis* Kieffer, 1910, *D. scamatus* Azevedo, 1999, *D. stellatus* Azevedo, 1999, *D. strictus* Azevedo, 1999, *D. subdeformis* Azevedo, 1999, *D. triangularis* Azevedo, 1999, *D. unitus* Azevedo, 1999 are given. *D. politus* and *D. tuberculatus* have their lectotypes designated. A key to males of Neotropical species is included.

Key words: Taxonomy, Hymenoptera, Bethyridae, *Dissomphalus*, Neotropical region

Introduction

Dissomphalus Ashmead, 1893, was described based on some species of Bethyridae, Pristocerinae possessing two pubescent tubercles on the second metasomal tergite in the males (Evans, 1954). These tergal processes seem to be an ornamented opening of a gland on the surface of this tergite (Evans, 1979).

Azevedo (1999a) revised the species whose tergal processes are restricted to the median third of the tergal width, and included a brief historical review of the genus. The tergal processes are an apomorphic character of the genus which make the genus easily recognized within the Pristocerinae. However, some species have lost the processes during of the evolution of different monophyletic groups, so that this loss is a homoplastic condition within the genus. These species usually run to *Apenesia* Westwood, 1874 or *Pseudisobranchium* Kieffer, 1904 in most keys of the subfamily. The main synapomorphy shared by all species of *Dissomphalus*, both with or without tergal processes, is the aedeagus divided into two distinct structures, a pair of ventral rami and a dorsal body, the latter being often complex and usually with two or more pairs of apical lobes.

Taxonomy of *Dissomphalus* is strongly based on males. Females of different species of *Dissomphalus* are very similar and hardly separable, because there is little variation, and they are also highly modified, without ocelli, notauli, parapsidal furrows, scutellum, pronotal and propodeal carinae, mesepisternal and subalar grooves and tergal processes (Azevedo 1999a). Females are very rare in collections and sex association is virtually impossible unless couples are taken in copula. Thus this paper treats males only in any detail.

Gordh & Moczar (1990) listed 55 Neotropical species of *Dissomphalus* in their catalog. After that, Azevedo (1999a, 1999c, 2000, 2001) described an additional 75 species, and six synonymies were proposed. In this paper, I describe 24 new Neotropical species and *D. krombeini* Azevedo, 1999 is recorded for the first time from the Neotropical region. Therefore, the Neotropical fauna of *Dissomphalus* now has 153 species, making *Dissomphalus* the largest bethyrid genus in the Neotropical region. *Dissomphalus* is also recorded from all other zoogeographic regions except the Australian region.