

Carmelo Peter Bonsignore

Curriculum Vitae

Personal Information

Full name: Carmelo Peter Bonsignore

Birth information: 07/07/1967 - Skovde – Sweden

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Residential Address:

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Professional Address: Università Mediterranea di Reggio Calabria, Facoltà di Agraria,
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Marital staus: Married

Language skills: Fluently in Italian and intemediate in English. Some ability in Spanish

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Present Position

Mediterranean University of Reggio Calabria, Dipartimento PAU,
Researcher since November 2003.
Subject area: General and Applied Entomology

Research Fields and Scientific Activity

Entomology

He focuses his researches on *Capnodis tenebrionis* (Coleoptera: Buprestidae) populations and its enemies with reference to its adaptation in Mediterranean environment. He has investigated on the environmental factors that influence the flight and the diffusion in field of the (Coleoptera Buprestidae). For this species has developed a previsional model for the flight and a phenological model for adults' presence. He has in phase advanced some investigations on the behavioral ecology *Trialeurodes vaporariorum* (Westwood) and effect of thermal level on its spreading. He has investigated the mechanisms of regulation and control of whitefly with reference to the "killer fly" *Coenosia attenuata* (Diptera: Muscidae). He investigated the biological control with using microbiological agents and predators adopting of strategies of low intervention environmental impact to control pest of horticultural crops. He focuses his researches on "Pine Processionary Moth", *Traumatocampa pityocampa* (Lepidoptera Traumatopoeidae). In particular, the research activities regarded the influence of abiotic factors on herbivore population and its enemies. Flight and the distribution of the

PPM have been investigated and report to varying climatic areas with the purpose to interpret its potential of spreading.

He has identified and reported the presence of new pests to some crops. In Italy he has described and reported for the first time the moth Crambidae, *Duponchelia fovealis* (Zeller) on strawberry, and the beetle Bostrichidae *Apate monachus* (Fabricius) on pomegranate and carob trees.

In the last years he focuses his researches on thermal effects on interaction "Asian Chestnut Gall Wasp" *Dryocosmus kuryphilus* (Hymenoptera: Cynipidae) and its-parasitoids.

The insects under study are both phytophages as "bronze bug" (*Thaumastocoris peregrinus*) but also species of conservation interest and in particular the effects of climate and anthropic change on their presence.

Zoology

Bonsignore Carmelo P. has studied, in different moments, the relationships between molluscs, birds and rodents with the agriculture crops. Of particular interest are the studies that concern the relationships between the rodents (rats, mice and voles) and the fruit plants.

Editorial board and Reviewing Activity

Editorial Board members in Horticulturae

https://www.mdpi.com/journal/horticulturae/sectioneditors/insect_pest_management 2020 until now

2011-2012. He is a member of the Editorial Board of international journal: Journal of Biopesticides

2013 until now He is Associate Editor of international journal: Journal of Biopesticides:

<http://www.jbiopest.com/users/LW8/page.php?intPageld=61>

2014 Editorial Board members in African Journal of Biotechnology

<http://www.academicjournals.org/journal/AJB/editors>

Reviewer Board of Insects

https://www.mdpi.com/journal/insects/submission_reviewers

Editorial Board members in Insects

https://www.mdpi.com/journal/insects/topic_editors

2020 until now

Frontiers member since:08 Mar 2016

Topic Editor of issue "Insights into the Physiology and Epidemiology of Arthropod-Vector Borne Diseases"

[My Frontiers | Overview \(frontiersin.org\)](https://www.frontiersin.org)

Web of Science ResearcherID P-8512-2014

Orcid: <https://orcid.org/0000-0002-9158-1386>

Journal updated to 2020:

Journal of Pest Science (3); Agronomy for Sustainable Development (2); Chemosphere (1) Plos one (7); Bulletin of Entomological Research (4); Insect Conservation and Diversity (1); Frontiers (3); Entomologia Experimentalis et Applicata (1) Pest Management Science (2); European Journal of Entomology (1); Insect Science (1) Bulletin of Insectology (1); Journal of Economic Entomology (1) Forest@ (1); Jordan Journal of Agricultural Sciences (3), The Israel Journal of Plant Science (1); African Journal of Agricultural Research (3); Journal of Life Sciences (1); Journal of Biopesticides (5); Biopesticides International (1); Journal of Plant Protection Research (1); Journal of Entomology and Nematology (3); Physiological and Molecular Plant Pathology.(2); Journal of Asia-Pacific Entomology (1);Agricultural and Forest Entomology (4); Acta Zoologica Bulgarica (1)

