

# Katherine A. Corn

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## Professional Experience & Education

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- 2022      Ph.D. Population Biology, University of California, Davis, CA 95616  
            Major professor: Peter C. Wainwright  
            Committee: Michael Turelli, Stacey A. Combes
- 2016      B.S. Biological Sciences, Cornell University, Ithaca, NY 14850  
            *cum laude*, with Distinction in Research  
            Honors thesis advisor: William E. Bemis
- 2013      A.A., Bard College at Simon's Rock, Great Barrington, MA 01230  
            Advisor: Patty Dooley  
            Acceleration to Excellence Merit Scholar

## Peer-Reviewed Publications

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11. **Corn, K.A.**, S.T. Friedman, E.D. Burress, C.M. Martinez, O. Larouche, S.A. Price, P.C. Wainwright. The Rise of Biting During the Cenozoic Fueled Reef Fish Body Shape Diversification. *in press at Proceedings of the National Academy of Sciences*.
10. Price, S.A., S.T. Friedman, S.T., **K.A. Corn**, O. Larouche, K. Brockelsby, A.J. Lee, M. Nagaraj, N. Bertrand, M. Danao, J.R. Estrada, R. Friedman, M. Iwan, D. Gross, B. Landry, M.J. Linares, J.R. Nguyen, A.J. Proffitt, S. Rodriguez, M.R. Rupp, V. Susman, A.J. Tovar, L.L.J. Vary, K.L. Zapfe, & P.C. Wainwright. FishShapes v1: functionally relevant measurements of teleost shape and size on three dimensions. *accepted at Ecology*.
9. Martinez, C.M., S.T. Friedman, **K.A. Corn**, O. Larouche, S.A. Price, P.C. Wainwright. 2021. The Deep Sea is a Hot Spot of Fish Body Shape Evolution. *Ecology Letters*, 24, 1788–1799.

8. **Corn, K.A.**, C.M. Martinez, E.D. Burress, P.C. Wainwright. 2021. A multifunction trade-off has contrasting effects on the evolution of form and function. *Systematic Biology*, 70(4), 681-693.
7. Larouche, O., B. Benton, **K.A. Corn**, S.T. Friedman, D. Gross, M. Iwan, B. Kessler, C.M. Martinez, S. Rodriguez, H. Whelpley, P.C. Wainwright, S.A. Price. 2020. Reef-associated fishes have more maneuverable body shapes at a macroevolutionary scale. *Coral Reefs* 39, 1427–1439.
6. Friedman, S.T., S.A. Price, **K.A. Corn**, O. Larouche, C.M. Martinez, P.C. Wainwright. 2020. Body shape diversification along the benthic-pelagic axis in marine fishes. *Proceedings of the Royal Society B: Biological Sciences* 287: 20201053.
5. Price, S.A., O. Larouche, S.T. Friedman, **K.A. Corn**, P.C. Wainwright, C.M. Martinez. 2020. A CURE for a major challenge in phenomics: a practical guide to implementing a quantitative specimen-based undergraduate research experience. *Integrative Organismal Biology*, 2(1), obaa004.
4. Price, S.A., S.T. Friedman, **K.A. Corn**, C.M. Martinez, O. Larouche, P.C. Wainwright. 2019. Building a body shape morphospace of teleostean fishes. *Integrative and Comparative Biology*, 59(3), 716-730. **\*Editor's choice\***
3. Farina, S.C., M.L. Knope, **K.A. Corn**, A.P. Summers, W.E. Bemis. 2019. Functional coupling in the evolution of suction feeding and gill ventilation of sculpins (Perciformes: Cottidae). *Integrative and Comparative Biology*, 59(2), 394-409.
2. **Corn, K.A.**, S.C. Farina, A.P. Summers, A.C. Gibb. 2018. Effects of organism and substrate size on burial mechanics of English sole, *Parophrys vetulus*. *Journal of Experimental Biology*, 221(18): jeb176131.
1. **Corn, K.A.**, S.C. Farina, J. Brash, A.P. Summers. 2016. Modeling tooth-prey interactions in sharks - the importance of dynamic testing. *Royal Society Open Science* 3: 160141. **\*cover image\***

## Fellowships, Grants, & Awards

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2022            *Finalist*, Society for Integrative and Comparative Biology, Dwight Davis Award

