

# FRANCESCA DELLA ROCCA

## Curriculum Vitae

### Research activities

I have a multidisciplinary background and have engaged in various research areas, from conservation biology to ecology and zoology. My work has involved different taxa, from invertebrates to mammals. However, over the past 10-15 years, my researches have primarily focused on arthropods. I explore the impacts of climate and environmental changes on the conservation status of species, communities, and their associated habitats.

At the community level, I examine changes in taxonomic and functional diversity as a result of microclimatic and environmental changes such as resource exploitation, habitat fragmentation and land use change. My primary targets among arthropod communities are beetles, orthopterans and pollinators. Additionally, I work with soil microfauna and aquatic macroinvertebrates with the aim of developing biological quality indices for soil and water (QBS and IBE).

At the species level, I assess the conservation status of populations and their potential distribution in relation to climate or land use changes. In this domain, I also address invasive species by identifying the environmental parameters that favour them and proposing strategies for their control.

### Key words

Insect conservation and ecology, ground beetles, saproxylic beetles, habitat directive species, invasive species, species distribution models, taxonomical diversity, functional diversity, climate change, habitat fragmentation.

### Part I – General Information

Full Name	Francesca Della Rocca
Date of Birth	25/7/1977
Place of Birth	Roma
Citizenship	Italian
Permanent Address	Via Riviera 1E, 27020, Torre d'Isola, Pavia
Mobile Phone Number	3293150936
E-mail	<a href="mailto:francesca.dellarocca@unipv.it">francesca.dellarocca@unipv.it</a>
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ResearchGate	<a href="https://www.researchgate.net/profile/Francesca-Della-Rocca">https://www.researchgate.net/profile/Francesca-Della-Rocca</a>
Google Scholar	<a href="https://scholar.google.it/citations?user=cV8Nz04AAAAJ&amp;hl=it">https://scholar.google.it/citations?user=cV8Nz04AAAAJ&amp;hl=it</a>
Spoken Languages	Italian
Other Languages	English, French

## **Part II – Education**

2002	<b>Master of Sciences</b> in Biological Sciences (110/110 and honours; highest possible grade in the Italian system).	University of Rome “Roma Tre”
2003	<b>II level University Master Degree</b> in Animal Biodiversity Conservation: protected areas and ecological networks (110/110)	University of Rome “La Sapienza”
2005	<b>Advanced course</b> in Research and experimental design in Wildlife science	University of Rome “La Sapienza”
2004	<b>Advanced course</b> in Behavioural science statistics	Ethoikos Association & Etological studies center
2007	<b>PhD</b> in Animal Biology	University of Rome “La Sapienza”

**Part III – Academic Appointments** (The research activities listed below focus on the study of the conservation status of arthropod species and communities in terrestrial and aquatic biotopes)

Since 2015	<b>Adjunct Professor</b> BSc of Biological Sciences, Department of Biology and Biotechnology	University of Pavia
2022-oggi	<b>Research fellowship</b>	University of Pavia
202-2022	<b>Research fellowship</b>	University of Pavia
2020-2021	<b>Research fellowship</b>	University of Pavia
2012-2020	<b>Post-doctoral research fellowship</b> (stopped in two occasions for maternity leave)	University of Pavia
2009-2011	<b>Research fellowship</b>	University of Pavia
2002	<b>Research fellowship</b>	University of Rome “Tor Vergata”

## **Part IV – Academic teaching**

2015-Oggi	University of Pavia	<b>Adjunct Professor</b> BSc of Biological Sciences, Department of Biology and Biotechnology
2018	University of Pavia	<b>Organization of the International Summer school</b> “Methods in Forest ecology 2018” co- financed by University of Pavia and Bosco Siro Negri Natural reserve
2012-2019	University of Pavia	<b>Lecturer</b> within the Prof. Giuseppe Bogliani course “Zoolgia ed Etologia applicata” (2 hours per year).
2008-2009	University of Rome “Roma Tre”	<b>Lecturer</b> within the Prof Luca Luiselli course “Statistica”. (2 hours per year).
2003-2004	University of Rome “Roma Tre”	<b>Lecturer</b> within the Prof. Marco Bologna course “Ecologia animale” (2 hours per year).
2003-2005	University of Rome “La Sapienza”	<b>Teaching assistant</b> in the course of Zoology and Animal Diversity, held by Prof. R. Argano. (40 hours per year)

