

## Katherine A. Corn

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### Professional Experience & Education

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- 2023 – pres.    Adjoint Professor, Washington State University, Pullman, WA 99164  
                    Fall 2024: Assistant Professor, Biological Sciences & Director, Conner Museum of Vertebrates
- 2022 – pres.    Postdoctoral Researcher, Virginia Polytechnic Institute & State University, Blacksburg, VA 24061  
                    Mentor: Josef C. Uyeda
- 2022            Ph.D. Population Biology, University of California, Davis, CA 95616  
                    Major professor: Peter C. Wainwright  
                    Committee: Michael Turelli, Stacey A. Combes
- 2016            B.Sc. 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 Scholar

### Peer-Reviewed Publications

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11. **Corn, K.A.**, S.T. Friedman, E.D. Burrell, C.M. Martinez, O. Larouche, S.A. Price, P.C. Wainwright. 2022. The rise of biting during the Cenozoic fueled reef fish body shape diversification. *Proceedings of the National Academy of Sciences*, 119 (31) e2119828119.
10. Price, S.A., S.T. Friedman, **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. 2022. FishShapes v1: functionally relevant measurements of teleost shape and size on three dimensions. *Ecology*, e3829.
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. Burrell, 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\***

## Manuscripts in Preparation

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Martinez, C.M.\*, **K.A. Corn\***, S. Williamson, D.R. Satterfield, A.S. Roberts-Hughes, A.J. Barley, S.R. Borstein, M.D. McGee, P.C. Wainwright. Replaying the tape of functional evolution across cichlid adaptive radiations. *preprint on bioRxiv, in revision at American Naturalist*.

\* Authors contributed equally to this paper.

Roberts-Hughes, A.S., C.M. Martinez, **K.A. Corn**, P.C. Wainwright. A classic key innovation constrains oral jaw functional diversification in fishes. *in revision at Evolution Letters*.

Burns, M.D., S.T. Friedman, **K.A. Corn**, O. Larouche, S.A. Price, P.C. Wainwright, E.D. Burress. High latitude ocean habitats are a crucible of fish body shape diversification. *in revision at Evolution Letters*.

### Fellowships, Grants, & Awards

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2022	<i>Finalist</i> , 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	<i>Finalist</i> , 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	<b>Winner</b> , Society for Integrative & Comparative Biology, David & Marvalee Wake Award
2019	UC Davis Graduate Student Association Travel Award (\$500)
2018	<i>Honorable mention</i> , 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) ( <i>declined</i> )
2014	Stephen and Ruth Wainwright Endowed Fellowship (\$1,000)
2011-2013	Bard College at Simon's Rock, Acceleration to Excellence Scholarship

## 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

### 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

### Statistics Workshops

- 2024      Minorities in Shark Science Summit (*upcoming*)  
Workshop Co-leader – Introduction to Statistics in R (co-led with Marguerite Butler, Stacy Farina, and Samantha Price)
- 2020      Functional Morphology & Ecology of Fishes, Friday Harbor Laboratories  
Guest Lecturer – Introduction to Phylogenetic Comparative Methods  
Workshop Co-leader – Comparative Methods in R (co-led with Hannah Weller)
- 2019 - 2020      HBCU Ecology and Evolution Graduate Admissions Pathway, UC Davis  
Teaching Assistant – Introduction to Statistics in R

## Professional Presentations

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### Invited Seminars

- 2023 George Washington University, Department of Biology. Washington, D.C. *\*graduate student invited speaker*
- 2023 International Congress of Vertebrate Morphology. Symposium: *The morphology of coral reef fishes: functional, ecological, and evolutionary implications*. Cairns, Australia.
- 2023 Clemson University, Department of Biological Sciences. Clemson, SC.
- 2022 Washington State University, School of Biological Sciences. Pullman, WA.
- 2022 University of California, Davis, Center for Population Biology. Davis, CA.
- 2020 University of California, Davis, Webinar: *DataLab California 2020 Election Challenge Finale*. Davis, CA.
- 2019 University of California, Davis, Center for Population Biology. Davis, CA.
- 2017 Sonoma State University, Department of Biology. Petaluma, CA.

### Contributed Presentations

- 2024 Society for Integrative & Comparative Biology. Seattle, WA. *upcoming*.
- 2023 Society for Integrative & Comparative Biology Southeast Regional Meeting. Blacksburg, VA.
- 2023 Virginia Polytechnic Institute & State University, Department of Biology. Blacksburg, VA.
- 2023 Society of Systematic Biologists. Mexico City, MX.
- 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 Ecology & Evolutionary Biology Undergraduate Honors Thesis Symposium, Cornell University. Ithaca, NY.
- 2016 Society for Integrative & Comparative Biology. Portland, OR.

### Poster Presentations

- 2022 Achievement Rewards for College Scientists Foundation, Northern California Chapter. San Francisco, CA.
- 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 – 2022 **Founding member, Population Biology Student Diversity Committee**  
Coordinator, Winter 2019

### **Journal Refereeing**

Biological Journal of the Linnean Society – Biology Letters – Ecology & Evolution –  
Environmental Biology of Fishes – Evolution – Integrative & Comparative Biology – Journal of  
Fish Biology – Journal of Mammalogy – Journal of Morphology – Proceedings of the Royal  
Society B

### **Grant Refereeing**

Icelandic Centre for Research (external reviewer)

### **Society Membership**

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

### **Society Service**

2023 – pres. Student & Postdoctoral Affairs Committee Representative, Division of  
Phylogenetics and Comparative Biology, the Society for Integrative &  
Comparative Biology

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 – 2022 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

### In the News

- 2022 UC Davis News. “[Reef fish evolution driven by recent evolution of biting.](#)”
- 2015 Science Magazine. “[A chainsaw spiked with shark teeth.](#)”
- 2015 Popular Science. “[Watch a power saw made with shark teeth slice through salmon.](#)”

## References

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Peter C. Wainwright | PhD Major Professor

Distinguished Professor, University of California, Davis

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Josef C. Uyeda | Postdoctoral Advisor

Associate Professor, Virginia Polytechnic Institute and State University

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Christopher M. Martinez | Collaborator

Assistant Professor, University of California, Irvine

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Last updated: 4 December 2023