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EDUCATION

2022.09-present	School of Ecological and Environmental Sciences, East China Normal University PhD candidate in Ecology (Supervised by Prof. Shaopeng Li)
2019.09-2022.06	College of Life Sciences, Shaanxi Normal University M.S. in Ecology (Supervised by Prof. Gang Liu)
2015.09-2019.06	College of Life Sciences, Shaanxi Normal University B.S. in Ecology

RESEARCH EXPERIENCE

1. **The dark diversity concept as a framework for reconciling Darwin's naturalization conundrum, 2022.12- present**

Darwin's naturalization conundrum (DNC) describes two opposing hypotheses, suggesting that the establishment of exotic species should be benefitted or suppressed by their phylogenetic relatedness to native species. We propose that the dark diversity concept, incorporating site-specific species pool size and community completeness, offers a framework to reconcile this conundrum. Using a 340-year record of fish introductions in 516 Swedish lakes and a plant seed and transplant addition experiment in calcareous grasslands, we revealed a context-dependent effect of exotic-native phylogenetic distance on exotic establishment.

2. **Realized niche shift and population differentiation facilitating the invasion of *Galinsoga quadriradiata* (Asteraceae) in China, 2020.01-2022.06**

Using species distribution models (SMDs), we assessed the climatic niche shift between the native and invasive ranges of *Galinsoga quadriradiata*, an invasive plant originating from Latin America. Additionally, through a combination of field surveys and greenhouse experiments, we investigated population differentiation between the central and edge invasive populations of *G. quadriradiata* in China, focusing on their interactions with arbuscular mycorrhizal fungi (AMF) and plant soil feedbacks.

PUBLICATIONS

1. **Zhang WG**, Song XJ, Petri L, Liu G*, Chen XY, Liu RL, Hang FF, Zou JB, Zhu ZZ. (2024). Elevated nitrogen deposition and co-evolutionary history shape competition between an invasive plant and its competitors during range expansion. *Journal of Plant Ecology* 17:rtae047.
2. **Zhang WG**, Chen XY, Liu RL, Song XJ, Liu G*, Zou JB, Qian ZQ, Zhu ZH, Cui LJ. (2022). Realized niche shift associated with *Galinsoga quadriradiata* (Asteraceae) invasion in China. *Journal of Plant Ecology* 15:538-548.
3. Liu RL†, **Zhang WG†**, Lee BR, Liu G*, Song XJ, Chen XY, Zou JB, Huang FF, Zhu ZH. (2023). Rhizosphere and root fungal community of the invasive plant *Galinsoga quadriradiata* changes along its elevational expansion route. *Journal of Plant Ecology* 16: rtac055.
4. Liu G*, Liu RL, **Zhang WG**, Yang YB, Bi XQ, Li MZ, Chen XY, Nie H, Zhu ZH. (2021). Arbuscular mycorrhizal colonization rate of an exotic plant, *Galinsoga quadriradiata*, in mountain ranges changes with altitude. *Mycorrhiza* 31:161-171.
5. Liu G*, Liu RL, Lee BR, Song XJ, **Zhang WG**, Zhu ZH, Shi Y. (2023). The invasion of *Galinsoga quadriradiata* into high elevations is shaped by variation in AMF communities. *Plants* 12:3190.
6. Liu RL, Yang YB, Lee BR, Liu G*, **Zhang WG**, Chen XY, Song XJ, Kang JQ, Zhu ZH. (2021). The dispersal-related traits of an invasive plant *Galinsoga quadriradiata* correlate with elevation during range expansion into mountain ranges. *AoB PLANTS* 13: plab008.
7. Yang YB, Liu G*, Shi X, **Zhang WG**, Cai XW, Ren ZL, Yao NN, Zhu ZH, Nie H. (2018). Where will invasive plants colonize in response to climate change: Predicting the invasion of *Galinsoga quadriradiata* in china. *International Journal of Environmental Research* 12:929-938.
8. Li SP*, Fan SY, Meng YN, **Zhang WG**, Yao Q. (2023). Darwin's naturalization conundrum: an unsolved paradox in invasion ecology. *Scientia Sinica Vitae*. (In Chinese with English abstract, Accepted)
9. Song XJ, **Zhang WG**, Chen XY, Liu RL, Yao X, Ma JH, Wang JN, Shi Y, Ran JJ, An YX, Liu G*. (2021). The composition and distribution status of alien plant species in Shaanxi Province, China. *Chinese Journal of Ecology* 40:3800-3809. (In Chinese with English abstract)
10. Chen XY, **Zhang WG**, Liu RL, Liu G*. Effects of elevational gradients on reproductivity and seed dispersal ability of *Galinsoga quadriradiata* in mountain ranges. *Ecological Science* 41: 44–53. (In Chinese with English abstract)

AWARDS & SCHOLARSHIPS

1. The Best Speaker in Guanghua Academic Forum of East China Normal University, 2022
2. Outstanding Graduates of Shaanxi Normal University, 2022
3. National Scholarship for Master's Students, 2021
4. Outstanding Graduate Student Report Award of the Forum on Ecological Environment Protection of Yellow River Basin, 2021
5. Scholarship for Outstanding Students, 1_{st} Scholarship, 2020
6. Scholarship for Outstanding Students, 2_{nd} Scholarship, 2019
7. Outstanding Achievement Award of the 4_{th} National College Students Life Science Innovation and Entrepreneurship Competition, 2019

CONFERENCES & WORKSHOPS

1. The 19th International Symposium on River and Lake Environment, 2024.11
2. The 109th annual meeting of the Ecological Society of America, 2024.08
3. The 22nd Chinese Conference on Ecology, Bejjing, China, 2023.10
4. The 21st China Conference on Ecology, Guiyang, China, 2022.08
5. The Forum on Ecological Environment Protection of Yellow River Basin, Xian, China, 2021.04
6. The Fifth Academic Conference of "Light of life", Xian, China, 2019.11
7. The 4th National College Students Life Science Innovation and Entrepreneurship Competition, China, 2019.07