Matthias Grenié

Postdoctoral Researcher

Curriculum Vitae
May 2022

📍 German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig
🏠 rekyt.github.io
📞 +49 341 9733176
✉ matthias.grenie@idiv.de
🐦 @LeNematode
⭘ Rekyt
G fZ1_d7QAAAAJ
R⁢ Matthias-Grenie
🆔 0000-0002-4659-7522

Scientific Education

2016-2020	**PhD in Ecology** Montpellier, France	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

➤ 6 months Internship with **Dr. Bruno Hérault Ronce** in Kourou, French Guiana, France
➤ 6 months Internship with **Dr. Ophélie Ronce** in Montpellier, France
➤ 4 months Internship with **Dr. Jean-François Goût** in Michael Lynch's lab in Bloomington, IN, USA

2012-2013	**Bsc. in General Biology** Lyon, France	École Normale Supérieure de Lyon

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

Publications

1. Grenié, M., Denelle, P., Tucker, C. M., Munoz, F., & Violle, C. (2017). Funrar: An R Package to Characterize Functional Rarity. *Diversity and Distributions*, *23*(12), 1365–1371. https://doi.org/10.1111/ddi.12629

2. Violle, C., Thuiller, W., Mouquet, N., Munoz, F., Kraft, N. J. B., Cadotte, M. W., Livingstone, S. W., 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*(12), 891–893. 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*(3), 693–703. https://doi.org/10.1111/2041-210X.12918_eprint: https://besjournals.onlinelibrary.wiley.com/doi/pdf/10.1111/2041-210X.12918

4. Grenié, M., Mouillot, D., Villéger, S., Denelle, P., Tucker, C. M., 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. 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, W. D., Şekercioğlu, Ç. H., & Violle, C. (2019). Functional Biogeography of Dietary Strategies in Birds. *Global Ecology and Biogeography*, *28*(7), 1004–1017. 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*(1), 478–490. 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. https://doi.org/10.1016/j.ecolind.2019.105970

8. Loiseau, N., Mouquet, N., Casajus, N., Grenié, M., Guéguen, M., Maitner, B., Mouillot, D., Ostling, A., Renaud, J., Tucker, C., Velez, L., Thuiller, W., & Violle, C. (2020). Global Distribution and Conservation Status of Ecologically Rare Mammal and Bird Species. *Nature Communications*, *11*(1), 5071. https://doi.org/10.1038/s41467-020-18779-w

9. Mouillot, D., Loiseau, N., Grenié, M., Algar, A. C., Allegra, M., Cadotte, M. W., Casajus, N., Denelle, P., Guéguen, M., Maire, A., Maitner, B., McGill, B. J., McLean, M., Mouquet, N., Munoz, F., Thuiller, W., Villéger, S., Violle, C., & Auber, A. (2021). The Dimensionality and Structure of Species Trait Spaces. *Ecology Letters*, *24*(9), 1988–2009. https://doi.org/10.1111/ele.13778_eprint: https://onlinelibrary.wiley.com/doi/pdf/10.1111/ele.13778

10. Grenié, M., Berti, E., Carvajal-Quintero, J., Dädlow, G. M. L., 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*(n/a). https://doi.org/10.1111/2041-210X.13802_eprint: https://onlinelibrary.wiley.com/doi/pdf/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. https://doi.org/10.3897/biss.5.75359

R Packages

➤ `funrar` computes functional originality indices central for CESAB FREE group analyses, [published paper], CRAN link, GitHub link

➤ `ecolottery` simulates community assembly processes cleverly with both niche and neutral processes, [published paper], CRAN link, GitHub link

➤ `rtaxref` accesses the French Taxonomic Referential (TAXREF) API, GitHub link

➤ `rromeo` accesses the Sherpa/RoMEO API on Open Access journals, reviewed by rOpenSci, CRAN link, GitHub link

➤ `fundiversity` is a fast and modular package to compute functional diversity indices, CRAN link, GitHub link

➤ `funbiogeo` helps to create functional biogeography workflows, developed in the context of the FREE CESAB group, GitHub link

➤ Contributions to several biodiversity packages: `taxize`

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. In *rOpenSci blog*.

2. Grenié, M., Berti, E., Carvajal-Quintero, J., Dädlow, G. M. L., Sagouis, A., & Winter, M. (2022). Best Practices for Taxonomic Harmonization, an Overlooked yet Crucial Step in Biodiversity Analyses. In *Methods Blog*.

3. Grenié, M., & Gruson, H. (2020). Community Captioning of rOpenSci Community Calls. In *rOpenSci blog*.

Teaching

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.