

Yichao Zeng 曾逸超

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<https://yichaozeng.github.io/>

Employment

University of Arizona, Tucson, AZ, USA Feb. 2024 – Present

- Postdoc at Dept. of Ecology & Evolutionary Biology (with Régis Ferrière).

University of Arizona, Tucson, AZ, USA Aug. 2019 – Dec. 2023

- Teaching assistant/associate at Dept. of Ecology & Evolutionary Biology

University of Florida, Gainesville, FL, USA Aug. 2017 – May 2019

- Research assistant at Dept. of Wildlife Ecology & Conservation (with Vanessa Hull).

Education

University of Arizona, Tucson, AZ, USA Aug. 2019 – Dec. 2023

Ph.D., Ecology and Evolutionary Biology.

- Thesis: Meta-analytical and modeling approaches to understanding the link between macroevolution and species interactions.
- Committee: John J. Wiens (Chair), Judith L. Bronstein, Michael J. Sanderson, Régis Ferrière, Paulo R. Guimarães Jr.

Universidade de São Paulo, Brazil Sep. 2021 – Jan, 2022

- Visiting Ph.D. student focusing on theoretical ecology and ecological networks, with Paulo R. Guimarães Jr.

University of Florida, Gainesville, FL, USA Aug. 2017 – May 2019

M.Sc., Wildlife Ecology and Conservation.

- Thesis: Medicinal herb collection and wildlife conservation: qualitative and quantitative inferences from participatory research in Wolong Nature Reserve.
- Committee: Vanessa Hull (Chair), Robert A. McCleery, Mathieu Basille, Jindong Zhang.

Peking University, Beijing, China Sep. 2013 – July 2017

B.S., Biological Science.

- Thesis: Phylogeography of the Indochinese and the keeled box turtles (*Cuora* spp.).
- Advisor: Dr. Shu-jin Luo.

Other Research Experience

University of California, Davis, Davis, CA June 2016 – Sept. 2016

Undergraduate Intern, Department of Entomology and Nematology.

- Used manipulative greenhouse experiment to look at priority effects in monarch-milkweed interactions.

Peking University, Beijing, China

Sept. 2014 – Mar. 2015

Undergraduate Research Assistant, School of Life Sciences.

- Morphologically identified butterfly specimens collected in Sichuan, China.

Manuscripts in Preparation

* indicates joint first-authorship

Cruz, A.R., **Y. Zeng**, C.M. Moore, J.L. Bronstein. The phylogenetic co-occurrence of pollination and dispersal mutualisms in plants.

*Sauterey, B, ***Y. Zeng**, R. Ferrière. Eco-evolutionary hysteresis as a testable hypothesis for toxic algal blooms.

Peer-reviewed Publications

Zeng, Y., D.H. Hembry, 2024. Coevolution-induced selection for and against phenotypic novelty shapes species richness in clade co-diversification. Accepted, *Journal of Evolutionary Biology*.

Preprint: <https://doi.org/10.1101/2023.11.29.569146>

Yang, L. H., K. Swan, E. Bastin, J. Aguilar, M. Cenzer, A. Codd, ..., and **Y. Zeng** (136 authors), 2022. Different factors limit early- and late-season windows of opportunity for monarch development. *Ecology and Evolution*, 12, pp. e9039.

<https://doi.org/10.1002/ece3.9039>.

Sanderson, M. J., A. Búrquez, D. Copetti, M. M. McMahon, **Y. Zeng**, and M. F.

Wojciechowski. 2022. Origin and diversification of the saguaro cactus (*Carnegiea gigantea*): a within-species phylogenomic analysis. *Systematic Biology*, 71, pp. 1178–1194.

<https://doi.org/10.1093/sysbio/syac017>.

Zeng, Y., and J. J. Wiens. 2021. Do mutualistic interactions last longer than antagonistic interactions? *Proceedings of the Royal Society, Series B*, 288, pp. 20211457. 20211457.

