Martina Livornese

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Research Profile

Ecologist and PhD candidate working on forest biodiversity, spatial ecological modelling, remote sensing, and ecosystem responses to environmental and anthropogenic change. My PhD research integrates biodiversity data, forest disturbance indicators and early warning signals to study forest resilience across spatial and temporal scales. My current work focuses on plant compositional turnover in protected areas using Generalized Dissimilarity Models, including Bayesian spatial GDM approaches, integrated with climatic, land-use and remote-sensing predictors.

Employment History

November 2025 – present

Research Fellow. BIOME Lab. Department of Biological, Geological and Environmental Sciences, Alma Mater Studiorum - University of Bologna. Employed on the PRIN 2022 PNRR project - "P2022JM3RZ" – BECAUSE.
Main activities: modelling plant compositional turnover in Italian Natura 2000 mountain areas using Generalized Dissimilarity Models, including Bayesian spatial GDM approaches; integrating vegetation, climatic, land-use and remote-sensing predictors; developing reproducible R workflows for spatial analysis, modelling and scientific reporting.

November 2022 – June 2026

PhD candidate in Natural Sciences BIOME Lab. Department of Biological, Geological and Environmental Sciences, Alma Mater Studiorum - University of Bologna.
Project title: *Understanding the effects of anthropogenic impacts on biodiversity and ecosystems' tipping points at different spatial and temporal scales.*
Research focused on forest biodiversity change, disturbance and resilience across scales, combining biodiversity datasets, spatial indicators and remote-sensing time series.

February 2025 – June 2025

Teaching Tutor for the course "Conservation Biology". Alma Mater Studiorum University of Bologna, Bologna, Italy.

April 2024– July 2024

Visiting PhD Experimental Ecology & Conservation Group. School of Biological Science, University of Bristol.

November 2023 – March 2024

Teaching Tutor for the course "Basis of Biological Conservation". Alma Mater Studiorum University of Bologna, Bologna, Italy.

June 2020 – August 2020

Traineeship as biomedical lab technician, Clinica Polispecialistica Casa Del Sole, Formia, Latina, Italy.

Education

2020 – 2022 **M.Sc. Global Change Ecology and Sustainable Development Goals, Alma Mater Studiorum University of Bologna**
Thesis title: *Exploring the sources of sampling bias in the database sPlotOpen across Europe.*
Grade: 110/110 with honors

2017 – 2020 **B.S. Biology, University of Parma**
Thesis title: *Hypothyroidism and Obesity: the effects of Laparoscopic Sleeve Gastrectomy on the serum level of T3, T4, TSH..*

2012 – 2017 **Linguistic High School, Istituto di Istruzione Superiore Liceo " M. T. Cicerone Pollione"**

Research Publications

Journal Articles

1. R. Melis, M. Malavasi, M. Bazzichetto, M. C. Caria, G. Rivieccio, A. Denaro, E. Marchetto, M. Perrone, M. Livornese, D. Rocchini, and S. Bagella, "Unravelling bias: A sardinian perspective on taxonomic, spatial, and temporal biases in vascular plant biodiversity data from gbif," *Ecological Informatics*, vol. 90, p. 103 289, 2025, ISSN: 1574-9541. DOI: https://doi.org/10.1016/j.ecoinf.2025.103289.

2. R. C. Gatti, J. Iaria, G. Moretti, V. Amendola, F. M. Cassola, P. Cerretti, M. D. Musciano, L. Francesconi, A. R. Frattaroli, M. Livornese, M. Martini, D. Nania, M. Pacifici, G. Piovesan, S. Prandelli, D. Rocchini, and A. Chiarucci, "Eu2030 biodiversity strategy: Unveiling gaps in the coverage of ecoregions and threatened species within the strictly protected areas of italy," *Journal for Nature Conservation*, p. 126 621, 2024, ISSN: 1617-1381. DOI: https://doi.org/10.1016/j.jnc.2024.126621.

