

ISSN 0370 - 4327

“ REDIA ”

GIORNALE DI ZOOLOGIA

PUBLISHED

Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria

CREA Research Centre for Plant Protection and Certification

Volume CIV
TERZA SERIE
104

*Rerum natura nusquam magis
quam in minimis tota.*

PLINIO



FIRENZE - 2021

ISSN 0370 - 4327

“ REDIA ”

GIORNALE DI ZOOLOGIA

PUBLISHED

Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria
CREA Research Centre for Plant Protection and Certification

Volume CIV
TERZA SERIE
104

*Rerum natura nusquam magis
quam in minimis tota.*

PLINIO



 **crea** Journals
Consiglio per la ricerca in agricoltura
e l'analisi dell'economia agraria

FIRENZE - 2021

“ REDIA „

Journal of Zoology

Founded by Antonio Berlese, Firenze, 1903

Published by CREA Research Centre for Plant Protection and Certification
(formerly: Istituto Sperimentale per la Zoologia Agraria, Firenze)
Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria

Editor-in-Chief

Pio Federico Roversi
Firenze, Italy

Associate Editors

Sauro Simoni
Firenze, Italy

Roberto Nannelli
Firenze, Italy

Managing Editor

Donatella Goggioli
Firenze, Italy

Editorial Board

Ramon Albajes <i>Lleida, Spain</i>	Andrew Paul Gutierrez <i>Berkeley, USA</i>	Hervé Jactel <i>Cestas, France</i>	Agatino Russo <i>Catania, Italy</i>
Miguel Angel Altieri <i>Berkeley, USA</i>	Tim Haye <i>Delémont, Switzerland</i>	Mariusz Lewandowski <i>Warszawa, Poland</i>	Peter Schausberger <i>Vienna, Austria</i>
Sebastiano Barbagallo <i>Catania, Italy</i>	Keith M. Harris <i>Ripley, Woking, England</i>	Francois Lieutier <i>Orleans, France</i>	Stephan Scheurer <i>Berlin, Germany</i>
Andrea Binazzi <i>Firenze, Italy</i>	Sherif Hassan <i>Darmstadt, Germany</i>	Evert E. Lindquist <i>Ottawa, Canada</i>	Thomas Schröder <i>Braunschweig, Germany</i>
Stefano Colazza <i>Palermo, Italy</i>	Axel Hausmann <i>München, Germany</i>	Gabriella Lo Verde <i>Palermo, Italy</i>	Ward Strong <i>Veron, Canada</i>
Piero Cravedi <i>Piacenza, Italy</i>	Kim Hoelmer <i>Newark, USA</i>	Pietro Luciano <i>Sassari, Italy</i>	Elijah Talamas <i>Tallahassee, USA</i>
Renato Crozzoli <i>Maracay, Venezuela</i>	Claudio Ioriatti <i>S. Michele all'Adige, Italy</i>	Manuel Mota <i>Evora, Portugal</i>	Eustachio Tarasco <i>Bari, Italy</i>
Romano Dallai <i>Siena, Italy</i>	Natsumi Kanzaki <i>Tsukuba, Japan</i>	Juan Nieto Nafria <i>Leon, Spain</i>	Stefano Turillazzi <i>Firenze, Italy</i>
Enrico de Lillo <i>Bari, Italy</i>	Gerrit Karssen <i>Wageningen, Netherland</i>	Eric Palevsky <i>Ramat Yishay, Israel</i>	Kees van Frankenhuyzen <i>Sault Ste. Marie, Canada</i>
Colin Favret <i>Montreal, Canada</i>	Pavel Klimov <i>Ann Arbor, Michigan, USA</i>	Francesco Paoli <i>Firenze, Italy</i>	Claire Villemant <i>Paris, France</i>
Ignazio Floris <i>Sassari, Italy</i>	Albrecht M. Köppenhöfer <i>New Brunswick, USA</i>	Francesco Pennacchio <i>Napoli, Italy</i>	Bradleigh Vinson <i>Tamu, USA</i>
Giacinto Germinara <i>Foggia, Italy</i>	Serge Kreiter <i>Montpellier, France</i>	Alain Roques <i>Ardon - Orleans, France</i>	

Editorial policy

Redia is concerned with research in the field of agricultural, forest and urban zoology, predominantly dealing with entomology, acarology and nematology. Particularly welcome are fundamental studies concerning taxonomy and biology of crop pests and their natural enemies in agricultural and forest environments, as well as applied researches on methods of preventing and controlling their infestations.