Proposal of Book or chapter for book

(1) book for Springer "Biopesticides: Basic to Applied" May 2013

(2) book for Springer "Studies in Natural Product Chemistry" August 2015

Bibliographic Production

Articles and book chapters accepted for Publication or in press

International book chapters

1. Vacante V. Bonsignore C. P., 2011. Implementation of IPM in Citriculture in Integrated control of Citrus pest in Mediterranean Region, Vacante V. and Gerson U. (eds). Bentham Science. 3:28-55 pp. eISBN: 978-1-60805-294-3
2. Bonsignore C. P. Vacante V., 2011. Natural Enemies in Integrated control of Citrus pest in Mediterranean Region, Vacante V. and Gerson U. (eds). Bentham Science. 5:66-87 eISBN: 978-1-60805-294-3

English Articles Published in Scientific Journals

1. Bonsignore C. P., C. Bellamy. 2007. Daily activity and flight behaviour of adults of *Capnodis tenebrionis* (Coleoptera: Buprestidae). *European Journal of Entomology* 104: 425–431.
2. Bonsignore C. P., Manti F. and V. Vacante 2008. Field and tree distribution of *Capnodis tenebrionis* (Linnaeus, 1767) (Col., Buprestidae) adults in an apricot orchard in Italy. *J. Appl. Entomol.* 132: 216–224. doi: 10.1111/j.1439-0418.2007.01235.x
3. Bonsignore, C.P., C. van Achterberg & V. Vacante 2008. First record of Braconidae as parasitoids of *Capnodis tenebrionis* (Linnaeus) (Coleoptera: Buprestidae), with notes on the ecology of *Spathius erythrocephalus* Wesmael (Hymenoptera: Braconidae). *Zool. Med. Leiden* 82 (44), 31.xii.2008: 489-498, figs 1-13.— ISSN 0024-0672. <http://www.repository.naturalis.nl/record/292111>
4. Bonsignore C. P.; Manti F.; Castiglione; E. Vacante V.. 2011 A study on the emergence sequence of pupal parasitoids of the pine processionary moth, *Thaumetopoea pityocampa*. *Biocontrol Science and Technology*. 21, (5): 587-591. (<http://dx.doi.org/10.1080/09583157.2011.566322>)
5. Bonsignore C. P. Vacante V., 2012. Influences of botanical pesticides and biological agents on *Orius laevigatus* – *Frankliniella occidentalis* dynamics under greenhouse conditions. *Journal of Plant Protection Research* 52 (1) 15-23.
6. Bonsignore C. P. 2012. Effects of environmental temperature on *Capnodis tenebrionis* adult phenology. *Psyche, A Journal of Entomology* (2012): 1-8 (doi: 10.1155/2012/586491).
7. Bonsignore C.P. 2012. *Apatte monachus* (Fabricius, 1775), a bostrychid pest of the pomegranate and carob tree in nursery. *Plant Protection Science* . 2 (48): 94-97.
8. Bonsignore C.P., Manti F. 2013. Influence of habitat and climate on the flight of male pine processionary moths. *Bulletin of Insectology* 66 (1): 27-34. ISSN 1721-8861
9. Bonsignore C.P., Jones T.M..2013. Aggregation and mating success of *Capnodis tenebrionis* (Coleoptera: Buprestidae). *Insect Science* DOI: 10.1111/1744-7917.12035.
10. Bonsignore C.P. 2014. Effect of environmental factors on the flight activity of *Trialeurodes vaporariorum* (Westwood) under greenhouse conditions. *Entomological Science*. DOI: 10.1111/ens.12097
11. Damos, P., Bonsignore, C.P. Gardi F. Avtzis D. 2014. Phenological responses and a comparative phylogenetic insight of *Anarsia lineatella* and *Grapholita molesta* between distinct geographical regions within the Mediterranean basin. *Journal of Applied Entomology*. DOI: 10.1111/jen.12124
12. Lupi D., Bernardo U., Bonsignore C.P., Colombo M., Dindo M.L., Faccoli M., Ferracini C., Gualtieri L., Marullo R., Mazzon L., Siscaro G., Suma P., Tavella L., Maini S., 2014. Insects and globalization: sustainable control of exotic species in Italian agro-forestry ecosystems. In: Holland J; Gerowitt B., Bianchi F., Kedziora A., Lupi D., van Helden M., Moonen C, van Rijn P. eds: *Landscape management for functional biodiversity IOBC/WPRS bulletin* (100): 87-90. IOBC/WPRS Working Group “Landscape management for functional biodiversity” Meeting May 21-23, 2014, Poznan, (PL); ISBN: 978-92-9067-280-7.7