- 2021 – 2022 American Association of University Women Dissertation Fellowship (\$20,000)
- 2019 – 2022 Achievement Rewards for College Scientists Fellowships (total \$34,446)
- 2021 *Finalist*, Society of Systematic Biologists, Ernst Mayr Award
- 2021 UC Davis Graduate Research Award (\$3,000)
- 2019, 2021 UC Davis Center for Population Biology Travel Awards (total \$2,677)
- 2021 Society for Integrative & Comparative Biology Grant-in-aid of research (\$1,000)
- 2020 UC Davis DataLab Election Data Challenge winner
- 2018, 2020 UC Davis Center for Population Biology Research Awards (total: \$2,700)
- 2020 XSEDE Computational Resources Allocation (\$1,835.50)
- 2020 *Winner*, Society for Integrative & Comparative Biology, David & Marvalee Wake Award
- 2019 UC Davis Graduate Student Association Travel Award (\$500)
- 2018 *Honorable mention*, National Science Foundation Graduate Research Fellowship
- 2015, 2016 Cornell University Office of Undergraduate Biology Travel Awards (total \$1,000)
- 2015 Cornell University Department of Ecology & Evolutionary Biology Symposium, Sigma Xi Best Undergraduate Poster Prize
- 2015 NSF Research Experience for Undergraduates internship (\$4,000)
- 2015 Dextra Undergraduate Research Endowment Fund (\$1,000)
- 2015 Brooks and Suzanne Ragen Endowed Scholarship (\$2,000) (*declined*)
- 2014 Stephen and Ruth Wainwright Endowed Fellowship (\$1,000)
- 2011-2013 Bard College at Simon's Rock, Acceleration to Excellence Scholar

## Teaching Experience

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### Instructor

- 2019 Phylogenetic Analysis of Vertebrate Structure  
 UC Davis – Graduate Teaching Assistant & **Lab Instructor** – 1 quarter  
**Overall evaluation: 4.9/5.0**, n = 24 students

2017 – 2018 Biodiversity of Fishes: Methods and Experimental Design in  
Macroevolution UC Davis – **Course Instructor** – 3 quarters  
Biodiversity of Fishes II: Hypothesis Development in Macroevolution  
Biodiversity of Fishes III: Data Analysis in Macroevolution  
Biodiversity of Fishes IV: Research Communication

### Guest Lectures

2022 Evolution I St. Ambrose University  
- Evolution research

2021 Natural History of Vertebrates I University of San Diego  
- Convergent Evolution

2020 Functional Morphology & Ecology of Fishes I Friday Harbor Marine  
Laboratories  
- Introduction to Phylogenetic Comparative Methods  
- Workshop: Statistical Analysis in R (co-instructed with Hannah Weller)

### Teaching Assistantships

2021 Phylogenetic Analysis of Vertebrate Structure  
UC Davis – Graduate Teaching Assistant & Virtual Lab Instructor – 1  
quarter  
**Overall TA evaluation: 4.9/5.0**, n = 14 students

2020 Life in the Sea  
UC Davis – Graduate Teaching Assistant – 1 quarter  
**Overall TA evaluation: 4.7/5.0**, n = 45 students

2017 – 2018 Introduction to Biological Sciences: Principles of Ecology and Evolution  
UC Davis – Graduate Teaching Assistant – 2 quarters  
**Overall TA evaluation: 4.9/5.0**, n = 98 students

2016 Vertebrates: Structure, Function, & Evolution  
Cornell University – Undergraduate Teaching Assistant – 1 semester

2015 Introduction to Oceanography  
Cornell University – Undergraduate Teaching Assistant – 1 semester

## Professional Presentations

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### Invited Seminars

- 2022 University of California, Davis, Center for Population Biology. Davis, CA.
- 2020 University of California, Davis, DataLab California 2020 Election Challenge Finale Webinar. Davis, CA.
- 2019 University of California, Davis, Center for Population Biology. Davis, CA.
- 2017 Sonoma State University, Department of Biology. Petaluma, CA.

### Conference Talks

- 2022 Society for Integrative & Comparative Biology, virtual conference.  
*Finalist, Dwight Davis Award for Outstanding Student Talk in the Division of Vertebrate Morphology*
- 2021 Evolution, virtual conference.  
*Finalist, Ernst Mayr Award for Outstanding Student Talk in the Society of Systematic Biologists*
- 2021 Society for Integrative & Comparative Biology, virtual conference.
- 2020 Society for Integrative & Comparative Biology, Austin, TX.  
*Winner, David & Marvalee Wake Award for Outstanding Student Talk in the Division of Phylogenetics & Comparative Biology*
- 2019 Society for Integrative & Comparative Biology, Tampa, FL.
- 2017 Society for Integrative & Comparative Biology. New Orleans, LA.
- 2016 Society for Integrative & Comparative Biology. Portland, OR.

