

Information

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Education

09/2013 ~ 06/2017

Sichuan Agricultural University

Bachelor of Agricultural Science

Major: Landscape and Gardening

Supervisor: Prof. Ao-Xue Luo

09/2017 ~ 06/2023

University of Chinese Academy of Sciences

Doctor of Philosophy

Major: Ecology **Academic institution:** Xishuangbanna Tropical Botanical Garden **Supervisor:** Prof. Wen-Yao Liu

Ph.D. dissertation: Functional trait variation and ecological adaptation of a hemiepiphytic fig (*Ficus tinctoria*) under the phosphorus-deficient background in the tropics

Research Interests

Biogeochemical niche; Species co-existence; Tropical forest; Phosphorus; Biodiversity; Plant functional trait; Intraspecific variation; Interspecific interaction; Plant physiology; Ecological network

Publications

- 1) **Yu-Xuan Mo**, Richard T. Corlett, Gang Wang, Liang Song, Hua-Zheng Lu, Yi Wu, Guang-You Hao, Ren-Yi Ma, Shi-Zheng Men, Yuan Li, Wen-Yao Liu*. Hemiepiphytic figs kill their host trees: Acquiring phosphorus is a driving factor. *New Phytologist*, 2022, 236(2): 714-728.
- 2) **Yu-Xuan Mo**[#], Huang Zou[#], Hai-Xia Hu, Su Li, Hua-Zheng Lu, Xiao-Yan Pu, Yun-Xin Zhang, Sujana Balami, Yuan Li, Tao Hu, Liang Song*, Wen-Yao Liu*. Strangler fig-host tree associations: insights into the ecology and management of tropical urban green spaces. *Plants People Planet*, 2024, 6(5): ppp3.10572
- 3) Yuan Li[#], **Yu-Xuan Mo**[#], Hong-Li Cui, Yong-Jiang Zhang, Gbadamassi G. O. Dossaa, Zheng-Hong Tan*, Liang Song*. Intraspecific plasticity and co-variation of leaf traits facilitate *Ficus tinctoria* to acclimate hemiepiphytic and terrestrial habitats. *Tree Physiology*, 2024, 44(2): tpae007.
- 4) Hai-Xia Hu, **Yu-Xuan Mo**, Sujana Balami, Glenda Mendieta-Leiva, Ting Shen, Shiekh Marifatul Haq, Liang Song*. Combining critical transition indicator to compare the stable structure of epiphyte–host networks. *Ecological Indicators*, 2024, 116, 112470.
- 5) Hai-Xia Hu, **Yu-Xuan Mo**, Ting Shen, Yi Wu, Xian-Meng Shi, Yan-Yu Ai, Hua-Zheng Lu, Sissou Zakari, Su Li, Liang Song*. Simulated high-intensity phorophyte removal mitigates the robustness of epiphyte community and destroys commensal network structure. *Forest Ecology and Management*, 2022, 526: 120586.
- 6) Qian Dai, **Yu-Xuan Mo**, Quan Chen, Liang Song*, Li-Min Zhang, Gbadamassi G. O. Dossaa, Hua-Zheng Lu*. Clonal fragmentation drives performance deterioration of epiphytic and lithophytic ferns in a karst forest. *Flora*, 2023, 302: 152258.
- 7) Liang Song*, Bin Yang, Lu-Lu Liu, **Yu-Xuan Mo**, Wen-Jie Liu, Xian-Jing Meng, Hua-Zheng Lu, Yuan Li, Sissou Zakari, Zheng-Hong Tan, Ze-Xin Fan, Yong-Jiang Zhang. Spatial-temporal differentiations in water use of coexisting trees from a subtropical evergreen broadleaved forest in Southwest China. *Agricultural and Forest Meteorology*, 2022, 316: 108862.
- 8) Yan Xiao, Da Yang*, Shu-Bin Zhang, **Yu-Xuan Mo**, Yi-Yi Dong, Ke-Fei Wang, Ling-Yun He, Bing Dong, Gbadamassi G.O. Dossaa, Jiao-Lin Zhang*. Nitrogen-fixing and non-nitrogen-fixing legume plants differ in leaf nutrient concentrations and relationships between photosynthetic and hydraulic traits. *Tree Physiology*, 2024, 44(5): tpae048.