3. E. Marchetto, M. Livornese, F. M. Sabatini, E. Tordoni, D. Da Re, J. Lenoir, R. Testolin, G. Bacaro, R. Cazzolla Gatti, A. Chiarucci, G. M. Foody, L. Gábor, Q. Groom, J. Iaria, M. Malavasi, V. Moudrý, D. Santovito, P. Šímová, P. Zannini, and D. Rocchini, "Addressing multiple facets of bias and uncertainty in continental scale biodiversity databases," *Biodiversity Informatics*, vol. 18, Sep. 2024. DOI: 10.17161/bi.v18i.21810.

4. M. Martini, S. Patelli, F. M. Cassola, J. Iaria, M. Livornese, S. Prandelli, F. Santi, D. Rocchini, M. Muraro, P. Angelini, *et al.*, "A case study on the impact of coppicing on small mammal diversity: First evidence from the high agri valley in the basilicata region, italy," *Journal for Nature Conservation*, p. 126 732, 2024.

Skills

Languages — Mother tongue: Italian
Strong reading, writing and speaking competencies in English and French. Basic reading and speaking competencies for German.

Programming and reproducible research — R, tidyverse, Git/GitHub, RMarkdown/Quarto, LaTeX, scientific visualization and reporting.

Remote Sensing — QGIS, Google Earth Engine, spatial analysis in R, raster/vector data processing, environmental data integration.

Skills (continued)

Misc. — Academic research, teaching, scientific diving, social media management.

Soft skills — Teamwork, problem solving, time management, communication, interdisciplinary collaboration.

Congress Attendance and Organization

February 2026 — **Final workshop of the PRIN 2022 Project - BECAUSE - "Plant Biodiversity and Ecosystem Change in protected Areas: land-Use impacts and Scenario Evaluation"**, Bologna, Italy.
Talk: "Identifying the dominant drivers of plant compositional change in Italian protected areas undergoing land abandonment."

May 2025 — **2nd Italian Conference for Early Career Researchers in Conservation Biology**, L'Aquila, Italy.
Speed Talk: "Early Warning Signals to detect resilience loss in European forests"

September 2024 — **66th IAVS Annual Symposium** Funchal, Madeira island.
Poster title: "Monitoring the Health of Global Forest Ecosystems"

June 2024 — **Volunteer, European Congress of Conservation Biology** Bologna, Italy.

June 2023 — **Organizing Committee, EU Horizon Europe EarthBridge Conference** Bologna, Italy.

April 2023 — **Challenging Conservation: adattarsi al cambiamento prima conferenza di Biologia della Conservazione per ECR (SCB)** Rome, Italy.(oral presentation).
oral contribution: "Detecting disturbance in Global forest ecosystems"

Completed Courses

May 2025 — **Introduction to Predictive Modeling in Ecology** Luca Santini, Università Sapienza di Roma

April 2024 — **Artificial intelligence & Machine Learning** Big Data Lab- Ifoa.

January 2024 — **Academic English Skills** Alma Mater Studiorum University of Bologna.

October 2024 — **Scientific Writing and Communication** Alma Mater Studiorum University of Bologna.

July 2023 — **Una Europa One Health Summer School** Una Europa, KU Leuven.

March 2023 — **IOP Peer Review Excellence training graduate** IOP publishing.

February 2023 — **Statistic course for PhD Students** Alma Mater Studiorum University of Bologna.

2022 — **Scientific Diving Laboratory: Diving Techniques for Biological Survey** Alma Mater Studiorum University of Bologna

Completed Courses (continued)

- **Seminar "Modeling the global scale effects of non-vascular plants on weathering and climate in the present and in the past"** Philipp Porada, University of Hamburg.
- **Data Science and Machine Learning with R** Valentina Porcu, Udemy
- **Emergency First Response - CPR Aid/Care for Children w/AED** Padi

Miscellaneous Experience

Field Experience

2023 **Monitoring micro-mammals species in Val d'Agri, Basilicata**

2022 **Analyses of biometric parameters and population structure of the zooxanthellate solitary coral *Balanophyllia europaea* in Calafuria, Italy**.

References

Available on Request

This CV has been compiled by the LaTeXprogramming language.
I authorise the processing of my personal data pursuant to Regulation (EU) 2016/679 (GDPR) and Italian Legislative Decree 196/2003, as amended. I declare that all the facts mentioned in this CV correspond to reality, under my own responsibility.
May 21, 2026