YUJING YAN, PhD

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Education

2020 June 21 **Ph.D. in Biodiversity**, Center for Macroecology, Evolution and Climate, Faculty of Science, University of Copenhagen, Denmark. Advisors: Prof. Carsten Rahbek and Dr. Michael Krabbe Borregaard. Thesis title: "Phylogeny, biogeography and diversification of the tea family (Theaceae)"

2016 **M.Sc. Ecology**, College of Urban and Environmental Sciences, Peking University, China.

2013 **B.Sc. Ecology**, College of Urban and Environmental Sciences, Peking University, China.

Current & Most Recent Employment

2021 (August -) HUH Research Fellow. Harvard University Herbaria, Harvard University, U.S.

2021 (Jan. – June) Research assistant, College of Urban and Environmental Sciences. Peking University, China.

2020 (Apr. – Dec.) Research assistant, Center for Macroecology, Evolution and Climate, University of Copenhagen, Denmark.

2018 (2 mo.) Research assistant, Department of Organismic and Evolutionary Biology, Harvard University, U.S.

2018 (9 mo.) Visiting PhD scholar, Department of Organismic and Evolutionary Biology, Harvard University, U.S. Advisor: Prof. Charles C. Davis.

2016 (3 mo.) Research assistant, College of Urban and Environmental Sciences. Peking University, China.

Scientific Focus Areas

biodiversity patterns, macroevolution, phylogenomics, climate change impact, conservation assessment

Academic Awards and Scholarships

2021	Harvard University Herbaria Research Fellowship, Harvard University
2019	Danish representative of GBIF Young Researcher Award
2016 - 2020	CSC Scholarship, the Ministry of Education of China
2015	Kwang-Hua Scholarship, Peking University
2014	Graduate School Scholarship, Peking University
2013 - 2015	Academic Scholarship, Peking University
2013	Second Prize in the 21st Challenge Cup Academic Contest, Peking University
2012	The Okamatsu Scholarship, Peking University
2012	First Prize in the Undergraduate Research Program, College of Urban and Environmental Sciences, Peking University
2012	Poster Prize, 31st IUBS General Assembly and Conference of Biological Sciences and Bioindustry
2012	Maoyugang Undergraduate Research Grants, Peking University

Publications

(Google Scholar [November 2020]: Total citations = 225; * = co-first authorship)

Peer-reviewed articles

Yan, Y., Davis, C., Wang, Z.-H., Dimitrov, D., Rahbek, C., & Borregaard., M (2021). Uncovering the origin of amphi-Pacific disjunct distributions using a high-resolution phylogeny and fossils of Theaceae. *Systematic Biology*. https://doi.org/10.1093/sysbio/syab042

Li, Y.*, **Yan, Y.***, He J.-S, Wang, K., Tang, Z., & Yao, Y.-J. (2020) Global warming and conservation of the Chinese Caterpillar Fungus. *Biodiversity and Conservation*. https://doi.org/10.1007/s10531-020-02109-z

Yan Y, Tang Z. (2019) Protecting endemic seed plants on the Tibetan Plateau under future climate change: migration matters. *Journal of Plant Ecology*, **6**, 962-971. [**cover article]**

Yan, Y.*, Li, Y.*, Wang, W.-J., He, J.-S., Yang, R.-H., Wu, H.-J., Wang, X.-L., Jiao, L., Tang, Z., & Yao, Y.-J. (2017) Range shifts in response to climate change of *Ophiocordyceps sinensis*, a fungus endemic to the Tibetan Plateau. *Biological Conservation*, **206**, 143–150.

Yan, Y., Yang, X., & Tang, Z. (2013) Patterns of species diversity and phylogenetic structure of vascular plants on the Qinghai-Tibetan Plateau. *Ecology and evolution*, **3**, 4584–95.

Zhang, Z., **Yan, Y.**, Tian, Y., Li, J., He, J.-S., & Tang, Z. (2015) Distribution and conservation of orchid species richness in China. *Biological Conservation*, **181**, 64–72.

Li, Y., Tang, Z., **Yan, Y.**, Wang, K., Cai L., He J.-S., Gu S., & Yao, Y.-J. (2020) Incorporating species distribution modelling into the red list assessment and conservation of macrofungi: A case study with *Ophiocordyceps sinensis*. *Biodiversity Science*, **28** (1), 99-106 (in Chinese).

Li, Y., Jiang, L., Wang, K., H.-J., Yang, R.-H., **Yan, Y.**, Bushley K., & Wu Z. (2020) RIP mutated ITS pseudogenes in population of *Ophiocordyceps sinensis*. *IMA Fungus*, **11**(1).