The Publisher's Policy is to use acid-free permanent paper.

INDEX OF THE VOLUME 104 OF «REDIA»

HÁRI K., FAIL J., STREITO J.-C., FETYKÓ K.G., SZITA É., HALTRICH A., VIKÁR D., RADÁCSI P., VÉTEK G. - First record of <i>Aleuroclava aucubae</i> (Hemiptera Aleyrodidae) in Hungary, with a checklist of whiteflies occurring in the countryPag.	3
http://dx.doi.org/10.19263/REDIA-104.21.01	
BOROWIEC L., GHAHARI H. - An annotated checklist of the Iranian Cassidinae (Coleoptera Chrysomelidae)»	9
http://dx.doi.org/10.19263/REDIA-104.21.02	
SCHIFANI E., NALINI E., GENTILE V., ALAMANNI F., ANCONA C., CARIA M., CILLO D., BAZZATO E. - Ants of Sardinia: an updated checklist based on new faunistic, morphological and biogeographical notes»	21
http://dx.doi.org/10.19263/REDIA-104.21.03	
PRASAD L., PERVEZ R., GABA S. - Bio-efficacy of fungal bioagents and its crude secondary metabolites against root knot nematode <i>Meloidogyne incognita</i> [(Kofoid & White, 1919) Chitwood, 1949] infesting tomato (<i>Solanum lycopersicum</i> L.).....»	37
http://dx.doi.org/10.19263/REDIA-104.21.04	
TREMATERRA P., GOGLIA L., COLACCI M. - Faunistic notes on Lepidoptera Tortricidae of Gargano territory with recording of <i>Ancylis minimana</i> (Caradja, 1916) new to Italy.....»	45
http://dx.doi.org/10.19263/REDIA-104.21.05	
FRANCARDI V., VITALE S., STRANGI A., BINAZZI F., BENVENUTI C., BARZANTI G., LUONGO L., LANDI S., PENNACCHIO F. - <i>Liparthrum colchicum</i> Semenov (Coleoptera Curculionidae Scolytinae) in Italy: introduced, established or native species?.....»	55
http://dx.doi.org/10.19263/REDIA-104.21.06	
MENCHETTI M., CIANFERONI F., MAZZA G., DAL CIN M., BARBATO D., BENOCCI A., CERVO R., DAPPORTO L., PICCHI M.S., VANNI L., CABRINI R., MORI E. - Checklist of macro-invertebrates of the Special Conservation Area “Poggi di Prata” (Grosseto, central Italy) through a citizen-science end expert-based approach.....»	63
http://dx.doi.org/10.19263/REDIA-104.21.07	
KOUTSOUKOS E., KAZILAS C. - Addressing distributional shortcomings through citizen science records: the presence of <i>Hermetia illucens</i> (Linnaeus, 1758) (Diptera Stratiomyidae) in Algeria.....»	69
http://dx.doi.org/10.19263/REDIA-104.21.08	
GARGANI E., BENVENUTI C., MARIANELLI L., ROVERSI P.F., RICCIOLINI M., SCARPELLI I., SACCHETTI P., NENCIONI A., RIZZO D., STRANGI A., IOVINELLA I., CUTINO I. - A five-year survey in Tuscany (Italy) and detection of <i>Xylella fastidiosa</i> subspecies <i>multiplex</i> in potential insect vectors, collected in Monte Argentario.....»	75
http://dx.doi.org/10.19263/REDIA-104.21.09	
BAZZATO E., MARIGNANI M., ANCONA C., CARIA M., CILLO D., SERRA E. - First record of <i>Ozognathus cornutus</i> (LeConte, 1859) (Coleoptera Ptinidae) from Sardinia, Italy.....»	89
http://dx.doi.org/10.19263/REDIA-104.21.10	
GIANNETTI D., SCHIFANI E., CASTRACANI C., GHIZZONI M., DELAITI M., PENNER F., SPOTTI F.A., MORI A., IORIATTI C., GRASSO D.A. - Assessing ant diversity in agroecosystems: the case of Italian vineyards of the Adige Valley.....»	97
http://dx.doi.org/10.19263/REDIA-104.21.11	
MORELLI A., BISCACCANTI A.B. - New records of moth flies (Diptera Psychodidae) mainly from protected areas of peninsular Italy.....»	111
http://dx.doi.org/10.19263/REDIA-104.21.12	
BALOG L.E., HOLOVACHOV O., TÖRÖK J.K. - Prevalence and distribution of different natural enemies in the harlequin ladybird <i>Harmonia axyridis</i> (Coleoptera Coccinellidae).....»	125
http://dx.doi.org/10.19263/REDIA-104.21.13	
BENVENUTI C., STRANGI A., IOVINELLA I., BARZANTI G. P., SIMONI S., VITALE S., LUONGO L., FRANCARDI V., ROVERSI P.F. - <i>Xylosandrus compactus</i> and <i>Liparthrum colchicum</i> (Coleoptera Scolytinae) in Tuscany: a preliminary screening of associated fungi.....»	139
http://dx.doi.org/10.19263/REDIA-104.21.14	
MAZZA G., BINAZZI F., MARRACCINI D., BONCOMPAGNI L., SABBATINI PEVERIERI G., ROVERSI P.F., GARGANI E. - Evaluation of <i>Chrysoperla carnea</i> complex and coccinellid predators as biocontrol agents of <i>Ricania speculum</i> (Walker, 1851) (Hemiptera Ricaniidae)»	147
http://dx.doi.org/10.19263/REDIA-104.21.15	
TOMA L., PARISI F. - New records of seed beetles (Chrysomelidae Bruchinae) of the Aspromonte National Park; a study in the Calabrian Apennines, Italy.....»	155
http://dx.doi.org/10.19263/REDIA-104.21.16	
GEORGIEV G., M. GEORGIEVA, K. TRENCHVA, P. MIRCHEV, M. KECHEV, S. BELILOV, V. PETROVA - First record of <i>Cinara (Cinara) cedri cedri</i> Mimeur (Hemiptera Aphididae) in Bulgaria.»	161
http://dx.doi.org/10.19263/REDIA-104.21.17	

