

Curriculum Vitae



Fang-Li Luo Ph.D

Self Introduction

Professor

Wetland Ecology

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Education and Experience

2007/09—2010/11 Doctor of Science in Plant Biology, Dusseldorf University, Germany

2007/09—2010/11 Deutsche Akademische Austausch Dienst (DAAD) scholarship, Germany

2004/09—2007/06 Master of Science in Plant Ecology, Southwest University, Chongqing

2000/09—2004/06 Bachelor of Science in Biology, China West Normal University, Nanchong

Work Experience

2020/01 – Present Professor, Beijing Forestry University

2014/01—2019/12 Associate Professor, Beijing Forestry University
2015/09—2016/09 Visiting Scholar, National Wetlands Research Center, USGS, USA
2011/07—2013/12 Lecturer, Beijing Forestry University

Research Areas

- (1) Evolution of wetland plants: wetland plant functional traits; genetic and epigenetic variation of wetland plants; ecophysiological responses of wetland plants to climate changes; clonal plant ecology;
- (2) Wetland protection and ecological restoration: wetland plant resources investigation and protection, wetland vegetation restoration and wetland soil dissolved organic matter.

Research Grants

- 2021—2024 National Natural Science Foundation of China “Roles of epigenetic variation in responses of *Phragmites australis* L. from different latitudes to local environmental change” (32071525);
- 2017—2020 National Natural Science Foundation of China “Adaptive plasticity of the riparian plant *Polygonum hydropiper* to flooding” (31670428);
- 2013—2015 National Natural Science Foundation of China “Correlations among functional traits, flooding tolerance and abundance of riparian species” (31200314);
- 2019—2020 National Forestry and Grassland Administration Project “Study on the relationship between wetland legislation and other relevant laws and relevant legal systems” (201905);
- 2013—2015 Education Ministry College Doctoral Program of China “Post-submergence recovery mechanisms of riparian clonal plants” (20120014120001).
- 2019—2024 National Science & Technology Fundamental Resources Investigation Program of China “Investigation on plant germplasm resources of temperate arid and semi-arid swamp wetlands” (2019FY100605); (Participated)
- 2017—2020 National Key R&D Program of China “Bioremediation technology of estuarine wetland” (2017YFC0505903); (Participated)

Publications

Cui Y, Luo F-L*, Chen Y-H, Zhang M-X, Yu F-H*. 2022. Rhizodeposition and litter decomposition of *Phragmites australis* play important roles in composition and properties of soil dissolved organic matter. *Ecological Indicators*, 142: 109275.