- 9) Yan-Yu Ai, Qiang Liu, Hai-Xia Hu, Ting Shen, **Yu-Xuan Mo**, Xun-Feng Wu, Jin-Long Li, Gbadamassi G.O. Dossa, Liang Song*. Terrestrial and epiphytic orchids exhibit different diversity and distribution patterns along an elevation gradient of Mt. Victoria, Myanmar. *Global Ecology and Conservation*, 2023, 42: e02408.
- 10) Nan Jin, Xiao-Cheng Yu, Jin-Long Dong, Meng-Cheng Duan, **Yuxuan Mo**, Lei-Yun Feng, Rong Bai, Jian-Li Zhao, Jia Song, Gbadamassi G. O. Dossa, Hua-Zheng Lu*. Vertical variation in leaf functional traits of *Parashorea chinensis* with different canopy layers. *Frontiers in Plant Science*, 2024, 15:1335524.
- 11) Xiao-Cheng Yu, Nan Jin, Rong Bai, **Yu-Xuan Mo**, Xiao-Yan Pu, Jing-Chao Li, Hua-Zheng Lu*. Effects of clonal fragmentation on *Pyrrosia nuda* depend on growth stages in a rubber plantation. *Frontiers in Plant Science*, 2024, 15:1371040.
- 12) Ting-Ting Zhang, Wen-Yao Liu*, Tao Hu, Dan-Dan Tang, **Yu-Xuan Mo**, Yi Wu. Divergent adaptation strategies of vascular facultative epiphytes to bark and soil habitats: insights from stoichiometry. *Forests*, 2021, 12(1): 1-15.

Research Projects

- **Project:** “Coexistence mechanism of plant species in the Xishuangbanna tropical rainforest: based on biogeochemical niche”. **Funding Agency:** Yunnan Provincial People's Government. **Project Director**
- **Project:** “Multi-scale analysis of plant nitrogen and phosphorus homeostasis pattern and its influencing factors”. **Funding Agency:** Yunnan Provincial People's Government. **Project Director**
- **Project:** “Spatiotemporal dynamics of and interaction mechanism between strangler figs, their host trees, and substrate nutrients in the tropics”. **Funding Agency:** National Natural Science Foundation of China. **Participant**
- **Project:** “Multi-dimensional analysis of the co-existence mechanism of epiphytes in Yunnan's typical forests based on canopy tower crane”. **Funding Agency:** National Natural Science Foundation of China. **Participant**
- **Project:** “Ecological stoichiometric characteristics of epiphytes and their responses to environmental changes in the mountainous wet evergreen broad-leaved forest”. **Funding Agency:** National Natural Science Foundation of China. **Participant**
- **Project:** “Conservation theory and ecological restoration technology of tropical rainforest”. **Funding Agency:** Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences. **Participant**

Academic Communication

Hemiepiphytic figs kill their host trees: Acquiring phosphorus is a driving factor. 8th International Canopy Conference, 2023, Yunnan, China. (Oral presentation)

SAKURA Exchange Program in Science: Learning about the biodiversity and the conservation of the Sea of Japan area. 2023, Sado Island, Niigata Prefecture and Tokyo, Japan. (Short-term exchange)

Eco-stoichiometry dynamics of hemiepiphytic fig (*Ficus tinctoria*) from epiphytic to terrestrial stages. Botany 2019 Congress, 2019, Tucson, USA. (Oral presentation)

Research on the Urban Agriculture Community Planting Pattern of Online to Offline. 55th World Congress of International Federation of Landscape Architects. 2018, Singapore City, Singapore. (Poster)

Awards

- (1) Outstanding graduate student of Beijing, 2023.
- (2) Outstanding graduate student of the University of Chinese Academy of Sciences, 2023.
- (3) First prize for graduate student presentation of the 8th Congress of Yunnan Ecological Society, 2022.
- (4) "Merit Student" of the University of Chinese Academy of Sciences, 2018 and 2019.
- (5) International volunteers of Sea Turtle Rescue in Sri Lanka, 2018.