1999-2002	University of Rome “Roma Tre”	<b>Teaching assistant</b> in the Zoological laboratories, Department of Biology, University of Rome “Roma tre” (40 hours per year)
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**Part V – Other Appointments** (Unless otherwise specified, all the activities listed below focus on the monitoring of arthropod species and communities)

Since 2020	<b>Environmental consulting</b> (commissioned by University of Pavia) for the monitoring of ground beetles communities in the dry-grasslands habitats of the Po plains. LIFE project DRYLANDS.
Since 2017	<b>Environmental consulting</b> (commissioned by Fondazione Lombardia per l’Ambiente – FLA) for the monitoring of <i>Osmoderma Eremita</i> and <i>Cerambyx cerdo</i> in Lombardy region. LIFE project GESTIRE 2020.
2022	<b>Environmental consulting</b> for the drafting of the project called "Interventions for the conservation and improvement of the biodiversity of Viale dei Roveri within the La Mandria Natural Park"
2021	<b>Environmental consulting</b> for the monitoring of <i>Osmoderma eremita</i> and <i>Cerambyx cerdo</i> in the Natural Park “Parco dei Mughetti”.
2021	<b>Environmental consulting</b> (commissioned by Skua Nature Group) for the coordination and supervision of the <i>L. cervus</i> monitoring in the Natural Park “La Mandria”.
2019-2020	<b>Environmental consulting</b> (commissioned by Parco del Po Alessandrino-Vercellese) for the monitoring of saproxylic beetles and elaboration of conservation actions to be included in the management plan of the SCI and ZPS IT1120002 “ <i>Bosco della Partecipanza di Trino</i> ”.
2018-2019	<b>Environmental consulting</b> (commissioned by Parco del Po Alessandrino-Vercellese) for the coordination of saproxylic beetles monitoring activities, park rangers training and elaboration of actions for the conservation of saproxylic species within the park management plan.
2017-2018	<b>Environmental consulting</b> (commissioned by Fondazione Lombardia per l’Ambiente – FLA) for the monitoring of <i>Osmoderma Eremita</i> and <i>Cerambyx cerdo</i> in Lombardy region. LIFE project GESTIRE 2020.
2016	<b>Environmental consulting</b> (commissioned by “Ente di Gestione Parchi e Biodiversità Emilia Occidentale”) for the organization, coordination and supervision of the monitoring of <i>Osmoderma eremita</i> and <i>Rosalia alpina</i> and their potential habitats and identification of suitable areas for restocking of <i>Graphoderus bilineatus</i>
2015	<b>Environmental consulting</b> (commissioned by “Appennino Tosco-Emiliano” National Park) for monitoring the presence and distribution of insects listed in the Habitat Directive Annexes within the Appennino Tosco Emiliano National Park.

2013	<b>Environmental consulting</b> (commissioned by Ente Parco Naturale Regionale Antola) for monitoring the presence and distribution of saproxylic insects within 5 natural 2000 sites of the Antola Regional Park and drafting the management plans
2012	<b>Environmental consulting</b> (commissioned by University of Pavia) for the coordination of international networking and the elaboration of the action plan: Biodiversity and Rice production in rice agro-ecosystem. LIFE project ECORICE
2011-2012	<b>Environmental consulting</b> (commissioned by Valle d’Aosta Regional Museum of Natural Sciences) for the monitoring of saproxylic beetles and elaboration of conservation actions.
2011	<b>Environmental consulting</b> (Commissioned by ECO-LOGO association) for assessing the effectiveness of an ecological corridor in the municipality of Samarate (VA) northern Italy and elaborating instructions for environmental mitigation and compensation.
2009	<b>Environmental consulting</b> (commissioned by the onlus Ornithologica Italiana) for 1) the monitoring (by webcams placed in the nest) of the breeding pairs of peregrine falcons nesting in all the world; 2) Design and installation of nest boxes for kestrel and horned owl.
2005-2008	<b>Environmental consulting</b> (commissioned by Regional Environment agency “Roma Natura”) as a curator and chief scientist for a three-years project on the ecology of a population of <i>Salamandrina terdigitata</i> , a threatened Italian amphibian.
2005	<b>Environmental consulting</b> (commissioned by the Environment agency Istituto di Ecologia Applicata – IEA) for the assessing the opinion of resident population (human dimension) on the two large Italian mammals: Wolf and Bear. LIFE project COEX.

