



Qingzhou Zhao

Ph.D. candidate

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EDUCATION

2020.09 – 2025.06 **PhD in Ecosystem Ecology**, Nanjing Agricultural University, College of Resources and Environmental Sciences (Supervisor: [Shuijin Hu](#))

2022.09 – 2024.09 **Visiting PhD in Ecosystem Ecology**, ETH Zürich, Department of Environmental Systems Science (Supervisor: [Thomas Crowther](#))

2017.09 – 2020.09 **MSc in Ecosystem Ecology**, Nanjing Agricultural University, College of Resources and Environmental Sciences (Supervisor: [Shuijin Hu](#))

2012.09 – 2016.09 **Bachelor of Science in Agriculture** with a specialization in Plant Protection at Hainan University, College of Tropical Crops

RESEARCH INTERESTS

- Aboveground-belowground nutrient strategies under global change
- Mycorrhizal fungal biodiversity and ecosystem functionality

CURRENT RESEARCH

- Habitat area matters for ectomycorrhizal fungal biodiversity across global forest fragments (*Reviewing by co-authors, leading author*)
- Forest edge effects on mycorrhizal fungal diversity and litter decomposition at the global scale (*Writing, leading author*)
- Behind fine roots: the overlooked role of coarse roots in plant nutrient economy (*Writing*)
- Rainfall intensification facilitated plant-microbial nitrogen assimilation and ecosystem nitrogen retention and productivity (*Writing, leading author*)

- Warming and drought effects on mycorrhizal fungal community and plant-microbial N competition in an alpine ecosystem (*Analyzing, leading author*)

RESEARCH & PROFESSIONAL EXPERIENCES

- 2022 - 2024 Processing big datasets of mycorrhizal fungal sequences across the global scale
- 2017 - 2022 Fieldwork coordination and operation exploring global change effects on ecosystem C, N cycling each year in the Qinghai-Tibetan Plateau

Advanced techniques

- Processing large-scale datasets from TRY, GBIF, GRooT and others using R
- Utilizing stable isotopes to explore plant-soil C and N dynamics
- Physical & chemical analysis and application of cutting-edge scientific instruments (IRMS, ICP-OES, TOC analyzer, Elemental Analyzer, SEAL AA3, FTIR spectra, WinRHIZO)

SCHOLARSHIPS & AWARDS

- 2024.12 Best Graduate Paper Award of Academician Li-Bo. *International Symposium on Modern Ecology Series (ISOMES)* (**RMB 2,000**)
- 2024.12 The Most Influential Graduate Student. *Winfast Charity Foundation* (**RMB 10,000**)
- 2022.07 State Scholarship Fund to study in Switzerland. *CSC* (**CHF 50,400, 2 years**)
- 2020, 2021 The Second Prize Scholarship for Ph.D. Student. *NAU* (**RMB 15,000 /year**)
- 2020.06 University President Scholarship for Top-notch Master Student. *NAU*, (**RMB 30,000**)
- 2020.06 Excellent Master's Thesis; Excellent Graduate Student. *NAU*
- 2019.12 Outstanding Poster, The 18th Conference of Ecological Society of China. *ESC*
- 2019.09 Wu Yi-Wen Scholarship. *Education Development Foundation of NAU* (**RMB 5,000**)
- 2018, 2019 The First Prize Scholarship for Master Student. *NAU* (**RMB 12,000 /year**)

PUBLICATIONS

1. **Qingzhou Zhao**, Gregoire Freschet, Tingting Tao, Gabriel Reuben Smith, Peng Wang, Lingyan Hu, Miaojun Ma, David Johnson, Thomas Crowther, Shuijin Hu (2024). Resolving the Intricate Effects of Multiple Global Change Drivers on Root Litter Decomposition. *Global Change Biology* <https://doi.org/10.1111/gcb.17547>
2. **Qingzhou Zhao**, Peng Wang, Gabriel Reuben Smith, Lingyan Hu, Xupeng Liu, Tingting Tao, Miaojun Ma, Colin Averill, Gregoire Freschet, Thomas Crowther, Shuijin Hu (2024). Nitrogen redistribution and seasonal trait fluctuation facilitate plant N conservation and ecosystem N retention. *Journal of Ecology*. <https://doi.org/10.1111/1365-2745.14246>
3. **Qingzhou Zhao**, Jin Guo, Meng Shu, Peng Wang, Shuijin Hu (2020) Impacts of drought and nitrogen enrichment on leaf N resorption and root nutrient allocation in four Tibetan plant species. *Science of The Total Environment* <https://doi.org/10.1016/j.scitotenv.2020.138106>
4. Gabriel R. Smith, ... **Qingzhou Zhao**, Constantin M. Zohner, Thomas W. Crowther (2024) Ten simple rules for using large language models in science, version 1.0. *PLOS Computational Biology* 20, e1011767. <https://doi.org/10.1371/journal.pcbi.1011767>
5. Peng Wang, Jin Guo, Xinyu Xu, Xuebin Yan, Kangcheng Zhang, Yunpeng Qiu, **Qingzhou Zhao**, Kailing Huang, Xi Luo, Fei Yang, Hui Guo, Shuijin Hu. 2020. Soil acidification alters root morphology, increases root biomass but reduces root decomposition in an alpine grassland. *Environmental Pollution* 265, 115016. <https://doi.org/10.1016/j.envpol.2020.115016>
6. Meng Shu, **Qingzhou Zhao**, Zhen Li, Lin Zhang, Peng Wang, Shuijin Hu. 2019. Effects of global change factors and living roots on root litter decomposition in a Qinghai-Tibet alpine meadow. *Scientific reports*. <https://doi.org/10.1038/s41598-019-53450-5>
7. Peng Wang, Yan Yang, Pu Mou, **Qingzhou Zhao**, Yunbin Li (2018) Local root growth and death are mediated by contrasts in nutrient availability and root quantity between soil patches. *Proceedings of the Royal Society B: Biological Sciences*. <https://doi.org/10.1098/rspb.2018.0699>