# Vittoria Ferrari

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#### Education

November 2025 - ongoing

#### PhD student

École doctorale Sciences de l'Environnement d'Île-de-France (ED129), Sorbonne Université • UMR7144 – Adaptation et Diversité en Milieu Marin, Station Biologique de Roscoff (CNRS, SU) - Roscoff, France

*PhD title:* Stability of kelp associated communities along a biogeographic transition zone (STABILO)

*PhD description:* The erosion of marine biodiversity has complex and poorly understood effects on the stability of ecosystems in the face of environmental change. In order to adapt management strategies to climate change, it is urgent to determine the compensatory dynamics that enable ecosystems to absorb new pressures (e.g. marine heatwaves), identify the early signs of their degradation, and describe the processes that may limit their recovery. Combining observations and in-situ experiments within macroalgal forests, the STABILO project will examine how various indicators of the stability of their biological communities vary under contrasting biogeographical and environmental conditions (in preserved, exploited and port forests).

Supervisors: Éric Thiébaut (HDR) and Jean-Charles Leclerc (MCF) - Sorbonne Université (SU), Station Biologique de Roscoff (UMR7144 – Adaptation et Diversité en Milieu Marin)

The STABILO project is the 2025 winner of the marine biodiversity research grant of the Iris Foundation – Ginkgo Foundation for the environment.

September 2021 - February 2024

#### Master's Degree in Marine Biology • Università Politecnica delle Marche, Italy

*Final grade:* 110/110 *cum Laude* (i.e. maximum possible result)

*Thesis title:* "To what extent are the interactions between the isopod crustacean *Idotea balthica* and the red alga *Gracilaria gracilis* mutualistic?" | *Supervisor:* Dr. Fabio Rindi | *Co-supervisor:* Dr. Myriam Valero

September 2017 – October 2020

# Bachelor's Degree in Biological Sciences • Università degli studi di Modena e Reggio Emilia, Italy

*Final grade:* 110/110 *cum Laude* (i.e. maximum possible result)

*Thesis title:* "Ecotoxicological effects of new generation pollutants on freshwater and marine phytoplankton species" | *Supervisor:* Dr. Daniela Prevedelli | *Co-supervisor:* Dr. Monia Renzi

September 2012 - July 2017

High School Diploma • Liceo Scientifico Statale "Manfredo Fanti" - Carpi (MO), Italy

Final grade: 100/100

# Research and working experience

June 2025 - September 2025 (4 months)

Internship (seasonal work) • Orso Diving S.A.S. di Pegoraro Paola e c. - Porto Cervo (SS), Italy

Supervisor: Paola Pegoraro

*Main duties:* Management and filtering of written and/or telephone communications addressed to the diving centre; diary management (contacts, appointments, deadlines); reception and customers' service; support for snorkelling, diving, dolphin and whale watching excursions.

#### October 2024 - January 2025 (4 months)

#### Campusworld internship • Université Côte d'Azur, ECOSEAS Laboratory - Nice, France

Supervisor: Dr. Luisa Mangialajo

Main duties:

- Laboratory and fieldwork activities related to the conservation and restoration ecology of *Cystoseira s.l.* marine forests in the framework of the project Biodiversa + FORESCUE.
- Identification of seaweeds, sample sorting and mapping of *Cystoseira s.l.* marine forests using QGIS.
- Co-organization of collaborative activities for the workshop "Conservation and Restoration of Mediterranean Marine Forests" (29/11 and 04/12/2024).

#### April 2024 - July 2024 (4 months)

#### Erasmus+ Traineeship • Ruđer Bošković Institute, Center for Marine Research - Rovinj, Croatia

Supervisor: Dr. Ljiljana Iveša

Main duties:

- Monitoring and collection of macroalgal samples in the field (by boating, snorkelling); maintenance of individuals in aquaria; taxonomical identification of specimens and extrapolation of morphological features from digital photos using ImageJ.
- Execution of an experiment investigating the thermotolerance resilience of *Fucus virsoides*.
- Participation to the kick-off meeting of the BRIGANTINE project (INTERREG Italy-Croatia).

