

Hung-Wei Lin

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I am a population ecologist and comparative demographer specialised in the modelling of population dynamics and quantifying resilience responses of animal & plant to environmental changes. My doctoral research topic is “**Integrating resilience across natural systems, from individuals to communities**”, so I focus on developing a **cross-level perspective** between population level and community level through my doctoral study. My current work combines meta-analysis and comparative analyses of large-scale open datasets, and I aim to extend my data sources to empirical field data and long-term datasets.

Education

2024-present DPhil in Biology. University of Oxford (UK)
2022-2023 MRes Ecology, Evolution, and Conservation. Imperial College London (UK) | 1st Class
2018-2022 BSc Ecology. Nanjing University (China) | Outstanding Graduate

Research skills

Proficient R language, Statistical Analyses and Modelling, Matrix Population Models, PGLS Methods, Bayesian Methods, LLM based-Data Extraction, Tree-based Ensemble Methods.
Familiar Python, Camera Trap, GIS, Meta-analysis, Field Work, Deal with Large Animals, Metagenomes Analysis.

Publications

2025 Yang, J., Yang, C., **Lin, H. W.**, Lees, A. C., & Tobias, J. A. Elevational constraints on flight efficiency shape global gradients in avian wing morphology. *Current Biology*, 35(8), 1890-1900. DOI: [10.1016/j.cub.2025.02.068](https://doi.org/10.1016/j.cub.2025.02.068)
2023 Wang, L., Luo, Y., **Lin, H. W.**, Xu, N., Gu, Y., ... & Li, Z. Performance on inhibitory tasks does not relate to handedness in several small groups of Callitrichids. *Animal Cognition*, 26(2), 415-423. DOI: [10.1007/s10071-022-01682-w](https://doi.org/10.1007/s10071-022-01682-w)
2022 Wang, S., Wang, Y., Zhou, J., Li, P., **Lin, H. W.**, Peng, Y., ... & Wang, Z. Genetic diversity and population structure of an arctic tertiary relict tree endemic to China (*Sassafras tzumu*) revealed by novel nuclear microsatellite (nSSR) markers. *Plants*, 11(20), 2706. DOI: [10.3390/plants11202706](https://doi.org/10.3390/plants11202706)
2022 Wang, L., Luo, Y., Xu, N., **Lin, H. W.**, Yu, F., Huang, C., & Li, Z. Signs of claw asymmetry appear in a homochelate crab. *Applied Animal Behaviour Science*, 246, 105537. DOI: [10.1016/j.applanim.2021.105537](https://doi.org/10.1016/j.applanim.2021.105537)

Manuscript in preparation

Under review **Lin, H. W.**, Moorthy, S. M. K., Hector, A., Salguero-Gómez, R. Still Lost in Definitions: How ‘Resilience’ Is Used in Ecology. *Nature Communications*.
Under revision **Lin, H. W.**, Gumbs, R., McRae., L. Exploring the integration of evolutionary history and population trends. *Biological Conservation*.
Under preparation **Lin, H. W.**, Hernandez, C. M., Jaggi, H., Zuo, W., Tuljapurkar, D., Salguero-Gómez, R. Life history traits predict the contribution of transient dynamics to variation in population growth.

Teaching & academic services

2025-present Contributor (digitiser) to COMPADRE and COMADRE database
2025-2025 Teaching Assistant for *Large Datasets: Focus on Online Access and Management in R*
2023-2023 Contributor (digitiser) to Living Planet database
2018-2019 Environmental Education Instructor at Nanjing Jingling Primary School

Memberships

2025-present Evolutionary Demography Society
2024-present British Ecological Society
2022-2023 Imperial College London team for the University Mammal Challenge in UK
2019-2019 Marine Detective Social Practice Team in Chian
2018-2019 Vice Minister of Environmental Education Dept., Environmental Association of Nanjing University

Past research projects

2026 Wytham Digital Twin Project - Scanning Trees with Luma AI

2025	Life-history traits predict the contribution of transient dynamics to population growth
2024	A systematic review of the quantification of resilience in ecology
2023	Exploring the integration of evolutionary history and population trends
2023	Elevational constraints on flight efficiency shape global gradients in avian wing morphology
2022	Effects of artificial light at night on detritivores and litter decomposition
2021	Genetic Diversity and Population Structure of <i>Sassafras tzumu</i>
2021	SPP 1685 Ecosystem Nutrition initiated by University of Fribourg
2021	Effects of Surface Area of Food on the Productivity of <i>Drosophila Melanogaster</i>
2020	Spatial memory in <i>Porcellio leaves</i>
2020	The Relationship between Handedness and Cognitive Ability in Primates
2020	Determination of Asymmetry in <i>Eriocheir Sinensis</i>
2019	A Study of Pere David's Deer Social Networks

Academic conference

2025	Oral and poster presenter at the 10th Evolutionary Demography International Conference
2024	Attendee of British Ecological Society Annual Meeting

Referees

Prof. Roberto Salguero-Gómez. Department of Biology, University of Oxford

Prof. Andrew Hector. Professor, Department of Biology, University of Oxford

Dr. Rikki Gumbs. Institute of Zoology, Zoological Society of London

Dr. Louise McRae. Institute of Zoology, Zoological Society of London

Prof. Zhongqiu Li. School of Life Sciences, Nanjing University

Prof. Xinwei Li. School of Life Sciences, Nanjing University