#### **Part VI – Thesis supervision**

- Supervisor of 8 MSc student
- Supervisor of 15 BSc student

#### **Part VII- Awards and Honors**

2002	“Prof. Francesco Barbieri” Award for the best Herpetological Master Thesis. Granted by the Societas Herpetologica Italica (S.H.I.)
2013	<b>EPSO/CAST/S/5/2013 RESEARCHER_ FUNCTION GROUP IV.</b> By the European Personnel Selection Office for recruiting talented European researcher
2017	Award for the best entomological paper. Granted by the Royal Entomological Society

#### **Part VIII- Society memberships**

- Ordinary member of the Italian Entomological Society
- Ordinary member of Citizen Science Italia Association

### **Part IX – Review activity**

- Reviewer of more than 30 peer – reviewed journals
- Scientific reviewer of projects within the call BIODIVERSA+ research proposals 2022-2023

### **Part X – Editorial activity**

- Associate Editor of the peer-reviewed journals Biodiversity and Conservation

### **Part XI – National Scientific Habilitation**

<b>2023-2033</b>	National Scientific Qualification for the functions of Associate Professor in the Recruitment Sector 05/B1 - ZOOLOGY AND ANTHROPOLOGY (The positive assessment was achieved unanimously by the members of the Commission).
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### **Part XII - Funding Information (grants as PI-principal investigator or I-investigator) of competitive National and International call**

<b>Year</b>	<b>Title</b>	<b>Description</b>	<b>CALL</b>	<b>Project Grant value</b>
2019	OLTRENATURA (Co-I)	Protection of natural and social capital through the enhancement of ecosystem services and networking in the Oltrepò Pavese. My activities: Analyzing the plant pollination networks in three dry grasslands habitat (6130, 6210, 6510)	CARIPLO 2019 "CAPITALE NATURALE"	<b>934.880 €</b>
2018	LIFE18/NAT/IT/000803 – DRYLANDS (Co-I)	Restoration of dry-acidic continental grasslands and heathlands in Natura 2000 sites in Piemonte and Lombardia. My activities: Monitoring the effect of dry grasslands (6210, 4030, 2330) fragmentation on ground beetles (Carabidae) communities	LIFE 2018 NATURE & BIODIVERSITY	<b>1.311.356 €</b>
2018	INTERNATIONAL SUMMER SCHOOL (PI)	Title: Methods in Forest Ecology	INTERNATIONAL SUMMER AND WINTER SCHOOL, PAVIA UNIVERSITY	<b>8.000 €</b>

2015-2017	CARIPLO_FRAG ENZIANE (Co-I)	Fragmented <i>Gentiana pneumonanthe</i> populations, habitats and associated fauna in local ecological network. Actions for restoring <i>Gentiana pneumonanthe</i> populations and its associated species such as the butterfly <i>Maculinea alcon</i> .	CARIPLO 2014 "CONNESSIONE ECOLOGICA"	240.000 €
2015	LIFE14 NAT/IT/000209 – EREMITA (Co-I)	Coordinated actions to preserve residual and isolated populations of forest and freshwater insects in Emilia-Romagna. My activities: Organization, coordination and supervision of the ex-ante monitoring of <i>Osmoderma eremita</i> and <i>Rosalia alpina</i> ; Census of all trees potentially suitable for <i>Osmoderma eremita</i> and <i>Rosalia alpina</i> in Natura 2000 sites; identification of any areas suitable for restocking of <i>Graphoderus bilineatus</i>	LIFE 2014 NATURE & BIODIVERSITY	1.268.865 €
2013-2016	CARIPLO_AMBR OSIANO (Co-I)	The aim is to identify and to pilot test the process, policies and operational mechanisms needed for the implementations of an ecological corridor between the Alto-Milanese natural park and the Ticino Valley natural park.	CARIPLO 2012 "CONNESSIONE ECOLOGICA"	125.000 €
2010-2015	LIFE10/NAT/IT/241 - TIB-TRANS INSUBRIA BIONET (Co-I)	Habitat connection and improvement along the Insubria ecological corridor between the Alps and the Ticino valley. My activities: monitoring <i>Lucanus cervus</i> and evaluating management actions for improving its reproduction success	LIFE 2010 NATURE & BIODIVERSITY	1.545.425 €
2009-2012	Co-I	“Tutela e valorizzazione della Biodiversità dei SIC “Boschi Siro Negri e Moriano” e “Boschi di Vaccarizza” e della ZPS “Boschi del Ticino” – tratto pavese”	CARIPLO 2008 “TUTELARE E VALORIZZARE LA BIODIVERSITÀ”	131.000 €