13. Bonsignore C.P. 2015. Environmental factors affecting the behavior of *Coenosia attenuata* Stein, a predator of *Trialeurodes vaporariorum* (Westwood) in tomato greenhouses. *Entomologia Experimentalis et Applicata* 158:87–96, 2016
14. Bonsignore C.P., Manti F.; Castiglione (2015). Interactions between pupae of the pine processionary moth (*Thaumetopoea pityocampa*) and parasitoids in a Pinus forest. *Bulletin of Entomological Research*. 105(5): 621-628.
15. Vacante, V., Bonsignore C.P., (2016) Interactions between the citrus bud mite *Aceria sheldoni* (Acari: Eriophyidae) and the lemon host tree in a Mediterranean area. *Acarologia*: 56(2): 167–174 (2016) DOI: 10.1051/acarologia/20162235
16. Damos, P., Bonsignore C.P. Botton M, Avtzis D. 2014. Intraspecific divergence between *Grapholitha molesta* (Tortricidae, Lepidoptera) populations from Italy and Greece in relation to temperature. 06-09 October 2014: IOBC-WPRS Working Group "Integrated Plant Protection in Fruit Crops", Sub Groups "Pome fruit arthropods" and "Stone fruits", AGES, Vienna, Austria. Vol. 112: 25-29, 2016.
17. Ferracini, C., Bertolino, S., Bernardo, U., Bonsignore, C.P., Faccoli, M., Ferrari, E., Lupi, D., Maini, S., Mazzon, L., Nugnes, F., Rocco, A., Santi, F., Tavella, L., (2018) Do *Torymus sinensis* (Hymenoptera: Torymidae) and agroforestry system affect native parasitoids associated with the Asian chestnut gall wasp?, *Biological Control* (2018), doi: <https://doi.org/10.1016/j.biocontrol.2018.01.009>
18. Nugnes F., Gualtieri L., Bonsignore C.P., Parillo R., Annarumma R., Griffo R., Bernardo U. (2018) Resistance of a local ecotype of *Castanea sativa* to *Dryocosmus kuriphilus* (Hymenoptera: Cynipidae) in Southern Italy. *Forests* 9, 94
19. Bonsignore C.P. *, Bernardo U. (2018) Effects of environmental parameters on the chestnut gall wasp and its complex of indigenous parasitoids. *The Science of Nature* 10.1007/s00114-018-1545-1, 105(3-4):20
20. Bonsignore C.P. Vono G., Bernardo U. (2019) Environmental thermal levels affect the phenological relationships between the chestnut gall wasp and its parasitoids. *Physiological Entomology* (2019), DOI: 10.1111/phen.12280
21. Salman MHR, Bonsignore CP, El Alaoui El Fels A, Giomi F, Hodar JA, Laparie M, Marini L, Merel C, Zalucki MP, Zamoum M, Battisti A. 2019. Winter temperature predicts prolonged diapause in pine processionary moths species across their geographic range. *PeerJ*, 7:e6530 <http://doi.org/10.7717/peerj.6530>
22. Bonsignore, C. P.; Manti, F.; Castiglione, E.; Battisti, A. (2019). Pupal traits and adult emergence in the pine processionary moth *Thaumetopoea pityocampa* (Lepidoptera: Notodontidae) are affected by pupal density. *European Journal of Entomology*. 16: 320-329. DOI:14411/eje.2019.035.
23. Castiglione, E.; Manti, F.; Bonsignore, C. P. (2020). First record from Calabria (southern Italy) of the “bronze bug” *Thaumastocoris peregrinus* Carpintero & Dellapé, 2006, alien Eucalyptus pest native to Australia (Hemiptera: Heteroptera: Thaumastocoridae). *Journal of Entomological and Acarological Research* - vol. 52:8879: 15. DOI:10.4081/jear.2020.8879.
24. Bonsignore C.P. Vizzari G., Vono G. Bernardo U. (2020) Thermal stress affects parasitism on Asian chestnut gall wasp. *Entomologia Experimentalis et Applicata* (under review).