# April 2023 - August 2023 (5 months)

#### Erasmus+ Traineeship • Station Biologique de Roscoff (CNRS, SU) - Roscoff, France

Supervisor: Dr. Myriam Valero

Main duties:

- Field sampling of the red alga *Gracilaria gracilis* and the isopod *Idotea balthica* and planning of an experimental design to investigate the mutualistic association between these two species.
- Use of: aquaria containing algae and isopods; filtration, coloration and fixation techniques followed by analysis of samples by fluorescence microscopy; Minitab Statistical software, Microsoft Excel and R Studio software were used for data analysis.

### September 2022 - September 2022 (1 month)

### Curricular internship • Marine Protected Area "Isola di Bergeggi" - Bergeggi (SV), Italy

Supervisor: Dr. Davide Virzi

*Main duties:* Monitoring activities of bottlenose dolphins and sperm whales with "Menkab" association; development of a monitoring plan, by underwater video camera, concerning the main fish species present within the MPA and drafting of an updated checklist of fish species present within the MPA.

#### January 2021 - October 2021 (10 months)

# Internship (remotely) • National Research Council (CNR-IRSA) - Verbania (VB), Italy

Supervisor: Dr. Diego Fontaneto

*Main duties:* Organisation, management and analysis of a georeferenced database (1800-2020) of occurrence of rotifer species in Italy.

#### June 2020 - September 2020 (4 months)

### Curricular internship • Bioscience Research Center (BsRC) - Fonteblanda (GR), Italy

Supervisor: Dr. Monia Renzi

Main duties: Conducting ecotoxicological assays to test the effect of emerging contaminants (i.e., ZnO, TiO<sub>2</sub>, amoxicillin and white musk) on two freshwater and three marine phytoplankton species; use of: spectrophotometer, Fourier-transformed infrared spectroscopy ( $\mu$ FT-IR) and field emission scanning electron microscopy (FE-SEM).

# Other formative experiences

09 - 14/09/2024: "Summer School of Geomorphology, Ecology and Biology in the Marine and Island Environment" • Istituto Superiore per la Protezione e la Ricerca Ambientale - Asinara (SS), Italy.

Theory and practice of geomorphology, ecology and biology of coastal marine and island environment.

02 - 07/10/2023: **Summer school "CAMPUS AMP"** • Worldrise Onlus - Loiri Porto San Paolo (SS), Italy. 39 hours of theoretical and practical training on the effective management of Marine Protected Areas.

04 - 22/07/2022: **Summer school N°4UM52 "Marine Biodiversity: expertise in flora" •** Station Biologique de Roscoff (CNRS, Sorbonne Université) - Roscoff, France

*Topics covered:* introduction to systematics, phylogeny and algal taxonomy; cytological, biochemical, ecological characteristics of green, red and brown macroalgae; reproductive phenology and life cycles. *Workshops:* observation of distinctive features of the main groups; use of identification keys; preparation of slides for microscopic observation; extraction and analysis of pigments; field sampling.

## **Publications**

**Ferrari, V.,** Coudret, J., Destombe, C. and Valero, M. Assessing the mutualistic interactions between the isopod *Idotea balthica* and the red alga *Gracilaria gracilis*. In preparation for anticipated submission to Current Biology.

Gljušćić, E., Bilajac, A., **Ferrari, V.** and Iveša L. (2025). Effects of increased temperatures during air exposure on the morphology and physiology of *Fucus virsoides* (Fucales, Phaeophyceae). Algae, 40(3), 241-255.

**Ferrari, V.**, Gualdi, A., Bertani, I., Fontaneto, D., Kamburska, L., Karimullah, K., Marrone, F., Obertegger, U., Rossetti, G., Tiberti, R. and Cancellario, T. (2023). A georeferenced dataset of Italian occurrence records of the phylum Rotifera. Journal of Limnology, 82 (1): 2107.