<https://doi.org/10.1098/rspb.2021.1457>.

Hou, J., V. Hull, T. Connor, H. Yang, J. Gao, F. Zhao, Y. Liao, S. Chen, J. Huang, **Y. Zeng** and S. Zhou. 2021. Scent communication behavior by giant pandas. *Global Ecology and Conservation*, 25, p.e01431. <https://doi.org/10.1016/j.gecco.2020.e01431>.

Zeng, Y., and J. J. Wiens. 2021. Species interactions have predictable impacts on diversification. *Ecology Letters*, 24(2), pp.239-248.
<https://doi.org/10.1111/ele.13635>.

Hou, J., Y. He, H. Yang, T. Connor, J. Gao, Y. Wang, **Y. Zeng**, J. Zhang, J. Huang, B. Zheng and S. Zhou. 2020. Identification of animal individuals using deep learning: A case study of giant panda. *Biological Conservation*, 242, p.108414.
<https://doi.org/10.1016/j.biocon.2020.108414>.

Zeng, Y., J. Zhang. and V. Hull. 2019. Mixed-method study on medicinal herb collection in relation to wildlife conservation: the case of giant pandas in China. *Integrative Zoology*, 14(6), pp.604-612. <https://doi.org/10.1111/1749-4877.12381>.

Other Publications

Newspaper articles:

Zeng Y., How do interactions between different species impact the generation of biodiversity? China Green Times (中国绿色时报). February 25, 2021. p.4. Title in original language: 不同物种间的相互作用如何影响生物多样性的形成? (A popular science article about Zeng & Wiens 2021 *Ecol. Lett.*) <http://www.greentimes.com/greentimepaper/page/1/2021-02-25/04/28421614212831452.pdf>

Awards, Grants & Scholarships

Seal of Excellence (Score: 92.2/100), proposal entitled “Co-diversifying interaction networks: an evolutionary approach to two central goals of ecology” for the 2023 Call for Marie Skłodowska-Curie Actions Postdoctoral Fellowships, European Commission. 2024.

Finalist in the competition for the Ernst Mayr Award, the Society of Systematic Biologists (SSB). 2023.

Galileo Circle Scholarship, Department of Ecology & Evolutionary Biology, University of Arizona (\$1000). 2023.

William A. Calder III Memorial Scholarship, Department of Ecology & Evolutionary Biology, University of Arizona (a total of \$10000 for two years). 2022 & 2023.

Robert W. Hoshaw Memorial Award, Department of Ecology & Evolutionary Biology, University of Arizona (The oldest and most prestigious departmental award for EEB grad students, \$1823.83). 2022.

Graduate Student Awards - Excellence in Scholarship, University of Arizona College of Science (\$100). 2021.

Tropical Conservation and Development Field Research Grant, Center for Latin American Studies, University of Florida (\$2,000). Research proposal entitled “Modeling distribution of giant pandas in a coupled human and natural system using GIS and participatory mapping”. 2018.

Jennings Scholarship, University of Florida (\$1,350). 2018.

Graduate Student Council Travel Grant, Univ. of Florida (\$350). 2018.

Wildlife Graduate Student Association Student Travel Award, Univ. of Florida (\$250). 2018.

Institute of Food and Agricultural Sciences Travel Grant, Univ. of Florida (\$250). September 2018.

Institute of Food and Agricultural Sciences Travel Grant, Univ. of Florida (\$250). June 2018.
Wildlife Ecology and Conservation Field Research Scholarship, Univ. of Florida (\$2,000). 2017.

Undergraduate Summer Research Grant. School of Life Sciences, Peking University (equivalent to \$4,200). 2016.

Undergraduate Student Conference Travel Grant. School of Life Sciences, Peking University (CNY ¥1,607). 2016.