Italian Articles Published in Scientific Journals

Number of articles **14**

International congress

Number of abstract or presentation **9**

Published Italian Book Chapters

Number of book chapter **5**

National congress

Number of abstract or presentation **13**

Reviewing Activity of Project and Research

He has worked as reviewer of the assessment of Quality in Scientific Research 2004-2010 (VQR), for the FIRB project (Projects of Basic Research Proposed by Young Researchers) (2013), SIR and PRIN projects 2012/2013/2014/2015-2016 made by Ministry of University and Scientific Research. He has been a reviewer of LS9_4 projects. ERC: LS9_4 Group: PRID2018-DI4A011.zip.

Research Projects

- **Scientific responsible** of n° 8 (2005-2010) projects MURST ex quota 60%.
 - Component of Unit B - PRIN anno 2010-2011; ***Insects and globalization: sustainable control of exotic species in agro-forestry ecosystems*** (GEISCA).
 - **Scientific responsible** 2013: Progetto di ricerca da titolo: ***Attività di studio e di ricerca sulla microfauna entomologica finalizzata alla salvaguardia e al miglioramento dei sistemi naturali***. N° Convenzione Parco Nazionale dell'Aspromonte - Dipartimento PAU; Euro 15000,00
 - **Scientific responsible** 2013: Progetti di "Indagine conoscitiva e monitoraggio sulla presenza di entomofauna inserita nell'allegato IV della Direttiva 92/43/CEE "Habitat" - ***Specie animali e vegetali di interesse comunitario che richiedono una protezione rigorosa***" e ***sulla comunità degli artropodi nel Pantano di Montalto della Foresta demaniale dell'Alto Aspromonte (RC)***, (BANDO N° 12/2014). Convenzione Corpo Forestale dello Stato- Dipartimento PAU con il Laboratorio di Entomologia ed Ecologia Applicata. Euro 7000,00.
 - **Scientific responsible** 2014-2015: Progetto "***Il Cinipide del Castagno (Dryocosmus kuriphilus Yasumatsu) in Calabria: studio dell'adattamento ai nuovi ambienti e risposta ecologica alla nuova componente biotica***" ai fini dell'adempimento del progetto relativo al contributo sulla ricerca Decreto n° 6040 del 16 Maggio 2014. Servizio Fitosanitario Regionale (Regione Calabria) - Dipartimento PAU con il Laboratorio di Entomologia ed Ecologia Applicata. Euro 10.000,00
 - **Scientific responsible** March-September 2016: Attività di studio e di ricerca sul controllo della processionaria del pino nel comune di Canolo. Euro 1900,00.
 - **Scientific responsible** December- June (2016-2017): Il Cinipide Del Castagno (*Dryocosmus kuriphilus* Yasumatsu) nel Parco Nazionale D'aspromonte: Studio dell'adattamento ai nuovi ambienti e risposta ecologica dei nemici nativi naturali
- English title "The cynipid gall wasp (*Dryocosmus kuriphilus* Yasumatsu) in the National Park of Aspromonte: Study on adaptation to new environments and ecological response of native natural enemies

Academicals activity:

Teaching activity related to Forestry and Agricultural Entomology, Integrated Pest Management, Biological Control at the University of Reggio Calabria and General and Applied Entomology at the University of Messina.

Tutor activity during the Ph.D. program

PhD Program XXI cycle (AGR11- General and Applied Entomology) "Cultivation and Defense of Tropical and Sub-Tropical Plants" at the Mediterranean University of Reggio Calabria entitled:

- 1) "Agrometeorological modeling in Calabria" - Thesis of Loredana Pasqualoni 2008/2009 (cycle XXII)
- 2) Bio-ecology of *Capnodis tenebrionis* in Mediterranean environment. Thesis of Basilio Mazzitelli 2009/2010 (cycle XXIII)
- 3) Ecological responses of *Trialeurodes vaporariorum* (Westwood) and of the natural enemy *Coenosia attenuata* Stein to the abiotic and biotic factors in the greenhouse environment. Thesis of Barreca Francesco Cycle XXIV.

Member of the PhD program in Sciences, Technologies and Biotechnologies for Sustainability from 2013 to 2018

He has been elected member of the Joint Commission (Students-Teachers) of the PAU Department (2017-2020).

He has carried out assignments of commissioner for the final evaluation of the PhD in Life Sciences 28.02.2020 (UniCAI) XXXI-XXXII cycle.

He has held various positions as commissioner and committee chair in public competitions for the selection of scholarship holders and postdoctoral fellow, assignment of teaching contracts, research fellows, doctoral candidates.

Academic Advisory:

Degree Thesis: > 12(concluded),
Master Thesis: 1 (concluded)
Ph.D. Thesis: 3 (concluded),

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