- Chen Y-H, Wei G-W, Cui Y, **Luo F-L***. 2022. Nutrient inputs alleviate negative effects of early and subsequent flooding on growth of *Polygonum hydropiper* with the aid of adventitious roots. *Frontiers in Plant Science*, doi: 10.3389/fpls.2022.919409.
- Cui Y, **Luo F-L***, Zhang M-X, Yu F-H*. 2022. Spectroscopic properties and driving factors of dissolved organic matter in the Yellow River Delta. *Journal of Plant Ecology*, doi: 10.1093/jpe/rtac037.
- Dong B-C, Wang P, **Luo F-L***. 2022. Sharing of nitrogen between connected ramets of *Alternanthera philoxeroides* in homogeneous environments. *Plant and Soil*, doi: 10.1007/s11104-022-05475-5.
- Sun X-S[#], Chen Y-H[#], Zhuo N, Cui Y, **Luo F-L***, Zhang M-X*. 2021. Effects of salinity and concomitant species on growth of *Phragmites australis* populations at different levels of genetic diversity. *The Science of the Total Environment*, 780: 146516.
- Wei G-W, Chen Y-H, Sun X-S, Matsubara S, **Luo F-L***, Yu F-H*. 2021. Elevation-dependent selection for plasticity in leaf and root traits of *Polygonum hydropiper* in response to flooding. *Environmental and Experimental Botany*, 182: 104331.
- Chen Y-H, Sun X-S, Cui Y, Zhuo N, Wei G-W, **Luo F-L***, et al. 2021. Interacting flooding and competition negatively affect growth of riparian species dominating a reservoir shoreline. *Water*, 13: 1471.
- Wei G-W, Sun X-S, Chen Y-H, **Luo F-L***, Yu F-H. 2020. Growth and reproductive responses of *Polygonum hydropiper* populations to elevational difference associated with flooding. *Global Ecology and Conservation*, 23:e01156.
- Xing Y-P, Wei G-W, **Luo F-L***, Li C-Y, Dong B-C, Ji J-S, et al. 2019. Effects of salinity and clonal integration on the amphibious plant *Paspalum paspaloides*: growth, photosynthesis and tissue ion regulation. *Journal of Plant Ecology*, 12:45-55.
- Wei G-W, Chen Y, Sun X-S, Chen Y-H, **Luo F-L***, Yu F-H. 2019. Growth responses of eight wetland species to water level fluctuation with different ranges and frequencies. *Plos One*, 14: e0220231.
- Wei G-W, Shu Q, **Luo F-L***, Chen Y-H, Dong B-C, Mo L-C, et al. 2018. Separating effects of clonal integration on plant growth during submergence and de-submergence. *Flora*, 246:118-125.
- Luo F-L**, Matsubara S, Chen Y, Wei G-W, Dong B-C, Zhang M-X, et al. 2018. Consecutive submergence and de-submergence both impede growth of a riparian plant during water level fluctuations with different frequencies. *Environmental and Experimental Botany*,

155:641-649.

- Luo F-L**, Xing Y-P, Wei G-W, Li C-Y, Yu F-H. 2017. Clonal integration facilitates spread of *Paspalum paspaloides* from terrestrial to cadmium-contaminated aquatic habitats. *Plant Biology*, 19:859-867.
- Liu L, Bu X-Q, **Luo F-L**, *et al.* 2017. Impacts of sediment type on the performance and composition of submerged macrophyte communities. *Aquatic Ecology*, 51: 167-176.
- Luo F-L**, Jiang X-X, Li H-L, Yu F-H. 2016. Does hydrological fluctuation alter impacts of species richness on biomass in wetland plant communities? *Journal of Plant Ecology*, 9: 434-441.
- Wang Y-J, Bai Y-F, **Luo F-L***, Yao B, Wang W. 2016. Heterogeneous water supply affects growth and benefits of clonal integration between co-existing invasive and native *Hydrocotyle* species. *Scientific Reports*, 6: 29420.
- Luo F-L**, Huang L, Lei T, Xue W, Yu F-H, Li H-L, Cornelissen JHC. 2016. Responsiveness of performance and morphological traits to experimental submergence predicts field distribution pattern of wetland plants. *Journal of Vegetation Science*, 27: 340-351.
- Wang Y-J, **Luo F-L**, Yu F-H, *et al.* 2016. Effects of patch contrast and arrangement on benefits of clonal integration in a rhizomatous clonal plant. *Scientific Reports* 6: 35459.
- Wang M-Z, Liu Z-Y, **Luo F-L**, *et al.* 2016. Do amplitudes of water level fluctuations affect the growth and community structure of submerged macrophytes? *Plos One* 11: e0146528.
- Dong B-C, Wang J-Z, Liu R-H, Zhang M-X, **Luo F-L***, Yu F-H. 2015. Soil heterogeneity affects ramet placement of *Hydrocotyle vulgaris*. *Journal of Plant Ecology*, 8: 91-100.
- Wang A, Jiang X-X, Zhang Q-Q, Zhou J, Li H-L, **Luo F-L***, Zhang M-X, Yu F-H. 2015. Nitrogen addition increases intraspecific competition in the invasive wetland plant *Alternanthera philoxeroides*, but not in its native congener *Alternanthera sessilis*. *Plant Species Biology*, 30: 176-183.
- Luo F-L**, Chen Y, Huang L, Wang A, Zhang M-X, Yu F-H. 2014. Shifting effects of physiological integration on performance of a clonal plant during submergence and de-submergence. *Annals of Botany*, 113: 1265-1274.
- Chen Y, Zhou Y, Yin T-F, Liu C-X, **Luo F-L***. 2013. The invasive wetland plant *Alternanthera philoxeroides* shows a higher tolerance to waterlogging than its native congener *Alternanthera sessilis*. *Plos One*, 8: e81456.
- Zhao C-F, Li H-L, **Luo F-L***. 2013. Effects of light heterogeneity on growth of a submerged clonal macrophyte. *Plant Species Biology*, 28: 156-164.

