Xiong Liu

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RESEARCH INTERESTS

My research interest is in plant functional traits, including leaf economic spectrum, trade-offs of plant functional traits, intraspecific and interspecific trait variation, and plant-environment interactions. Besides, I have also researched the impact of global changes (increased nitrogen deposition, changes in precipitation patterns) on soil biochemical processes.

EDUCATION

> 02/2023 - Present CREAF, UAB

CSC funded PhD student. Advisor: Prof. Josep Peñuelas and Congde Huang

> 09/2020 - Present College of Forestry, Sichuan Agricultural University

PhD student of Forest Cultivation. Advisor: Prof. Congde Huang

Tentative: Leaf economic spectrum and vein network of Bambusoideae.

> 09/2017 - 06/2020 College of Forestry, Sichuan Agricultural University

Master of Forestry: Forestry. Advisor: Prof. Congde Huang

Graduation thesis: Effects of density regulation and compound fertilizer application on soil nutrient and bamboo shoot yield in *Chimonobambusa utilis* forest, Gulin County.

> 09/2013 - 06/2017 College of Forestry, Sichuan Agricultural University

Bachelor of Agriculture: Forestry. Advisor: Prof. Congde Huang.

Graduation thesis: Effects of simulated rainfall changes on soil enzyme activities in natural evergreen broad-leaved forests in Rainy Area of West China.

EXPERIENCES

January 2021 - December 2025

Research Assistant: Field work, sampling campaign, data logging, sample analysis, data analysis and report writing for project "Sichuan Province "14th Five Year Plan" Crop and Livestock Breeding Project, Research on the Creation and Matching Technology of Shoot's Bamboo Resources" (2021YFYZ0006) ¥ 500,000

January 2015 - December 2020

Research Assistant: Field work, sampling campaign, data logging, sample analysis and data analysis for project "Sichuan Province "13th Five Year Plan" Crop and Livestock Breeding Project, Research on the Creation and Matching Technology of Shoot's Bamboo Resources" (2016NYZ0038) ¥ 500,000

Other research projects

- Effects of simulated nitrogen deposition and precipitation changes on microbial residues during litter decomposition in natural evergreen broad-leaved forest.
- > Forest carbon storage and potential for increasing sinks in Chengdu.

PUBLICATIONS

 Liu X., Zhou S., Hu J., Zhu W., Zhou Y., Pan X., Wang Y., Lei Y., Xiao L., Huang C. (2022) Density Management Is More Cost Effective Than Fertilization for *Chimonobambusa pachystachys* Bamboo-Shoot Yield and Economic Benefits. Forests, 13(7), 1054. DOI: 10.3390/f13071054.

2. Liu, X., Xiang L., Zhao D., Huang J., Zhou F., Liao J., Lan S., Du M., Zhou Y., Huang, C. (2021) Stoichiometric characteristics of nitrogen and phosphorus in *Chimonobambusa utilis* leaves at different elevations. Chinese Journal of Applied and Environmental Biology. DOI: 10.19675/j.cnki.1006-687x.2021.02054. (In Chinese with English abstract).

3. Liu, X., Luo, C., Xiang, Y., Xiao, Y., Zhou, S., Tie, L., Hu, J., Han, B., Huang, S., Huang, C. (2020) Effects of simulated precipitation changes on soil enzyme activities in a natural, evergreen, broad-leaf forest in the Rainy Area of Western China. Chinese Journal of Applied and Environmental Biology, 26(3), 635-642. DOI: 10.19675/j.cnki.1006-687 x.2019.05050 (In Chinese with English abstract).

4. Hu J., Zhou SX., Tie L., **Liu X.**, Liu X., Zhao A., Lai J., Xiao L., You C., Huang C. (2022) Effects of nitrogen addition on soil faunal abundance: A global meta-analysis. Global Ecology and Biogeography, 31(8), 1655-1666. DOI: 10.1111/geb.13528.

5. Hu J., Huang C., Zhou S., Liu X., Dijkstra F. A. (2022) Nitrogen addition increases microbial necromass in croplands and bacterial necromass in forests: A global meta-analysis. Soil Biology and Biochemistry, 165: 108500. DOI: 10.1016/j.soilbio.2021.1 08500.

CHINESE NATIONAL INVENTION PATENT

A dyeing method for the vein network of Bambusoideae.
 The first inventor (Under review)

SCHOLARSHIPS AND HONORS RECEIVED

2021-2022, National Second-class Academic Scholarship
2020-2021, National Second-class Academic Scholarship
2020, A-level certificate comprehensive quality of college students in Sichuan province
2018-2019, National Third-class Academic Scholarship
2017-2018, National Third-class Academic Scholarship

ACADEMIC ACTIVITIES

The 19th Chinese Ecology Conference, Online, 2020 The 21th Chinese Ecology Conference, 2022