

# Yichao Zeng 曾逸超

Last updated: June 27, 2024.  
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<https://yichaozeng.github.io/>

## Employment

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|---|-----------------------|
| <b>University of Arizona</b> , Tucson, AZ, USA  | Feb. 2024 – July 2024 |
| <ul style="list-style-type: none"><li>• Postdoc at Dept. of Ecology &amp; Evolutionary Biology (with Régis Ferrière).</li></ul>           |                       |
| <b>University of Arizona</b> , Tucson, AZ, USA  | Aug. 2019 – Dec. 2023 |
| <ul style="list-style-type: none"><li>• Teaching assistant/associate at Dept. of Ecology &amp; Evolutionary Biology</li></ul>             |                       |
| <b>University of Florida</b> , Gainesville, FL, USA   | Aug. 2017 – May 2019  |
| <ul style="list-style-type: none"><li>• Research assistant at Dept. of Wildlife Ecology &amp; Conservation (with Vanessa Hull).</li></ul> |                       |

## Education

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| <b>University of Arizona</b> , Tucson, AZ, USA  | Aug. 2019 – Dec. 2023 |
| <b>Ph.D., Ecology and Evolutionary Biology.</b>   |                       |
| <ul style="list-style-type: none"><li>• Thesis: Meta-analytical and modeling approaches to understanding the link between macroevolution and species interactions.</li><li>• Committee: John J. Wiens (Chair), Judith L. Bronstein, Michael J. Sanderson, Régis Ferrière, Paulo R. Guimarães Jr.</li></ul>  |                       |
| <b>Universidade de São Paulo</b> , Brazil   | Sep. 2021 – Jan, 2022 |
| <ul style="list-style-type: none"><li>• Visiting Ph.D. student focusing on theoretical ecology and the coevolution of ecological networks, with Paulo R. Guimarães Jr.</li></ul>  |                       |
| <b>University of Florida</b> , Gainesville, FL, USA   | Aug. 2017 – May 2019  |
| <b>M.Sc., Wildlife Ecology and Conservation.</b>  |                       |
| <ul style="list-style-type: none"><li>• Thesis: Medicinal herb collection and wildlife conservation: qualitative and quantitative inferences from participatory research in Wolong Nature Reserve.</li><li>• Committee: Vanessa Hull (Chair), Robert A. McCleery, Mathieu Basille, Jindong Zhang.</li></ul> |                       |
| <b>Peking University</b> , Beijing, China   | Sep. 2013 – July 2017 |
| <b>B.S., Biological Science.</b>  |                       |
| <ul style="list-style-type: none"><li>• Thesis: Phylogeography of the Indochinese and the keeled box turtles (<i>Cuora</i> spp.).</li><li>• Advisor: Dr. Shu-jin Luo.</li></ul>   |                       |

## Other Research Experience

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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

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\* 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

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**Zeng, Y.**, D.H. Hembrý, 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>.

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 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**

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### **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**

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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***

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Sauterey B, **Zeng Y**, and Ferrière R. Modeling and inference of eco-evolutionary dynamics in seasonal environments: toxic algal blooms as a model system. 3<sup>rd</sup> joint Congress on Evolutionary Biology, ASN/ESEB/SSB/SSE. Montreal, QC, Canada. 2024.

[https://www.youtube.com/watch?v=JltP8E\\_sBDI](https://www.youtube.com/watch?v=JltP8E_sBDI)

**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>.

**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***

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**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](https://www.youtube.com/watch?v=NRuPptiqW_M)

**Zeng Y.** Species interactions: from local-scale processes to macroevolutionary patterns. Lab of H  l  ne Morlon,   cole Normale Sup  rieure, France. 2023.

## ***Posters***

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**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.

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***

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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***

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Annals of Botany, PeerJ, Communications Biology

## ***Teaching Experience***

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**University of Arizona**, Tucson, AZ, USA

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).

**Peking University**, Beijing, China

Sept. 2015 – July 2016

**Undergraduate Teaching Assistant**, *School of Life Sciences*.

Course: Scientific Research Professional Skills.

## ***Other Responsibilities & Activities***

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- Graduate Student Representative. Dept. of Ecology & Evolutionary Biology, U. Arizona. Jan. 2022 – Dec. 2022.
- Advisor, Palm Drive (棕榈大道, [www.palmdrive.cn](http://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***

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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)