### **Part XIII – Other research projects**

Year	Role	Description	Funded by	Project Grant value
Since 2012	PI	Bosco Siro-Negri Project: Forest management experimental researches in the Bosco Siro Negri National reserves in the Ticino Valley natural Park.	ITALIAN MINISTRY OF THE ENVIRONMENT AND ENERGY SECURITY	50.000 €

2014-2016	Co-I	Management and conservation of agro-ecosystems and forest habitats in the Ticino Park". My activities: monitoring of arthropods communities within rise fields and Marcite (winter-flooded meadows).	CARIPLO FOUNDATION & TICINO REGIONAL PARK	
2005-2008	PI	Elaboration of an action plan for the monitoring of spectacled salamander ( <i>Salamandrina terdigitata</i> ) and for the management of its habitat, During this three years project I also trained park staff in monitoring techniques	ENTE REGIONALE ROMA NATURA	24.000 €

#### **Part XIV – Congress participation and organization**

**Organizer** of the International Summer School “Methods in Forest Ecology” held at the University of Pavia (2018)

**Speaker** at 3 National Congress and 3 International Congress

**Invited speaker** at 3 Local Conference

**Participation as co-author** of poster and oral communication at 5 National Congress and 3 International Congress

#### **Part XV – Monographs and technical reports**

- 4 book chapters
- 1 monograph
- 12 Scientific and technical reports

#### **Part XVI – List of scientific papers on peer reviewed journals**

Mola L., Ruzzier E., Deiavo C., Agosti M., Faccoli M., Matějček J., Farina L., Diotii L., **Della Rocca F.** (2023). A preliminary catalogue of the Coleoptera (Hexapoda: Insecta) of the Monte Netto Regional Park (Lombardy NE Italy). *Zootaxa*

**Della Rocca F.**, Tagliani A., Milanesi P., Barcella M., Assini P. (2023) Contrasting response of mountain Plant-Pollinator Network to fragmented semi-natural grasslands. *Land*, 12(2), 356.

**Della Rocca, F.**; Milanesi, P. (2022). The Spread of the Japanese Beetle in a European Human-Dominated Landscape: High Anthropization Favors Colonization of *Popillia japonica*. *Diversity* 2022, 14, 658.

**Della Rocca, F.**, Jansson, N., Chiari, S., Zauli, A. & Carpaneto, G.M. (2022) Micro-habitat drivers of saproxylic beetle assemblages in old woodlands of Mediterranean cork oak (*Quercus suber*). *Agricultural and Forest Entomology*, 1– 14.

**Della Rocca F.**, Milanesi P. (2022). The new dominator of the world: modelling the global distribution of the Japanese beetle under land use and climate change scenarios. *Land*, 11(4), 567; <https://doi.org/10.3390/land11040567>

**Della Rocca F.**, Venturo A., Milanesi P., Bracco F. 2021. Effects of natural and seminatural elements on the composition and dispersion of carabid beetles inhabiting an agroecosystem in Northern Italy. *Ecology and Evolution* 11, 10526– 10537. <https://doi.org/10.1002/ece3.7857>

**Della Rocca, F.**, Stefanelli S., Cardarelli E., Bogliani G., Bracco F. 2021. Contribution to the knowledge of the arthropods community inhabiting the winter-flooded meadows (Marcite) of Northern Italy. *Biodiversity Data Journal*, DOI: [10.3897/BDJ.9.e57889](https://doi.org/10.3897/BDJ.9.e57889)

**Della Rocca, F.**; Milanesi, P.; Magna, F.; Mola, L.; Bezzicheri, T.; Deiaco, C.; Bracco, F. 2020. Comparison of Two Sampling Methods to Estimate the Abundance of *Lucanus cervus* with Application of n-Mixture Models. *Forests*, 11, 1085.

