

Yichao Zeng 曾逸超

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Employment

University of Arizona, Tucson, AZ, USA Sept. 2024 – Present
Postdoctoral Research Associate, *College of Information Science* (with Cristian Román-Palacios).

University of Arizona, Tucson, AZ, USA 1 Feb. 2024 – 31 July 2024
Postdoctoral Research Associate, *Dept. of Ecology & Evolutionary Biology* (with Régis Ferrière).

University of Arizona, Tucson, AZ, USA Aug. 2019 – Dec. 2023
Teaching assistant/associate, *Dept. of Ecology & Evolutionary Biology*.

University of Florida, Gainesville, FL, USA Aug. 2017 – May 2019
Research assistant, *Dept. of Wildlife Ecology & Conservation* (with Vanessa Hull).

Formal 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.

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 education & research experience

Universidade de São Paulo, Brazil Sep. 2021 – Jan. 2022
• Virtual visiting trainee) focusing on theoretical ecology and the coevolution of ecological networks, with Paulo R. Guimarães Jr.

University of California, Davis, Davis, CA June 2016 – Sept. 2016
Undergraduate Researcher, *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

1. **Zeng, Y.**, C. Román-Palacios. Approximate Bayesian inference of macroevolutionary rates of species interactions from cophylogenetic patterns
2. **Zeng, Y.**, B. Sauterey, R. Ferrière. Eco-evolutionary hysteresis as a testable hypothesis for toxic algal blooms.
3. Cruz, A.R., **Y. Zeng**, C.M. Moore, J.L. Bronstein. The phylogenetic co-occurrence of pollination and dispersal mutualisms in plants.

Peer-reviewed publications

1. **Zeng, Y.**, D.H. Hembry, 2024. Coevolution-induced selection for and against phenotypic novelty shapes species richness in clade co-diversification. *Journal of Evolutionary Biology*. <https://doi.org/10.1093/jeb/voae069>.
2. 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>.
3. 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>.
4. **Zeng, Y.**, and J. J. Wiens. 2021. Do mutualistic interactions last longer than antagonistic interactions? *Proceedings of the Royal Society B*, 288, pp. 20211457. 20211457. <https://doi.org/10.1098/rspb.2021.1457>.
5. 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>.
6. **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>.
7. 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>.
8. **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:

1. Zeng Y., How do interactions between different species impact the generation of biodiversity? China Green Times. February 25, 2021. p.4. (A popular science article about Zeng & Wiens 2021 *Ecol. Lett.*). Link accessible from within Mainland China: <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

1. Sauterey B, **Zeng Y**, and Ferrière R. Modeling and inference of eco-evolutionary dynamics in seasonal environments: toxic algal blooms as a model system. 3rd joint Congress on Evolutionary Biology, ASN/ESEB/SSB/SSE. Montreal, QC, Canada. 2024.
https://www.youtube.com/watch?v=JltP8E_sBDI
2. **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>.
3. **Zeng Y**, Wiens J. Species interactions have predictable effects on diversification. Evolution Meeting. Online. 2021.
4. **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.
5. **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

1. **Zeng Y**. Testing hypotheses that link macroevolution and species interactions. Graduate program in ecology, University of São Paulo, Brazil. 2021.
https://www.youtube.com/watch?v=NRuPptiqW_M
2. **Zeng Y**. Species interactions: from local-scale processes to macroevolutionary patterns. Lab of Hélène Morlon, École Normale Supérieure, France. 2023.

Posters

1. **Zeng Y**, Wiens J. Macroevolution of species interactions: the biotic-abiotic emergence of specificity, partner shifts, and network dynamic. Congress of the European Society for Evolutionary Biology. Prague, Czech Republic. 2022.

2. 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.

Teaching experience

University of Arizona, Tucson, AZ, USA

Aug. 2019 – Dec. 2023

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, Fall 2023), Evolutionary Biology (Spring 2023).

Peking University, Beijing, China

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 (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.