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Phenotypic plasticity and genetic adaptation of plant functional traits on global scales

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Curriculum Vitae

Jianhong Zhou was born in January 1, 1990 in Changshan, Quzhou, China. After graduating from Quzhou No. 2 high school in 2008, she studied biology science at Shaoxing University. In an elective class, she watched the film "An Inconvenient Truth" and was shocked by the profound impact of climate change showed in the film. Since then, she was motivated to study a postgraduate program which related to climate change. Therefore, after obtaining her bachelor's degree, she pursued her MSc degree in Ecology at East China Normal University (ECNU) in Shanghai, China (2012-2015). There, she was supervised by Prof. Kaiyun Wang, who specializes in global change ecology. She conducted her master research in an enclosed tidal wetland located at the east of Chongming Island to investigate the soil salinity dynamics after reclamation and its effect on plant growth in the context of climate change by long-term monitoring. During her master study, she was awarded a fund from ECNU as a visiting student to the University of California, Riverside, USA for three months. In 2016, she received China Scholarship Council (CSC) scholarship to study in the Netherlands for a doctorate. She spent one year at Soil Physics and Land Management Group in Wageningen University. Since September 2017, she has joined the Institute of Environmental Sciences (CML) under the supervision of Prof. Peter van Bodegom and Dr. Ellen Cieraad to pursue her doctorate degree on the topic about phenotypic plasticity and genetic adaptation of plant functional traits under changing climatic conditions.



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List of Publications

Publications related to this thesis

1. **Zhou, J.***, Cieraad, E., van Bodegom, P.M. 2022. Global analysis of trait-trait relationships within and between species. *New Phytologist*, 233: 1643-1656.
2. **Zhou, J.***, Cieraad, E., van Bodegom, P.M. 2022. Drivers of plant intraspecific variation are trait-specific. *bioRxiv*. doi: 10.1101/2022.12.29.521136.
3. **Zhou, J.***, Cieraad, E., van Bodegom, P.M. 2022. Genetic adaptation rates differ by trait and plant type -- a comprehensive meta-analysis. *bioRxiv*. doi: 10.1101/2022.12.29.522194.
4. **Zhou, J.***, Cieraad, E., Marta Benito-Garzón, Miguel A. Zavala, van Bodegom, P.M. Global resilience of growth forms and biomes. (in preparation for submission)

Additional publications

1. Aurangzeib M., Zhang S., Yan S., **Zhou, J.**, Niu X., Yan P., Wang J. 2024. Biochar Application Can Improve Most of the Chemical Properties of Acidic Soils: A Global Meta-Analysis. *ACS Agriculture Science & Technology* :3c00564.

Conference Abstracts

1. **Zhou, J.**, Cieraad, E. & van Bodegom, P.M. Drivers of plant intraspecific variation are trait-specific. Oral presentation (Online). AGU Fall Meeting.2022, Chicago, IL, USA.
2. **Zhou, J.** Phenotypic plasticity and genetic adaptation of plant functional traits under climate change. Oral presentation. 2023, Southwest University, Chongqing, China.

Acknowledgements

Finally, it comes to almost the end of my PhD journey. It has been an unexpectedly long journey, if I count it since September, 2016, when I came to the Netherlands first time and started to pursue my PhD degree. Completing PhD has been undoubtedly challenging, as the ups and downs I have experienced during the past eight years likes the feelings of taking roller coasters. It's not only an academic adventure, but also a self-exploring journey which makes me connect to myself more deeply. At the same time, I would like to acknowledge a lot of wonderful people who helped me during this journey. Only with your strong support, inspiration, care and accompany, it has made it possible for me to land safely at the finishing line.

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Jianhong

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