Cardarelli E., Gentili R., **Della Rocca F.**, Zanella M., Caronni S., Bogliani G., Citterio S. 2020. Seeding and overseeding native hayseed increase vegetation cover, plant functional diversity and biological soil quality in an agriculture area of northern Italy. *LIFE*,10,38 doi:10.3390/life10040038

**Della Rocca F.**, Milanesi P. 2020. Combining climate, land use change and species traits to estimate the distribution of short-distance dispersal species. *Journal of Biogeography* DOI: 10.1111/jbi.13804

Milanesi P., **Della Rocca F.**, Robinson RA (2019). Integrating dynamic environmental predictors and species occurrences: toward true dynamic species distribution models. *Ecology and Evolution* , 10: 1087–1092. <https://doi.org/10.1002/ece3.5938>

**Della Rocca F.**, Bogliani G., Breiner F., Milanesi P., 2018. Identifying hotspots for rare species under climate changes scenarios: improving saproxylic beetles conservation in Italy. *Biodiversity and Conservation*, 28 (2), 433–449

**Della Rocca F.**, Bogliani G., Milanesi P., 2017. Patterns of distribution and landscape connectivity of the stag beetle in a human-dominated landscape. *Nature Conservation* 19:19-37

Romiti, F., Bissattini, A., Buono, V., Cifarelli, C., **Della Rocca, F.**, Akani, G., Luiselli, L., Carpaneto, G., Superti, V., Vignoli, L. (2016). A simple tool to make a long story short: Photographic Identification Method (PIM) using natural body marks. *Zoologischer Anzeiger* 266, 136–147

Campanaro A, Zapponi L., Hardersen S. , Méndez M., Al Fulaij N., Audisio P., Bardiani M, Bower L., Carpaneto G.M., Corezzola S., **Della Rocca F.**, Harvey D., Hawes C., Johnson H., Kadej M., Karg J., Minari E., Rink M., Smolis A., Sprecher E., Thomaes A., Toni I., Vrezec A., Zauli A., Zilioli M., Chiari S. (2016). A European monitoring protocol for the stag beetle, a saproxylic flagship species. *Insect Conservation and Diversity* (2016) 9, 574–584

**Della Rocca F.**, Stefanelli S., Bogliani G. 2016. *Robinia pseudoacacia* as a surrogate for native tree species for saproxylic beetles inhabiting the riparian mixed forests of northern Italy. *Agricultural and Forest Entomology*. DOI: 10.1111/afe.12157

Stefanelli S., **Della Rocca F.**, Bogliani G., 2014. Saproxylic beetles of the Po plain woodland, Italy. *Biodiversity data journal*. DOI 10.3897/BDJ.2.e1106.

Vignoli L., D'Amén M., **Della Rocca F.**, Bologna M.A. & Luiselli L., 2014. Contrasted influences of moon phases on the reproduction and movement patterns of four amphibian species inhabiting different habitats in central Italy. *Amphibia-Reptilia* 35 (2): 247-254. DOI:10.1163/15685381-00002943

**Della Rocca F.**, Stefanelli S., Campanaro A., Pasquaretta C., Bogliani G. 2014. Effect of deadwood management on saproxylic beetles richness in the floodplain forests of northern Italy: some measure for a deadwood sustainable use. *J. Insect Conservation* 18:121-136.

**Della Rocca F.**, Bottari V., Filippi E., Luiselli L. & Uteri C., 2008. Modelling aspects of terrestrial ecology in an Italian endemic salamander, *Salamandrina perspicillata*. *Revue d'Ecologie (Terre et Vie)* 63: 261-270.

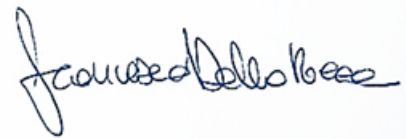


**Della Rocca F.**, 2007. How tall is an elephant? Two methods for estimating elephant height. *Web Ecology* 7: 1–10.

**Della Rocca F.**, Vignoli L. & Bologna M.A., 2005. The Reproductive biology of *Salamandrina terdigitata* (Caudata, Salamandridae). *Herpetological Journal* 15(4): 273-278.

**Date**  
**20/10/23**

**Sign**

A handwritten signature in blue ink, appearing to read "Francesco Della Rocca", is written on a light blue rectangular background.