



Camille Magneville

PH.D IN FUNCTIONAL ECOLOGY

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Scientific diver
Driving licence

EDUCATION AND PROFESSIONAL BACKGROUND

PHD THESIS IN MARINE ECOLOGY September 2019 - June 2023

- Topic: Importance of fish functional diversity for the functioning of coastal marine ecosystems
- Competitive excellence PhD grand (110 000 € for three years)
- Montpellier University (France), MARBEC Lab
- Supervisors: Sébastien Villéger (CNRS Montpellier) and Thomas Claverie (CUFR Mayotte)
- 6 articles first author

ENGINEER DIPLOMA AND MASTER DEGREE September 2016 - June 2019

- Agronomic engineer diploma at Agrocampus Ouest Rennes Graduate School, Rennes (France)
- Research Master diploma "Functional, Behavioral and Evolutive Ecology" at the Rennes University (France) (courses in english)

MASTER 2 INTERNSHIP IN BIOGEOGRAPHY January 2018 - June 2019

- Topic: Conservation planning of insular mammals biodiversity facets
- Paris-Sud University (France), Systematic Ecology and Evolution Lab
- Supervisors: Dr Céline Bellard et Camille Leclerc
- 1 article second author

MASTER 1 INTERNSHIP IN BEHAVIORAL ECOLOGY September 2017 - January 2018

- Topic: Study of the sibling cooperation in a burrying beetle
- Edinburgh University (Scotland), Institute of Evolutionary Biology
- Supervisor: Dr Per T. Smiseth
- 1 article 1st author

SKILLS

COMPUTER SCIENCE

- Reproducible R programming (building R packages, literate programming, creating websites)
- Mapping in R
- Code collaboration using Git
- GIS Basics (with QGIS)
- SQL Basics

NUMERICAL ECOLOGY

- Functional and phylogenetic diversity analysis
- Species-Area Relationships
- Generalised and simple linear models
- Multivariate analysis
- Null models

FIELD WORK

- Scientific diver (CAH 0B) and N2 FFESSM
- Ecological inventories (amphibians, birds, flora)
- Preparation and execution of two field campaigns (Mediterranean Sea and Indian Ocean) for underwater cameras setting and biological samplings

LANGUAGES

- French (native)
- English (fluent)
- German (beginner)
- Spanish (beginner)

SUPERVISION & TEACHING EXPERIENCE

STUDENTS SUPERVISION

- Bachelor: 18 students - Video annotations and analysis with R
- Master 1:
 - Marie Lou Leréec "Effect of invasive species on native herbivores grazing activity in the Mediterranean sea" (2019)
 - Solène Dedieu "Effect of protection levels on taxonomic, phylogenetic and functional facets of diversity" (2021)
 - Capucine Brissaud "Improving species abundance estimation using a network of cameras" (2022)

TEACHINGS

- 202 hours during my Ph.D.
- Degrees: Bachelor and Master
- Topics: Biology of Organisms, Functional Ecology, Description of data variability, Biostatistics and R coding
- Type of teachings: lectures, tutorial groups, practical work



Scientific Outputs

PUBLICATIONS

Number of citations: 48 - H Index: 3

- Magneville et al. 2018, 'No evidence of sibling cooperation in the absence of parental care in *Nicrophorus vespilloides*' *Evolution* DOI: <https://doi.org/10.1111/evo.13622>
- Leclerc, Magneville and Bellard 2021 'Multidimensional diversity approach to explore endemic mammal priorities on insular regions' *Diversity and Distribution* DOI: <https://doi.org/10.1111/ddi.13441>
- Magneville et al. 2022 'mFD: an R package to compute and illustrate the multiple facets of functional diversity' *Ecography* DOI: <https://doi.org/10.1111/ecog.05904>
- Magneville et al. 2022 'Long-duration remote underwater cameras reveal that grazing by fishes is highly variable through time and dominated by non-indigenous species' *Remote Sensing in Ecology & Conservation* DOI: <https://doi.org/10.1002/rse2.311>

SUBMITTED MANUSCRIPTS

- Magneville et al. (review) 'A new framework for estimating abundance of animals using a network of cameras' *Limnology and Oceanography - Methods*
- Magneville et al. (submitted) 'Detecting benefits of protection level in a sea of temporal scarcity' *Aquatic Conservation*
- Magneville et al. (review) 'Remote observations revealed effects of fully protected area on contribution of fishes to trophic-based processes' *Coral Reefs*
- Villéger, Magneville, Roncin, Retailleau and Claverie (review) 'Remote underwater video revealed reef fishes reaction to a submarine magnitude 5 earthquake' *Ecology - Scientific Naturalist*

PRESENTATIONS

- "Presenting the mFD package" - R Meetings 2021 (Remote) (online presentation: [link](#))
- "Tropical exotic fish are key herbivores in the Mediterranean sea" International Coral Reef Symposium (2021) (Remote)
- "A new framework based on synchronised cameras to measure fish abundance" - International Coral Reef Symposium (2022) (Bremen - Germany)
- Workshop on the mFD package at the conference "From Species to Functions" - FRB (2022) (Montpellier - France)

SCIENCE POPULARISATION

- Followed the training and participated to the Three Minutes Thesis regional contest. [Speech online](#) (french) - March 2022
- Participated to the premiere of the documentary series Insignificant (Arte) realised by par Franck Courchamp and Clément Morin to answer questions from visitors to the "Forum des Images" (Paris - France) - March 2019

REFERENCES

- Dr Villéger Sébastien: Chargé de recherche CNRS at the MARBEC lab (Montpellier University) (sebastien.villeger@cnrs.fr)
- Dr Céline Bellard: Chargée de recherche CNRS at the Systematic Ecology and Evolution lab (Paris-Sud University) (celine.bellard@universite-paris-saclay.fr)