



Zootaxa 3539: 1–80 (2012)
www.mapress.com/zootaxa/

Copyright © 2012 · Magnolia Press

ISSN 1175-5326 (print edition)

ZOOTAXA

ISSN 1175-5334 (online edition)

Monograph

urn:lsid:zoobank.org:pub:0564EF02-FCF9-49A8-BDAC-F432876C16B8

ZOOTAXA

3539

Revision of *Eupsenella* Westwood, 1874 (Hymenoptera, Bethylidae)

MAGNO S. RAMOS¹ & CELSO O. AZEVEDO²

¹Universidade Federal do Espírito Santo, PPG-Biologia Animal, Av. Marechal Campos 1468, Maruípe, 29.040-090 Vitória ES, BRAZIL. E-mail: magnosuprani@gmail.com

²Universidade Federal do Espírito Santo, Departamento de Biologia, Av. Marechal Campos 1468, Maruípe, 29.040-090 Vitória ES, BRAZIL. E-mail: bethylidae@gmail.com



Magnolia Press
Auckland, New Zealand

Accepted by A.S. Lelej: 28 Sept. 2012; published: 5 Nov. 2012

MAGNO S. RAMOS & CELSO O. AZEVEDO
Revision of *Eupsenella* Westwood, 1874 (Hymenoptera, Bethylidae)
(*Zootaxa* 3539)

80 pp.; 30 cm.

5 November 2012

ISBN 978-1-77557-042-4 (paperback)

ISBN 978-1-77557-043-1 (Online edition)

FIRST PUBLISHED IN 2012 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

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

© 2012 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
Systematics	8
Key to species of <i>Eupsenella</i>	8
<i>Eupsenella</i> Westwood, 1874	10
<i>Eupsenella agilis</i> Westwood, 1874	11
<i>Eupsenella ceciliae</i> Terayama, 2004	11
<i>Eupsenella diemenensis</i> Dodd, 1916	11
<i>Eupsenella flavifemorata</i> Terayama, 2004	12
<i>Eupsenella insulana</i> Gordh & Harris, 1996	13
<i>Eupsenella proxima</i> Kieffer, 1911	15
<i>Eupsenella reticulata</i> Terayama, 2004	15
<i>Eupsenella ajabatha</i> Ramos & Azevedo, sp. nov.	15
<i>Eupsenella alawa</i> Ramos & Azevedo, sp. nov.	16
<i>Eupsenella alura</i> Ramos & Azevedo, sp. nov.	18
<i>Eupsenella antakirinja</i> Ramos & Azevedo, sp. nov.	19
<i>Eupsenella araba</i> Ramos & Azevedo, sp. nov.	20
<i>Eupsenella arabana</i> Ramos & Azevedo, sp. nov.	21
<i>Eupsenella baada</i> Ramos & Azevedo, sp. nov.	23
<i>Eupsenella barada</i> Ramos & Azevedo, sp. nov.	24
<i>Eupsenella barna</i> Ramos & Azevedo, sp. nov.	25
<i>Eupsenella batjala</i> Ramos & Azevedo, sp. nov.	26
<i>Eupsenella bilingara</i> Ramos & Azevedo, sp. nov.	27
<i>Eupsenella bugulmara</i> Ramos & Azevedo, sp. nov.	29
<i>Eupsenella dalla</i> Ramos & Azevedo, sp. nov.	30
<i>Eupsenella djagaraga</i> Ramos & Azevedo, sp. nov.	31
<i>Eupsenella eora</i> Ramos & Azevedo, sp. nov.	32
<i>Eupsenella ilba</i> Ramos & Azevedo, sp. nov.	34
<i>Eupsenella inawonga</i> Ramos & Azevedo, sp. nov.	35
<i>Eupsenella inggarda</i> Ramos & Azevedo, sp. nov.	36
<i>Eupsenella ingura</i> Ramos & Azevedo, sp. nov.	37
<i>Eupsenella iwaidja</i> Ramos & Azevedo, sp. nov.	38
<i>Eupsenella jaadwa</i> Ramos & Azevedo, sp. nov.	39
<i>Eupsenella jaara</i> Ramos & Azevedo, sp. nov.	41
<i>Eupsenella jaburara</i> Ramos & Azevedo, sp. nov.	42
<i>Eupsenella jadira</i> Ramos & Azevedo, sp. nov.	43
<i>Eupsenella jagara</i> Ramos & Azevedo, sp. nov.	44
<i>Eupsenella janda</i> Ramos & Azevedo, sp. nov.	45
<i>Eupsenella kabalbara</i> Ramos & Azevedo, sp. nov.	46
<i>Eupsenella kaibara</i> Ramos & Azevedo, sp. nov.	47
<i>Eupsenella karanja</i> Ramos & Azevedo, sp. nov.	48
<i>Eupsenella karawa</i> Ramos & Azevedo, sp. nov.	49
<i>Eupsenella kokatha</i> Ramos & Azevedo, sp. nov.	50
<i>Eupsenella larrakia</i> Ramos & Azevedo, sp. nov.	51
<i>Eupsenella maya</i> Ramos & Azevedo, sp. nov.	52
<i>Eupsenella malgana</i> Ramos & Azevedo, sp. nov.	53
<i>Eupsenella nanda</i> Ramos & Azevedo, sp. nov.	55
<i>Eupsenella nangatara</i> Ramos & Azevedo, sp. nov.	56
<i>Eupsenella pangkala</i> Ramos & Azevedo, sp. nov.	57
<i>Eupsenella wanamara</i> Ramos & Azevedo, sp. nov.	58
Discussion	59
Acknowledgements	61
References	61
List of figures	62