- VITALE S., LUONGO L., BARZANTI G.P., BINAZZI F., PETRUCCI M., GALLI M., PENNACCHIO F., FRANCARDI V. -
First report of *Geosmithia pallida* and *G. langdonii* associated with *Liparthrum colchicum*
in central Italy. (Short Note).....» 167
<http://dx.doi.org/10.19263/REDIA-104.21.18>
- ORTEGO J., MIER DURANTE M.P., NIETO NAFRÍA J.M. - *Aphis cordubensis* sp. n. (Hemiptera Aphididae)
living on *Abutilon megapotamicum* (Malvaceae) from Cordoba province (Argentina).» 171
<http://dx.doi.org/10.19263/REDIA-104.21.19>
- ELIMEM M., LAHFEF C., KALBOUSSI M., SAKHRAOUI A., BESSOUDA B., LIMEM SELLEMI E., ROUZ S. - The alien psyllid
Macrohemitoma gladiata Kuwayama (1908) (Hemiptera Psylloidea Homotomidae); a new pest on
Ficus microcarpa trees in Tunisia.» 177
<http://dx.doi.org/10.19263/REDIA-104.21.20>
- BELLA S., CATANIA R., BAVIERA C. – First record of the genus *Serangium* Blackburn, 1889 (Coleoptera,
Coccinellidae) in Italy.....» 185
<http://dx.doi.org/10.19263/REDIA-104.21.21>
- GRUJIĆ N., GRAORA D., NJEŽIĆ B., BOSANČIĆ B., TARASCO E. – Virulence of entomopathogenic nematodes to
three soft scale insect species.» 193
<http://dx.doi.org/10.19263/REDIA-104.21.22>
- RAHIM N., CHAKALI G., BATTISTI A. – Impact of natural enemies on larvae of *Thaumetopoea bonjeani*
(Lepidoptera Notodontidae) in association with *Thaumetopoea pityocampa* in northern Algeria.....» 199
<http://dx.doi.org/10.19263/REDIA-104.21.23>
- MORI E., VIVIANO A., BRUSTENGA L., OLIVETTI F., PEPPUCCI L., PUCCI C., SENSERINI D., SERGIACOMI U.,
SPILINGA C., ROVERSI P.F., MAZZA G. – Distribution and genetic analysis of wild-living Eurasian beavers
in Central Italy.....» 209
<http://dx.doi.org/10.19263/REDIA-104.21.24>

ARTICLES

GUIDE FOR AUTHORS

Manuscript Submission

Submission of a manuscript implies: that the work described has not been published before; that it is not under consideration for publication anywhere else; that its publication has been approved by all co-authors, if any, as well as by the responsible authorities – tacitly or explicitly – at the institute where the work has been carried out. The publisher will not be held legally responsible should there be any claims for compensation.