Contributed talks

Zeng Y, Hembry D, and Wiens J. Co-evolution induced stabilizing and destabilizing selection shapes species richness in clade co-diversification. Finalist presentation as part of the Ernst Mayr Award Symposium, the Evolution Meeting. Albuquerque, NM. 2023.
<https://www.youtube.com/watch?v=J5haS96clwQ&t=1s>.

Zeng Y, Wiens J. Species interactions have predictable effects on diversification. Evolution Meeting. Online. 2021.

Zeng Y, Zhang J, Hull V. Modeling changes in giant panda distribution in a coupled human and natural system. Student Conference on Conservation Science, American Museum of Natural History. New York, NY, USA. 2018.

Zeng Y, Zhang J, Hull V. Participatory approaches for quantitative analysis in wildlife research. Ecological Society of America Annual Meeting. New Orleans, LA, USA. 2018.

Invited talks

Zeng Y. Testing hypotheses that link macroevolution and species interactions. Graduate

https://www.youtube.com/watch?v=NRuPptiqW_M&t=11s

Posters

Chen J, Chen X, Liu H, Shen Y, **Zeng Y**, Yin L. Biodiversity survey in Chongzuo examined effects of the white-headed langur (*Trachypithecus leucocephalus*) as a flagship species on habitat conservation. Conservation of China's Tropical Biodiversity Conference. Kunshan, China. 2016.

Work Presented by Colleagues

Gaillard D, **Zeng Y**, Chen H, Lin L, Shi H, Luo S. Eight foot and flower power turtles: a phylogenetic and phylogeographic approach to conservation. 16th Annual Symposium on the Conservation and Biology of Tortoises and Freshwater Turtles. Fort Worth, TX, USA. 2018.

Journal Review

Annals of Botany, PeerJ, Communications Biology

Teaching Experience

Aug. 2019 – Present

Graduate Teaching Assistant.

Course: Genetics (Fall 2019, Fall 2020, & Summer 2021), Introductory Biology Lab (Spring 2020), Diversity of Life (Summer 2020), Animal Sexual Behavior (Spring 2021 & Fall 2021). Marine Biology (Spring 2021, Fall 2021, Spring 2022, Fall 2022), Evolutionary Biology (Spring 2023).

Sept. 2015 – July 2016

Undergraduate Teaching Assistant, *School of Life Sciences.*

Course: Scientific Research Professional Skills.

Other Responsibilities & Activities

- Graduate Student Representative. Dept. of Ecology & Evolutionary Biology, U.

Arizona. Jan. 2022 – Dec. 2022.

- Advisor, Palm Drive (棕榈大道, www.palmdrive.cn). Assisting students with applications to Ph.D. programs in ecology and/or evolutionary biology. Mar. 2020 – Present.
- Fieldwork Leader. Beijing Butterfly Monitoring Project, Peking University. 2017.
- Volunteer. Monitoring Milkweed-Monarch Interactions for Learning and Conservation (MMMILC) Project, UC Davis. 2016.
- Instructor. Beijing Primary and Middle School Birding Competition, Dongcheng Youth S&T Museum, Beijing, China. 2016.
- 1st Award. Beijing College Birding Competition. China Biodiversity Conservation and Green Development Foundation. 2015.
- Volunteer. Chongzuo Biodiversity Research Institute, Peking University. 2015.
- Volunteer. Lab of Population Genetics, Peking University. 2015.
- Person in Charge. GreenLife Society, Peking University. 2014 – 2015.

Workshops attended

Species distribution modeling workshop, Peking University-ETH Zürich, Beijing, China, 2018

Additional Information

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- Coding skills: R, Python, C/C++, Matlab
 - TOEFL (2018, internet-based): 112 (speaking score: 26)
 - GRE (2016): Quantitative- 170 (96th percentile), Verbal- 154 (65th percentile), Writing- 3.5
 - Languages: Mandarin (Native); English (Learned, almost bilingual); Japanese (Reading and listening: Good; Writing and speaking: Basic)
 - Driver's license: Class E (United States), C1 (P.R. China, Manual)