

PERSONAL INFORMATION

Francesca Barbero



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SHORT
INFORMATION

Francesca Barbero (FB) graduated in Biological Sciences at the University of Turin and obtained a *PhD in Evolutionary Biology and Biodiversity Conservation* (University of Turin), partly carried out in England. FB is currently *Associate Professor of Zoology* at the Dept. of Life Sciences and Systems Biology (DBIOS).

FB is an *entomologist*. The aspect that most characterizes her research is the study of communication and mimicry mechanisms implemented in *host-parasite interactions* and, more generally, in multitrophic systems that involve plants or microorganisms and insects. Another important area of research is the investigation of the biology, ecology and conservation of diurnal Lepidoptera and Hymenoptera.

FB is a member of the *doctoral committee of the international PhD on Sustainable Development and Cooperation*. FB has been *invited speaker* at national and international conferences and she participated in the organization at several national and international conferences. FB has participated or has been responsible for international, national and local research projects in the field of entomology and is PI for basic or applied research agreements with parks and private companies. FB is the author of publications in JCR journals, publications in non-JCR international and national journals, French/English bilingual monographs with foreign editor and book chapters. FB is reviewer for numerous international JCR journals, she is *Associate Editor* for the journal *Insect Conservation and Diversity* and *manuscript manager* for the *Journal of Plant Interactions*, she is *Topic Editor* for the *International Journal of Molecular Sciences*.

Since 2013 FB has been a member of the scientific committee for the awarding of the "Young people and science" award - national selection for the European Union competition for young scientists and other international events under the patronage of the President of the Republic and since 2015 she is a member of the scientific committee for the evaluation of national projects "Young Research Teams" (The Romanian National Authority for Scientific Research and Innovation through the National Research Council and its Executive Agency for Higher Education, Research, Development and Innovation). She is an auditor for national (PRIN) and international projects. She is a member of UZI (Italian Zoological Union), SEL (Societas Europea Lepidopterologica) and CSEE (Canadian Society for Ecology & Evolution) and founding member of ALI (Italian Lepidopterological Association). She is also a *certified specialist for BRC Global Standards - Food safety*, as counselling for pest control strategy in Food Factories.

Her team lab now counts one senior researcher, three PhD students and several master and bachelor students.

Funded PROJECTS (last 5 years - from 2016):

- **2018-2023.** Horizon 2020 Innovation Action programme under grant agreement 776528 "PROGIREG". NBS8 Pollinator biodiversity - Citizen science approach for Monitoring Pollinator biodiversity in community-based URBAN agriculture (NBS developed by Living labs).
- **2021-2023.** MoVITo – Public Engagement project. Monitoring and Evaluation of Pollinators in the Metropolitan City of Turin. Funded by Turin University.
- **2020-2023.** Monitoring and evaluation of the impacts of various control strategies for *Cydalima perspectalis* on the Lepidoptera community in the natural environment with focus on Habitats Directive species. Funded by Ente di Gestione delle Aree Protette delle Alpi Cozie.
- **2020-2022.** BILiV - The role of woodlands on the association between insects and yeasts of interest in winemaking). Funded by Fondazione Cassa di Risparmio di Torino, Turin, Italy.
- **2016-2023.** Monitor of pest control systems in food industries. Funded by private companies.
- **2019-2021.** Conservation and monitoring of butterfly protected species. Funded by Ente di Gestione delle Aree Protette delle Alpi Marittime
- **2018-2019.** Conservation of myrmecophilous species of butterflies. Funded by Ente Gestore del Parco Fluviale Gesso e Stura.

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2. Nowicki P., Bonelli S., **Barbero F.**, Balletto E., 2009. Relative importance of density-dependent regulation and environmental stochasticity for butterfly population dynamics. *Oecologia*. 161: 227-239.
3. Patricelli D., **Barbero F.**, La Morgia V. Casacci L. P., Witek M. Balletto E. Bonelli S., 2011. To lay or not to lay: oviposition of *Maculinea arion* in relation to *Myrmica* ant presence and host plant phenology. *Animal Behaviour*. 82: 791-799.
4. Patricelli D., Sielezniew M., Ponikwicka-Tyszko D., Bonelli S., **Barbero F.**, Witek M., Buś-Kicman M., Ratkiewicz M., Rutkowski R., Balletto E., 2013. Contrasting genetic structure of rear edge and continuous range populations of a parasitic butterfly infected by *Wolbachia*. *BMC Evolutionary Biology*. 13:14. doi:10.1186/1471-2148-13-14.
5. Sala M., Casacci L.P., Bonelli S., Balletto E., **Barbero F.** 2014. Variation in Butterfly Larval Acoustics as a Strategy to Infiltrate and Exploit Host Ant Colony Resources. *PLoS ONE* 9(4): e94341. doi:10.1371/journal.pone.0094341.
6. Patricelli D. & **Barbero F.**, Occhipinti A., Berteà C.M, Bonelli S., Casacci L.P., Zebelo S.A., Crocoll C., Gershenzon J, Maffei M.E., Thomas J.A., Balletto E., 2015. Plant defenses against ants provide a pathway to social parasitism in butterflies. *Proc. R. Soc. B* 282: 20151111. **Joint 1st author.**
7. Schönrogge K., **Barbero F.**, Casacci L.P., Settele J., Thomas J.A., 2017. Acoustical communication within ant societies and its mimicry by mutualistic and socially parasitic myrmecophiles. *Animal Behaviour*. 134:249-256.
8. Di Salvo M., Calcagnile M., Talà A., Tredici S. M., Maffei M. E., Schönrogge K., **Barbero F.***, Alifano, P. 2019. The Microbiome of the *Maculinea-Myrmica* Host-Parasite Interaction. *Scientific reports*, 9: 8048. ***corresponding author.**
9. Casacci L.P., Schönrogge K., Thomas J.A., Balletto E., Bonelli S., **Barbero F.*** 2019. Host specificity pattern and chemical deception in a social parasite of ants. *Scientific Reports*. 9: 1619. **IF 4.122, Ranking 12/64 (Q1)** ***corresponding author**
10. Tartally A, Thomas J.A., Anton C., Balletto E., Barbero F, et al. 2019. Patterns of host use by brood-parasitic *Maculinea* butterflies across Europe. *Phil. Trans. R. Soc. B* 374:20180202. <http://dx.doi.org/10.1098/rstb.2018.0202> 7/85