Manuscripts under review

Zhang H.-T, **Yan Y.,** Guo Y., Tang, Z. Plant functional traits in relation to environment in tree communities in China. *Global Ecology and Biogeography* (under review)

Popular science article

Yan, Y. (2016) Chinese caterpillar fungus: the mysterious fungus of the Tibetan Plateau. *Life World*, **6**, 36-42. (in Chinese).

Major Projects

2016-2021 *Phylogeny, biogeography and diversification of the tea family (Theaceae)*, PhD thesis

- Compiled datasets of distribution, fossils and traits of the tea family.
- Sequenced and *de novo* assembled the plastid genome, nuclear ribosomal DNA, and ~350 low-copy nuclear genes from herbarium specimens using genome skimming and target enrichment method.
- Constructed dated phylogenies using phylogenomic methods.
- Inferred biogeographic history, diversification rate and trait evolution of the family based on the data.

2014-present *Conservation of the Chinese caterpillar fungus under global warming*, long-term collaboration

- Co-lead the project with researchers from the Institute of Microbiology, Chinese Academy of Sciences and Yangzhou University.
- Modeled the distribution change of the Chinese caterpillar fungus under climate change using niche modeling method.
- Assessed the conservation status of the fungus and established a framework for fungal conservation.

2011-2016 *Diversity patterns and conservation of vascular plants on the Tibetan Plateau*, Bachelor and Master thesis

- Compiled distribution datasets of ~8000 vascular plants on the Tibetan Plateau.
- Analyzed the factors determining the species and phylogenetic diversity patterns.

- Evaluated the impact of future climate change on the distribution of ~1000 endemic seed plants in this region and assessed the effectiveness of current nature reserve system.

Presentations

2021 HUH & Arnold Arboretum joint seminar, "The evolution and biogeography of the tea family (Theaceae): From the past to the future", Harvard University, U.S.

2020 Invited seminar, "Phylogeny, biogeography, and diversification of the tea family (Theaceae)", Yangzhou University, China

2020 Oral presentation, "A new nuclear phylogeny unravels fast-moving radiations in the tea family (Theaceae)", Botany Conference of the Botanical Society of America. Virtual.

2018 Poster presentation, "Phylogeny and historical biogeography of tea family (Theaceae)", Botany Conference of the Botanical Society of America, Rochester, U.S.

2017 Selected poster presentation, "Range shifts in response to climate change of *Ophiocordyceps sinensis*, a fungus endemic to the Tibetan Plateau", the 8th Biennial Conference of the International Biogeography Society, Tucson, U.S.

2016 Selected poster presentation, "Assessing the impact of future climate change on the distribution patterns of endemic vascular plants of Tibetan Plateau", Conference of the International Biogeography Society, Beijing, China

2015 Selected poster presentation, "Assessing the impact of future climate change on the distribution patterns of endemic vascular plants of Tibetan Plateau", the 58th Annual Symposium of the International Association for Vegetation Science, Brno, Czech Republic

2012 Selected poster presentation, "Patterns and determinants of vascular plants richness on the Tibetan Plateau", the 31st IUBS General Assembly and Conference of Biological Sciences and Bioindustry, Suzhou, China

Teaching Experiences

- Teaching assistant. Introduction to Ecological Data Analysis with R, University of Copenhagen, Denmark. 2020.
- Teaching assistant. Remote Sensing in Ecology, Peking University, China. 2014.
- Teaching assistant. Human Sex and Health, Peking University, China. 2013-2016.

Field Experiences

Forest and grassland investigations in various mountain regions in China from north to south, from east to west, and as high as 5000m: Shanxi, Jiangxi, Qinghai, Tibet, Sichuan, Gansu, Inner Mongolia

Professional Service

Peer Reviewer

Landscape Ecology, *Journal of Biogeography*, *Ecology and Evolution*, *Chinese Journal of Plant Ecology* (in Chinese), *Biodiversity Science* (in Chinese)

Professional Affiliation

2020 - Society of Systematic Biologists

2018 - Botanical Society of America

2016 - The International Biogeography Society

Training

2018 Transcriptome Workshop, Botany Conference, Minnesota, U.S.

2015 LiDAR Workshop, Institute of Botany, Chinese Academy of Sciences, Beijing, China

2014 Advanced Workshop in Ecology and Conservation, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, Xishuangbanna, China

Skills

Quantitative Analysis

- Spatial analysis (including species distribution models), phylogenetic analysis

Computer Skills

- Proficient in R, Python and Shell, knowledge of SQL and Julia
- Proficient in working on HPC (Slurm system and multi-thread computing)
- Proficient in ArcGIS and Adobe suites. Familiar with various bioinformatic tools and ENVI

Wet Lab Skills

- DNA extraction from historical plant specimens
- NGS library preparation and target enrichment sample preparation