

Matthias Grenié

Postdoctoral Researcher

Curriculum Vitae
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Scientific Education

2016-2020	PhD in Ecology Montpellier, France ➤ Supervised by Dr. Cyrille Violle and Pr. François Munoz . ➤ PhD title: 'Outside the norm: deviation from ecological optimality and functional originality'	CEFE / Montpellier University
2013-2015	MSc. in General Biology Lyon, France	École Normale Supérieure de Lyon
2012-2013	Bsc. in General Biology Lyon, France	École Normale Supérieure de Lyon

Academic Experience

Oct. 2020-now	Postdoctoral Researcher Leipzig, Germany ➤ Working with Dr. Marten Winter on the functional biogeography of alien plants	German Center for Integrative Biodiversity Research (iDiv) / Leipzig University
2016-2020	PhD Student Montpellier, France	Montpellier University
Feb. 2015-June 2015	Master Intern Kourou, French Guiana, France ➤ Supervised by Dr. Bruno Hérault on intraspecific variability in tropical trees growth in function of functional traits	EcoFOG
Sept. 2014-Dec. 2014	Master Intern Montpellier, France ➤ Supervised by Dr. Ophélie Ronce on matrix population models	ISEM, University of Montpellier
Feb. 2014-July 2014	Master Intern Bloomington, IN, USA ➤ Supervised by Dr. Jean-François Goût in Michael Lynch's lab on trait motifs in the *Paramecium* complex	Indiana University

Scientific Supervision

Master students supervision. Charlotte & Nathan.

Scientific Service

Elected Lab council, peer reviews for XX and YY journals, reviewer for rOpenSci, conference organization (MEE), half-day workshop on Open Science CEFE R User Group. Organize sDiv lab meetings. PhD Advisory Committee.

Scientific Projects

Active member of FREE CESAB group, GloNAF, Impacts CESAB group.

Scientific Contributions













📄 10 published articles. 🗨 323 citations (Google Scholar). 📊 h-index 10 (Google Scholar). 📦 6 R packages

Publications

1. Grenié M, Denelle P, Tucker CM, Munoz F, Violle C. 2017 Funrar: An R package to characterize functional rarity. *Diversity and Distributions* **23**, 1365–1371. (doi:[10.1111/ddi.12629](https://doi.org/10.1111/ddi.12629))

2. Violle C, Thuiller W, Mouquet N, Munoz F, Kraft NJB, Cadotte MW, Livingstone SW, Grenié M, Moullot D. 2017 A Common Toolbox to Understand, Monitor or Manage Rarity? A Response to Carmona et al. *Trends in Ecology & Evolution* **32**, 891–893. (doi:[10.1016/j.tree.2017.10.001](https://doi.org/10.1016/j.tree.2017.10.001))
3. Munoz F, Grenié M, Denelle P, Taudière A, Laroche F, Tucker C, Violle C. 2018 Ecolottery: Simulating and assessing community assembly with environmental filtering and neutral dynamics in R. *Methods in Ecology and Evolution* **9**, 693–703. (doi:[10.1111/2041-210X.12918](https://doi.org/10.1111/2041-210X.12918))
4. Grenié M, Moullot D, Villéger S, Denelle P, Tucker CM, Munoz F, Violle C. 2018 Functional rarity of coral reef fishes at the global scale: Hotspots and challenges for conservation. *Biological Conservation* **226**, 288–299. (doi:[10.1016/j.biocon.2018.08.011](https://doi.org/10.1016/j.biocon.2018.08.011))
5. Barnagaud J-Y, Mazet N, Munoz F, Grenié M, Denelle P, Sobral M, Kissling WD, Şekercioğlu ÇH, Violle C. 2019 Functional biogeography of dietary strategies in birds. *Global Ecology and Biogeography* **28**, 1004–1017. (doi:[10.1111/geb.12910](https://doi.org/10.1111/geb.12910))
6. Joffard N, Massol F, Grenié M, Montgelard C, Schatz B. 2019 Effect of pollination strategy, phylogeny and distribution on pollination niches of Euro-Mediterranean orchids. *Journal of Ecology* **107**, 478–490. (doi:[10.1111/1365-2745.13013](https://doi.org/10.1111/1365-2745.13013))
7. Grenié M, Violle C, Munoz F. 2020 Is prediction of species richness from stacked species distribution models biased by habitat saturation? *Ecological Indicators* **111**, 105970. (doi:[10.1016/j.ecolind.2019.105970](https://doi.org/10.1016/j.ecolind.2019.105970))
8. Loiseau N et al. 2020 Global distribution and conservation status of ecologically rare mammal and bird species. *Nature Communications* **11**, 5071. (doi:[10.1038/s41467-020-18779-w](https://doi.org/10.1038/s41467-020-18779-w))
9. Moullot D et al. 2021 The dimensionality and structure of species trait spaces. *Ecology Letters* **24**, 1988–2009. (doi:[10.1111/ele.13778](https://doi.org/10.1111/ele.13778))
10. Grenié M, Berti E, Carvajal-Quintero J, Dädlow GML, Sagouis A, Winter M. 2022 Harmonizing taxon names in biodiversity data: A review of tools, databases and best practices. *Methods in Ecology and Evolution* **n/a**. (doi:[10.1111/2041-210X.13802](https://doi.org/10.1111/2041-210X.13802))

R packages

- **funrar** (main creator and maintainer)
computes functional originality indices central for CESAB FREE group analyses
 [published paper](#),  [CRAN](#),  [GitHub](#)
- **ecolottery** (co-creator)
simulates community assembly processes cleverly with both niche and neutral processes
 [published paper](#),  [CRAN](#),  [GitHub](#)
- **rtaxref** (main creator and maintainer)
accesses the French Taxonomic Referential (TAXREF) API
 [GitHub](#)
- **rromeo** (co-creator and maintainer)
accesses the Sherpa/RoMEO API Open Access journals
[published by rOpenSci](#),  [CRAN](#),  [GitHub](#)
- **fundiversity** (co-creator and maintainer)
a fast and modular package to compute functional diversity indices
 [CRAN](#),  [GitHub](#)
- **funbiogeo** (co-creator and maintainer)
helps create functional biogeography workflows, developed in the context of the FREE CESAB group
 [GitHub](#)
- Significant contributions to other packages: [taxize](#), [ggfortify](#), and [traitdataform](#)

Conference Proceedings

1. Grenié M, Berti E, Carvajal-Quintero J, Winter M, Sagouis A. 2021 Matching Species Names Across Biodiversity Databases: Sources, tools, pitfalls and best practices for taxonomic harmonization. *Biodiversity Information Science and Standards* **5**, e75359. (doi:[10.3897/biss.5.75359](https://doi.org/10.3897/biss.5.75359))

Invited Talks

Göttingen lab seminar, D2KAB workshop.

Talks

Blogposts

1. Grenié M, Gruson H. 2019 Access Publisher Copyright & Self-Archiving Policies via the 'SHERPA/RoMEO' API. *rOpenSci blog*.
2. Grenié M, Berti E, Carvajal-Quintero J, Dädlow GML, Sagouis A, Winter M. 2022 Best practices for taxonomic harmonization, an overlooked yet crucial step in biodiversity analyses. *Methods Blog*.

3. Grenié M, Gruson H. 2020 Community Captioning of rOpenSci Community Calls. *rOpenSci blog*.

Teaching Experience

Summary table. Year, Institution, Name of course, role, number of students.

Skills

Languages

French, English, Spanish, German, Chinese, Japanese

Programming languages

R practices, data visualization, spatial data, SQL, HPC, git + GitHub collaborative development.