Matthias Grenié
Postdoctoral Researcher

Curriculum Vitae
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📍 German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig
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Scientific Education

2016-2020	**PhD in Ecology** Montpellier, France	CEFE / Montpellier University

➤ Supervised by **Dr. Cyrille Violle** and **Pr. Françoiz Munoz**.
➤ PhD title: 'Outside the norm: deviation from ecological optimality and functional originality'

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	German Center for Integrative Biodiversity Research (iDiv) / Leipzig University

➤ Working with **Dr. Marten Winter** on the functional biogegraphy of alien plants

2016-2020	**PhD Student** Montpellier, France	Montpellier University
Feb. 2015-June 2015	**Master Intern** Kourou, French Guiana, France	EcoFOG

➤ Supervised by **Dr. Bruno Hérault** on intraspecific variability in tropical trees growth in function of functional traits

Sept. 2014-Dec. 2014	**Master Intern** Montpellier, France	ISEM, University of Montpellier

➤ Supervised by **Dr. Ophélie Ronce** on matrix population models

Feb. 2014-July 2014	**Master Intern** Bloomington, IN, USA	Indiana University

➤ Supervised by **Dr. Jean-François Goût** in Michael Lynch's lab on trait motifs in the *Paramecium* complex

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.

Scientic Projects

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

Scientific Contributions

📄 10 published articles. ❝❝ 323 citations (Google Scholar). H 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)

2. Violle C, Thuiller W, Mouquet N, Munoz F, Kraft NJB, Cadotte MW, Livingstone SW, Grenié M, Mouillot 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)

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)

4. Grenié M, Mouillot 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)

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)

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)

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)

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)

9. Mouillot D *et al.* 2021 The Dimensionality and Structure of Species Trait Spaces. *Ecology Letters* **24**, 1988–2009. (doi: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)

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)

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**

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.