YUJING YAN, PhD

Harvard University Herbaria, Harvard University, Cambridge, MA, U.S.
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Google Scholar; Personal website

Education

2020 **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 - 2023 HUH Research Fellow. Harvard University Herbaria, Harvard University, U.S.

2021 (6 mo.) Research assistant, College of Urban and Environmental Sciences. Peking University, China.

2020 (9 mo.) Research assistant, Center for Macroecology, Evolution and Climate, University of Copenhagen, Denmark.

2018 -2021 Research associate, 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

2022	The Arnold Arboretum Genomics Initiative and Sequencing Award
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 [August 2022]: Total citations = 272; * = 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). [**Highly cited paper of 2021, F5000 China top academic papers database**]

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).

Zhang, H., **Yan, Y.**, Guo, Q., Guo, Y., Sheremetiev, S. N., & Tang, Z. (2022). Environment shapes tree community traits in China's forests. *Journal of Vegetation Science*. https://doi.org/10.1111/jvs.13146

Manuscript and book chapter in preparation

Yan, Y., Davis, C., da Fonseca, R., Rahbek, C., & Borregaard., M. Multiple incomplete lineage sorting uncovered by phylogenomics highlights rapid radiation in the history of Theaceae. (90% complete in preparation).

Yan, Y. (2022) Climate change impact on medicinal resources. In Chi, X., Huang, L., et al. (Eds), Diversity and conservation of Chinese medicinal resources. Chinese Academy of Chinese Medical Sciences, Beijing.

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

2021 onwards *The role of recent climate change in plant species extinction: a test case examining the Franklin tree (Franklinia alatamaha Bartr. ex Marshall)*

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

2014-2021 *Conservation of the Chinese caterpillar fungus under global warming*, long-term collaboration with the Institute of Microbiology, Chinese Academy of Sciences and Yangzhou University, China

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

Presentations

2022   Invited seminar, "Climate change impact on medicinal resources", Chinese Academy of Chinese Medical Sciences, virtual

2022   Selected oral presentation, "Integrating fossils and phylogenies reveals a boreotropical origin of the tea family (Theaceae) ", Biennial Conference of the International Biogeography Society, Vancouver, Canada

2022   Poster presentation, "The draft genome of the Franklin tree (*Franklinia alatamaha Bartr. Ex Marshall*)", The 16th Annual Plant Biology Initiative Symposium, Boston, U.S.

2021   Invited virtual seminar, "The effect of fossil data in exploring the biogeographical history of the tea family (Theaceae)", Department of Biology and Environment, Nanjing Forestry University, China.

2021   Harvard University Herbaria & 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. The First Nine Months, General Education Program, Harvard University. 2022.
- 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, Reproduction and Health, Peking University, China. 2013-2016.

Field Experiences

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

Fungi investigation in Himalaya Mountain region and Heng-duan Mountain region in China: Tibet and Yunnan

Population survey of *Gordonia lasianthus* in North Carolina, South Carolina, Georgia, and Florida, U.S

Professional Service

Peer Reviewer

Journal of Systematics and Evolution, 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 (serving on the Graduate Research Awards committee from 2022 onwards)

2016 -   The International Biogeography Society

Training

2022   Science Mentoring Undergraduates Workshop, Harvard University, Cambridge, U.S.

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

Analysis Skills

- Spatial analysis (including species distribution models), phylogenetic analysis, biogeographic analysis, diversification analysis, bioinformatics (i.e., *de novo* whole genome assembly using long read data and NGS data, *de novo* plastid genome assembly, *de novo* transcriptome assembly, genome annotation), statistics

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, QGIS and Adobe suites. Familiar with various bioinformatic tools and ENVI

Wet Lab Skills

- DNA extraction from historical plant specimens; DNA extraction for Nanopore long-read sequencing; total RNA extraction from different plant tissues
- NGS library preparation and target enrichment sample preparation