Abstract

The Australian genus *Eupsenella* Westwood, 1874 is revised and 45 species are recognized, seven previously described and 38 new, namely: *Eupsenella ajabatha* Ramos & Azevedo, **sp. nov.**, *E. alawa* Ramos & Azevedo, **sp. nov.**, *E. alura* Ramos & Azevedo, **sp. nov.**, *E. antakirinja* Ramos & Azevedo, **sp. nov.**, *E. araba* Ramos & Azevedo, **sp. nov.**, *E. arabana* Ramos & Azevedo, **sp. nov.**, *E. baada* Ramos & Azevedo, **sp. nov.**, *E. barada* Ramos & Azevedo, **sp. nov.**, *E. barna* Ramos & Azevedo, **sp. nov.**, *E. batjala* Ramos & Azevedo, **sp. nov.**, *E. bilingara* Ramos & Azevedo, **sp. nov.**, *E. bugulmara* Ramos & Azevedo, **sp. nov.**, *E. dalla* Ramos & Azevedo, **sp. nov.**, *E. djagaraga* Ramos & Azevedo, **sp. nov.**, *E. eora* Ramos & Azevedo, **sp. nov.**, *E. ilba* Ramos & Azevedo, **sp. nov.**, *E. inawonga* Ramos & Azevedo, **sp. nov.**, *E. inggarda* Ramos & Azevedo, **sp. nov.**, *E. ingura* Ramos & Azevedo, **sp. nov.**, *E. iwaidja* Ramos & Azevedo, **sp. nov.**, *E. jaadwa* Ramos & Azevedo, **sp. nov.**, *E. jaara* Ramos & Azevedo, **sp. nov.**, *E. jaburara* Ramos & Azevedo, **sp. nov.**, *E. jadira* Ramos & Azevedo, **sp. nov.**, *E. jagara* Ramos & Azevedo, **sp. nov.**, *E. janda* Ramos & Azevedo, **sp. nov.**, *E. kabalbara* Ramos & Azevedo, **sp. nov.**, *E. kaibara* Ramos & Azevedo, **sp. nov.**, *E. karanja* Ramos & Azevedo, **sp. nov.**, *E. karawa* Ramos & Azevedo, **sp. nov.**, *E. kokatha* Ramos & Azevedo, **sp. nov.**, *E. larrakia* Ramos & Azevedo, **sp. nov.**, *E. maya* Ramos & Azevedo, **sp. nov.**, *E. malgana* Ramos & Azevedo, **sp. nov.**, *E. nanda* Ramos & Azevedo, **sp. nov.**, *E. nangatara* Ramos & Azevedo, **sp. nov.**, *E. pangkala* Ramos & Azevedo, **sp. nov.**, *E. wanamara* Ramos & Azevedo, **sp. nov.**, which are described and illustrated. *Eupsenella ceciliae* Terayama, 2004, *E. diemenensis* Dodd, 1916, *E. flavifemorata* Terayama, 2004, *E. insulana* Gordh & Harris, 1996, and *E. reticulata* Terayama, 2004 had their taxonomical variations and known distribution broadened. Keys to species of Australian region based on males and females are provided.

Key words: Chrysidoidea, Bethylinae; Australian region

Introduction

Eupsenella Westwood, 1874 is hitherto composed of seven species, being type species of the genus *Eupsenella agilis* Westwood, 1874. This genus is restricted to the Australian region. The most distinctive feature of *Eupsenella* is the forewing with six closed cells, being the second radial 1 (2R1), first radial 1 (1R1) and first medial (1M) cells closed (Fig. 1). *Lytopsenella* Kieffer is the only genus in Bethylinae with this condition. However in *Eupsenella* the second radial 1 cell is short, slightly higher than first radial 1, whereas in *Lytopsenella* it is elongate, reaching about 2.0 first radial 1. Other features of *Eupsenella* include the presence of notauli and parapsidal sutures, 13-segmented antenna and incipient anal vein in hind wing.

The taxonomy of *Eupsenella* has been discussed by various workers, but without study of the type material (Ashmead 1893; Dalla Torre 1898; Kieffer 1905, 1914; Lameere 1938; Polaszek & Krombein 1994), thus the same remains poorly known. Since the original description of *Eupsenella* it lasted thirty-seven years for the second species *E. proxima* to be described by Kieffer (1911). The other five species are *E. diemensis* Dodd, 1916, *E. insulana* Gordh & Harris, 1996, Terayama, 2004 *E. ceciliae* Terayama, 2004, *E. flavifemorata* Terayama, 2004, and *E. reticulata* Terayama, 2004. Most of these species are known from a small series of specimens.

Riek (1970) indicated that *Eupsenella* species attacks Lepidoptera larvae but evidence has been weak. According to Gordh & Harris (1996) the discovery of hosts of the *Eupsenella* is noteworthy consistent with the host and records of most other Bethylinae which attack moth larvae.

The main goal of the current paper is to recognize, define and describe the species of *Eupsenella*. In addition, to redefine the diagnostic characteristics of the genus as well as provide for the first time a key to species of Australian region based on both males and females.

Material and methods

The material was provided by the following institutions: ANIC, Australian National Insect Collection, Canberra, Australia (Nicole Fisher); HNHM, Hungarian Natural History Museum, Budapest (Sándor Csósz); NZAC, New Zealand Arthropod Collection, Auckland, New Zealand (Darren Ward); SAMA, South Australian Museum, North Terrace, Adelaide, Australia (Peter Hudson).