- Huang L, Peng Y-K, Li H-L, Zhang M-X, **Luo F-L***. 2013. Effects of soil moisture regimes on growth and photosynthesis of the riparian plant *Bolboschoenus planiculmis*. *Forest Science and Practice*, 15: 105-113.
- Luo F-L**, Thiele B, Janzik I, Zeng B, Schurr U, Matsubara S. 2012. De-submergence responses of antioxidative defense systems in two wetland plants having escape and quiescence strategies. *Journal of Plant Physiology*, 169: 1680-1689.
- Alter P, Dreissen A, **Luo F-L**, Matsubara S. 2012. Acclimatory responses of Arabidopsis to fluctuating light environment: comparison of different sunfleck regimes and accessions. *Photosynthesis Research*, 113: 221-237.
- Zhang Q, Dong B-C, Li H-L, Liu R-H, **Luo F-L**, Zhang M-X, Lei G-C, Yu F-H. 2012. Does light heterogeneity affect structure and biomass of submerged macrophyte communities? *Botanical Studies*, 53: 377-385.
- Luo F-L**, Nagel KA, Schar H, Zeng B, Schurr U, Matsubara S. 2011. Recovery dynamics of growth, photosynthesis and carbohydrate accumulation after de-submergence: a comparison between two wetland plants showing escape and quiescence strategies. *Annals of Botany*, 107: 49-63.
- Luo F-L**. 2010. Post-submergence recovery of photosynthesis and growth: A comparison between two wetland plants. *Doctor thesis*: Heinrich Heine University of Düsseldorf.
- Luo F-L**, Nagel KA, Zeng B, Schurr U, Matsubara S. 2009. Photosynthetic acclimation is important for post-submergence recovery of photosynthesis and growth in two riparian species. *Annals of Botany*, 104: 1435-1444.
- Luo F-L**, Wang M-Z, Dong B-C, Chen Y-H, Yu F-H*. 2022. Clonal and sexual parental effects and their mechanisms. *Acta Ecologica Sinica*, doi: 10.5846/stxb202107211968.
- Chen Y-H, Luo Y-F, Sun X-S, Wei G-W, Huang W-J, **Luo F-L***. 2020. Effects of waterlogging and increased soil nutrients on growth and reproduction of *Polygonum hydropiper* in the hydro-fluctuation belt of the Three Gorges Reservoir Region. *Chinese Journal of Plant Ecology*, 44: 1184-1194.
- Li H, Wu W, **Luo F-L***, et al. 2016. The comparison of removal effect of total nitrogen and total phosphorus in simulated eutrophic water among 4 kinds of emergent plants, 4 kinds of submerged plants and their mixed communities. *Wetland Science*, 14: 163-172.
- Zhou J, Li H-L, **Luo F-L***, et al. 2015. Effects of nitrogen addition on interspecific competition between *Alternanthera philoxeroides* and *Alternanthera sessilis*. *Acta Ecologica Sinica*, 35: 8258-8267.

Patents

Luo F-L, Yu F-H, et al. 2019. A method for purifying water quality by using species diversity of submerged plants, ZL 2017 1 0183577. 4.

Luo F-L, Yu F-H, et al. 2020. A method for remediating heavy metal cadmium polluted water body by using the clonality of wetland clonal plants, ZL 2016 10680486. 7.