Broccoli, A., Anselmi, S., Cavallo, A., **Ferrari, V.**, Prevedelli, D., Pastorino, P. and Renzi, M. (2021). Ecotoxicological effects of new generation pollutants (nanoparticles, amoxicillin and white musk) on freshwater and marine phytoplankton species. Chemosphere 279: 130623.

#### Courses and certificates

08/2025: **Enriched Air Nitrox Level 2 (40%) SSI** (717851A7554623228117-IT) • Orso Diving Club (SS), Italy.

07/2025: **Stress and Rescue SSI** (717851S7514663257606-IT) • Orso Diving Club (SS), Italy.

06/2025: **React Right SSI** (717851F7503232559142-IT) • Orso Diving Club (SS), Italy.

06/2025: Advanced Adventurer SSI (717851C7509631797485-IT) • Orso Diving Club (SS). Italy.

02/2025 - 03/2025: Online course "Artificial intelligence" (40 hours) • FORMODENA (MO), Italy.

01/2025: Online course "**Introductory Statistics with R for Biological Sciences**" (16 hours) • Centro Interdisciplinar de Investigação Marinha e Ambiental (CIIMAR), Universidade do Porto.

10/2024 - 12/2024: Online course "**QGIS** (base user level)" (24 hours) • Gter s.r.l. (GE), Italy. After a final examination (19/20), I received an international certification to the use of QGIS software.

07/2024: Online course **"Excel (intermediate level)"** (20 hours) • CIS Unindustria (RE), Italy.

09/2023 - 12/2023: Extracurricular course (6 ECTS) "Restoration of Seagrasses and Algal Forests" from MSc in Marine Biology, *Final grade:* 29/30 • Università Politecnica delle Marche (AN), Italy.

06/2022: Open Water Diver PADI (2206EE2828) • Centro Sub Monte Conero (AN), Italy.

11/2018: **Driving licence B** • Unione autoscuole Carpi (MO), Italy.

# **Congresses and conferences**

- 13 14/11/2024: **Journées de la Société Phycologique de France**, Roscoff (France). Talk: "Assessing the mutualistic interactions between the isopod *I. balthica* and the red alga *G. gracilis*".
- 21 26/08/2023: 8<sup>th</sup> European Phycological Congress (EPC8), Brest (France). Participation as listener and volunteer.

#### Academic awards

- "PREMIO DI LAUREA 2024" assigned by Rotary Club Ancona in recognition of the value of MSc thesis during the A.Y. 2022/2023 and within the Department of Life and Environmental Sciences (DISVA) of Università Politecnica delle Marche, Italy.
- Three "PREMI DI STUDIO" assigned by Università degli studi di Modena e Reggio Emilia in recognition of academic merits achieved in the A.Y. 2017/2018, 2018/2019, 2019/2020.

# **Competences and skills**

#### Competences:

- Experience in handling short and long-term laboratory experiments
- Experience in performing field sampling in the intertidal and shallow subtidal
- Experience in taxonomic identification of sampled organisms
- Experience in the use of imagery software (e.g., ImageJ)
- Experience in recreational diving and interest in scientific diving
- Basic experience in data analysis (e.g., R Studio, Minitab statistical software, Microsoft Excel)
- Basic experience in handling spatial data on QGIS software
- Basic experience in organizing stakeholder engagement activities
- Interest in conservation and restoration ecology of marine angiosperms and seaweeds
- Knowledge of flora and fauna of hard substrates in the Northeast Atlantic and in the Mediterranean

#### Soft skills:

- Ability to work both independently and as part of a team
- Ability to adapt to different cultural frameworks
- Good communication and collaboration skills (interdisciplinary included)
- Rigor and initiative
- Strong organizational and writing skills
- Creativity
- Enthusiasm for fieldwork

# Languages

**Italian:** mother tongue | **English:** C1 (not certified) | **French:** B1 (not certified)