

REVISTA BRASILEIRA DE *Entomologia*

A Journal on Insect Diversity and Evolution



© 2018 Sociedade Brasileira de Entomologia. Published by Elsevier Editora Ltda. All rights reserved.

All rights reserved and protected by law 9.610 - 19/02/98. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or any information storage and retrieval system, without permission in writing from SBE and the Publisher.

No responsibility is assumed by Elsevier Editora Ltda. or SBE for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions, or ideas contained in the material herein. Although all advertising material is expected to conform to ethical standards, inclusion in this publication does not constitute a guarantee or endorsement of the quality or value of such product or of the claims made of it by its manufacturer.



RJ: 55-21-39709300
SP: 55-11-51058555

Site: www.elsevier.com
ISSN: 0085-5626

Partially financed with funds from



Ministério da
Ciência e Tecnologia



Ministério da
Educação

GOVERNO FEDERAL
BRASIL
PAÍS RICO É PAÍS SEM POBREZA

Editor-in-Chief

Rodrigo M. Feitosa
Universidade Federal do Paraná, Brazil

Assistant Editor

Claudio J. B. de Carvalho
Universidade Federal do Paraná, Brazil

Associate Editors

Adeney F. Bueno
*Empresa Brasileira de Pesquisa Agropecuária,
Embrapa Soja, Brazil*

Adriana Marvaldi
Museo de La Plata, Argentina

Ana Eugênia Campos
Instituto Biológico, São Paulo, Brazil

Andrzej Grzywacz
Nicolaus Copernicus University, Poland

Bernardo Santos
National Museum of Natural History, USA

Takumasa Kondo
*Corporación colombiana de investigación
agropecuaria, Colombia*

Daniel R. Sosa-Gomez
*Empresa Brasileira de Pesquisa Agropecuária,
Embrapa Soja, Brazil*

Daniela M. Takiya
Universidade Federal do Rio de Janeiro, Brazil

Diana Grisales
Universidad de Antioquia, Colombia

Douglas Zeppelini Filho
Universidade Estadual da Paraíba, Brazil

Eduardo A. B. Almeida
Universidade de São Paulo, Brazil

Eliana Canello
*Museu de Zoologia da Universidade de
São Paulo, Brazil*

Frederico Falcão Salles
Universidade Federal de Viçosa, Brazil

Gustavo Graciolli
*Universidade Federal de Mato Grosso
do Sul, Brazil*

Hector A. Vargas
Universidad de Tarapacá, Chile

Inge Armbrecht
Universidad del Valle, Colombia

James Carpenter
American Museum of Natural History, USA

Jeffrey Sosa-Calvo
Arizona State University, USA

Leonardo Rodrigues Barbosa
*Empresa Brasileira de Pesquisa
Agropecuária, Embrapa Florestas, Brazil*

Lívia Rodrigues Pinheiro
*Museu de Zoologia da Universidade de
São Paulo, Brazil*

Lucas Augusto Kaminski
*Universidade Federal do Rio Grande do Sul,
Brazil*

Marcel G. Hermes
Universidade Federal de Lavras, Brazil

Marcela L. Monné
Universidade Federal do Rio de Janeiro, Brazil

Márcia S. Couri
Universidade Federal do Rio de Janeiro, Brazil

Maria Anice M. Sallum
Universidade de São Paulo, Brazil

Mariane A. Nিকেle
Universidade Federal do Paraná, Brazil

Mário A. Navarro Silva
Universidade Federal do Paraná, Brazil

Regiane Cristina O. F. Bueno
Universidade Estadual Paulista, Brazil

Ricardo Solar
Universidade Federal de Minas Gerais, Brazil

Rodrigo B. Gonçalves
Universidade Federal do Paraná, Brazil

Rodrigo F. Krüger
Universidade Federal de Pelotas, Brazil

Sarah S. Oliveira
Universidade Federal de Goiás, Brazil

Manuscript Reviewers: Names available in last issue of each volume.

Edition: 40 copies.

Indexed in: Abstracts of Entomology, Biological Abstracts, Bioresearch Index, Bulletin Signalitique, CAB Abstracts, Current Contents/Agriculture, Biology and Environmental Sciences, Entomological Abstracts, Latindex, LILACS, Referativnyi Zhurnal, Science Citation Index - ISI, Scientific Electronic Library Online - SciELO, Scopus, The Zoological Record.

Online version: www.scielo.br/rbent

REVISTA BRASILEIRA DE
Entomologia
A Journal on Insect Diversity and Evolution



SOCIEDADE BRASILEIRA DE ENTOMOLOGIA (SBE)

(Founded 17 July 1937)
CNPJ 43.951.615/0001-06

Officers (2017-2018)

President: Mario Antonio Navarro da Silva,
Universidade Federal do Paraná (UFPR)

Vice-President: Lúcia Massutti de Almeida, *UFPR*

1st Secretary: John Lattke, *UFPR*

2nd Secretary: Edilson Caron, *UFPR*

1st Treasurer: Rodrigo Barbosa Gonçalves, *UFPR*

2nd Treasurer: Eduardo Carneiro, *UFPR*

Editor-in-Chief (2017-2018)

Rodrigo M. Feitosa, *UFPR*

Annual dues (2017)

Brazilian members: R\$ 180.

Foreign members: US\$ 60.

Brazilian students membership: R\$ 150.

Membership

Made by specific form requested by email. There is no entrance fee.

Postal Address

Caixa Postal 19030, 81531-980, Curitiba, Paraná, Brasil.

Email: rbe@ufpr.br

Home page: <http://www.sbe.ufpr.br>