Permissions

Authors wishing to include figures, tables, or text passages that have already been published elsewhere are required to obtain permission from the copyright owner(s) for both the print and online format and to include evidence that such permission has been granted when submitting their papers. Any material received without such evidence will be assumed to originate from the authors.

Online Submission

Authors should submit their manuscripts online. Electronic submission substantially reduces the editorial processing and reviewing times and shortens overall publication times.

Papers should be sent to Redia at Managing Editor: donatella.goggioli@crea.gov.it

Title Page

The title page should include:

- The name(s) of the author(s) (name and surname in block capitals)
- A concise and informative title (in block capitals, with species in italic capitals)
- The affiliation(s) and address(es) of the author(s)
- The e-mail address, telephone and fax numbers of the corresponding author. Any relevant notes on financial contributions, the part played by the different Authors, should be indicated in a footnote on the first page.

Abstract

Please provide an abstract of 150 to 250 words. The abstract should not contain any undefined abbreviations or unspecified references.

Key Words

Please provide 4 to 6 key words which can be used for indexing purposes.

Text Formatting

- Manuscripts should be submitted in Word.
- Use a normal, plain font (e.g., 12-point Times New Roman) for text.
- Use the automatic page numbering function to number the pages.
- Do not use field functions.
- Use tab stops or other commands for indents, not the space bar.
- Use the table function, not spreadsheets, to make tables. Use the equation editor or MathType for equations.
- Save your file in docx format (Word 2007 or higher) or doc format (older Word versions).

Headings

Please use no more than three levels of displayed headings.

Abbreviations

Abbreviations should be defined at first mention and used consistently thereafter.

Footnotes

Footnotes can be used to give additional information, which may include the citation of a reference included in the reference

list. They should not consist solely of a reference citation, and they should never include the bibliographic details of a reference. They should also not contain any figures or tables.

Footnotes to the text are numbered consecutively; those to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data). Footnotes to the title or the authors of the article are not given reference symbols.

Always use footnotes instead of endnotes.

Acknowledgments

Acknowledgments of people, grants, funds, etc. should be placed in a separate section before the reference list. The names of funding organizations should be written in full.

Scientific style

Please always use internationally accepted signs and symbols for units (SI units).

Genus and species names should be in italics.

Please use the standard mathematical notation for formulae, symbols etc.:

- Italic for single letters that denote mathematical constants, variables, and unknown quantities
- Roman/upright for numerals, operators, and punctuation, and commonly defined functions or abbreviations, e.g., cos, det, e or exp, lim, log, max, min, sin, tan, d (for derivative)
- Bold for vectors, tensors, and matrices.

References

Cite references in the text as follows: (Ramackers, 1983) or Ramackers (1983); (Riom and Gerbinot, 1977) or Deubert & Rhode (1971); (Robertson *et al.*, 1989)

The list of references should only include works that are cited in the text and that have been published or accepted for publication. Personal communications and unpublished works should only be mentioned in the text. Do not use footnotes or endnotes as a substitute for a reference list.

Reference list entries should be alphabetized by the last names of the first author of each work.

Bibliographical references in the following examples:

- Dallai R., 1975 – *Fine structure of the spermatheca of Apis mellifera*. – J. Insect Physiol., 21: 89-109.
- Santini G., Ramsay P.M., Tucci L., Ottonetti L., Frizzi F., 2011 – *Spatial patterns of the ant Crematogaster scutellaris in a model ecosystem*. – Ecological Entomology, 36: 625-634.
- Wallwork J.A., 1967 – *Acari*. In: Soil Biology, Burgers A. & Raw F. Ed., Academic Press, London, New York, pp.365-395.
- Hill D.S., 1987 – *Agricultural insect pests of the tropics and their control*. Cambridge University press, XII+ 746 pp.

- Plate and illustrations: the format of the journal (16.5x24.5 cm) should be borne in mind, and illustrations should be of such a size as to allow a 65% reduction. Plates and illustrations, together with their relevant captions, should be indicated in Roman numerals (e.g. Fig. I, Plate I, etc.); illustrations in the text composed of more than one drawing of photograph should always be numbered from 1 (e.g. Fig. I, 1, 2, 3, etc., Plate II, 1, 2, 3, ...); while tables should use Arabic numerals (e.g. Table 1, etc.).
- Captions are to be written on a separate page with precise references to the illustration.
- Figures, photos etc. should be submitted as 300 dpi TIFF, EPS, or PDF files. Line art should be 1200 dpi bitmap format. The JPEG (JPG) format may also be submitted, but must be of a high resolution and size that allow for good print reproduction when reduced and converted to TIFF format.