### Poster Presentations

- 2016 International Congress of Vertebrate Morphology, Washington, DC. Poster.
- 2015 40<sup>th</sup> Annual Cornell University Department of Ecology and Evolutionary Biology Graduate Symposium, Ithaca, NY.  
*Winner, Sigma Xi Undergraduate Poster Prize*
- 2015 Cornell Undergraduate Research Board Spring Forum. Ithaca, NY.
- 2015 Cornell Institute of Biological Engineering BioExpo. Ithaca, NY.

2015 Society for Integrative & Comparative Biology. West Palm Beach, FL.

## Professional Training

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- 2021 Introduction to Remote Computing – UC Davis DataLab  
Instructor: Dr. C. Titus Brown
- 2019 Evolutionary Quantitative Genetics – Friday Harbor Marine Laboratories  
Instructors: Dr. Joseph Felsenstein & Dr. Stevan J. Arnold
- 2014 Functional Morphology & Ecology of Fishes – Friday Harbor Marine  
Laboratories  
Instructors: Dr. Adam P. Summers & Dr. E.W. “Misty” Paig-Train

## Professional Activities

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### Diversity, Equity, and Inclusion

- 2021 – 2022 Population Biology Diversity Committee Representative to Evolution &  
Ecology Seminar Committee
- 2020 – 2021 **Co-founder, Ecology & Evolution Graduate School Preview Program**  
Executive board, logistics co-coordinator (2020)  
Presenter – *Finding a Good Fit* programming (2020-2021)
- 2019 – 2020 Women in Life Sciences at Davis Administrative Team
- 2019 – 2020 R teaching assistant, HBCU Ecology & Evolution Graduate Admissions  
Pathways, University of California, Davis
- 2016 – pres. **Founding member, Population Biology Student Diversity Committee**  
Coordinator, Winter 2019

### Journal Referee

Biological Journal of the Linnean Society – Ecology & Evolution – Evolution –  
Integrative and Comparative Biology – Journal of Fish Biology – Journal of Mammalogy  
– Proceedings of the Royal Society B: Biological Sciences

## Society Membership

International Society of Vertebrate Morphology – Society for Integrative & Comparative Biology – Society of Systematic Biologists – Society for the Study of Evolution – PADI Divemaster

## Society Service

- 2021 Research methods advisor, Ask-An-Expert Booth, Division of Phylogenetics and Comparative Biology at annual meetings of the Society for Integrative & Comparative Biology
- 2021 Co-organizer: Job hunting tips and tricks: A panel discussion on finding a faculty position in Ecology and Evolutionary Biology workshop, annual meeting of the Society for Integrative & Comparative Biology
- 2020 – 2021 Committee for Remote Social and Networking Events, annual meeting of the Society for Integrative & Comparative Biology
- 2019 Social Media Ambassador for symposium: *"Multifunctional structures and multistructural functions: Functional coupling and integration in the evolution of biomechanical systems"* at the annual meeting of the Society for Integrative & Comparative Biology

## Graduate Student Representation

- 2019 – 2020 Population Biology Graduate Group Admissions Committee
- 2019 – 2020 Population Biology Graduate Group Curriculum Committee
- 2017 – 2018 UC Davis Academic Senate Distinguished Teaching Awards Committee
- 2017 – 2018 Population Biology Graduate Group Representative to UC Davis Graduate Student Association

## Community Engagement and Outreach

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### Mentorship

- 2020 Mentor for high school student, Girls Outdoor Adventure in Leadership and Science at UC Davis
- 2015 Peer Mentor, Cornell Undergraduate Research Board

### **Public Exhibitor**

2017 – pres. Station Leader and presenter – UC Davis Annual Picnic Day “Explore the Tree of Life” exhibit, fish section

**Best “Secrets of Nature” Exhibit Award (2017)**

**Best “Planet Earth” Exhibit Award (2019)**

2017 – 2020 Exhibitor – UC Davis Annual Museum Biodiversity Day, fish exhibit

2015 Speaker – Cornell Office of Undergraduate Biology research outreach

### **K-12 Activity Leadership**

2020 STEM Squad Fish Dissection Lead at Winters Middle School

2015 – 2016 Facilitator – Expanding Your Horizons STEM Conference – Marine Biology

### **Interviews**

2015 Science Magazine. “[A chainsaw spiked with shark teeth.](#)”

2015 Popular Science. “[Watch A Power Saw Made With Shark Teeth Slice Through Salmon.](#)”

Last updated: 5 July 2022