Katherine A. Corn

Department of Evolution and Ecology
Population Biology Graduate Group
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Education

2016 – pres. **Ph.D. Evolution & Ecology**, University of California, Davis, CA 95616
Major professor: Peter C. Wainwright
Expected graduation date: June 2021

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

Research Interests

Functional morphology, macroevolution, biomechanics, and ecology of fishes.

Publications

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*, icz115, doi: 10.1093/icb/icz115.

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: Cottoidei). *Integrative and Comparative Biology*, icz022, doi: 10.1093/icb/icz022.

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), doi: 10.1242/jeb.176131.

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, doi: 10.1098/rsos.160141.

Fellowships, Grants, & Awards

2019 **$1,000:** UC Davis Center for Population Biology Travel Award. Support to travel to the 2019 *Evolutionary Quantitative Genetics Workshop* at Friday Harbor Labs.

2019 **$11,000**: Achievement Rewards for College Scientists Foundation Fellowship.

2019 **$500:** UC Davis Graduate Student Association Travel Award. Support to travel to SICB 2019 Annual Meeting.

2018 **$1,300:** UC Davis Center for Population Biology Research Award
2018 **Honorable Mention**, National Science Foundation Graduate Research Fellowship
2016 **$500:** Cornell University Office of Undergraduate Biology Student Travel Funding. Support to travel to the 11th Meeting of the ISVM.
2015 Sigma Xi Undergraduate Poster Prize at the 40th Annual Cornell University Department of Ecology and Evolutionary Biology Graduate Symposium.
2015 **$4,000:** NSF Research Experience for Undergraduates (REU) internship with Dr. Adam Summers at Friday Harbor Laboratories.
2015 **$1,000:** Cornell University Office of Undergraduate Biology Student Research Grant. Funding for undergraduate students doing independent research in agricultural and life sciences.
2015 **$2,000:** Brooks and Suzanne Ragen Endowed Scholarship. Funding for undergraduate and graduate students at Friday Harbor Laboratories. *(declined)*
2015 **$500:** Cornell University Office of Undergraduate Biology Student Travel Funding. Support to travel to the SICB 2015 Annual Meeting.
2014 **$1,000:** Stephen and Ruth Wainwright Endowed Fellowship. Funding to attend Friday Harbor Laboratories' *Functional Morphology and Ecology of Fishes* course.
2011-2013 **$50,000:** Bard College at Simon's Rock Acceleration to Excellence Program Scholar. Undergraduate academic merit scholarship.

Teaching Experience

2019 Phylogenetic Analysis of Vertebrate Structure (UC Davis, EVE 105); Lead Graduate Teaching Assistant, 1 quarter
2017 – 2018 Biodiversity of Fishes: Methods and Experimental Design in Macroevolution (UC Davis, EVE 198); **Course Instructor**, 3 quarters
2017 – 2018 Introduction to Biological Sciences: Principles of Ecology and Evolution (UC Davis, BIS 2B); Graduate Teaching Assistant, 2 quarters
Overall TA Evaluation: 4.9/5.0, n = 98 students
2016 Vertebrates: Structure, Function, & Evolution (Cornell University, BIOEE 2740); Undergraduate Teaching Assistant, 1 semester
2015 Introduction to Oceanography (Cornell University, BIOEE 1540); Undergraduate Teaching Assistant, 1 semester

Invited Seminars

2019 **Corn, K.A.** Effects of coral reefs on evolution of fish feeding mechanisms. University of California, Davis, Center for Population Biology. Davis, CA.
2017 **Corn, K.A.** From shark saws to fish jaws: Using biomechanics to explore evolution. Sonoma State University, Biology Department. Petaluma, CA.

Presentations

2019 **Corn, K.A.**, C.M. Martinez, P.C. Wainwright. Feeding mode and prey type affect cranial mobility in coral reef fishes. Society for Integrative and Comparative Biology. January 3-7, Tampa, FL. Oral presentation.

2019 Price, S.A., **K.A. Corn**, S.T. Friedman, O. Larouche, C.M. Martinez, K. Zapfe, P.C. Wainwright. The fish shapes project: Harnessing the power of data science, museum collections and undergraduate researchers to quantify body shape evolution across teleost fishes. Society for Integrative and Comparative Biology. January 3-7, Tampa, FL. Invited symposium presentation.

2017 **Corn, K.A.**, W.E. Bemis. Tooth Microstructure, Development, and Replacement in the Sharpnose Sevengill Shark, *Heptranchias perlo*. Society for Integrative and Comparative Biology. January 4-8, New Orleans, LA. Oral presentation.

2016 **Corn, K.A.**, S.C. Farina, A.C. Gibb, A.P. Summers. Scaling of Burial Mechanics in *Parophrys vetulus*, the English Sole. International Congress of Vertebrate Morphology. June 29 - July 3, Washington, DC. Poster.

2016 **Corn, K.A.**, S.C. Farina, A.C. Gibb, A.P. Summers. Scaling of Burial Mechanics in *Parophrys vetulus*, the English Sole. Society for Integrative and Comparative Biology. January 3-7, Portland, OR. Oral Presentation.

2016 Farina, S.C., M.L. Knope, **K.A. Corn**, A.P. Summers, W.E. Bemis. Modularity and coupling in the evolution of the feeding and respiratory systems of cottoid fishes. Society for Integrative and Comparative Biology. January 3-7, Portland, OR. Oral Presentation.

2015 **Corn, K.A.**, S.C. Farina, J. Brash, A.P. Summers. Jawzall: Effects of Shark Tooth Morphology and Repeated Use on Cutting. 40th Annual Cornell University Department of Ecology and Evolutionary Biology Graduate Symposium. December 8, Ithaca, NY. Poster. **Won: Sigma Xi Undergraduate Poster Prize**

2015 **Corn, K.A.**, S.C. Farina, J. Brash, A.P. Summers. Jawzall: Effects of Shark Tooth Morphology and Repeated Use on Cutting. Cornell Undergraduate Research Board Spring Forum. April 22, Ithaca, NY. Poster.

2015 **Corn, K.A.**, S.C. Farina, J. Brash, A.P. Summers. Jawzall: Effects of Shark Tooth Morphology and Repeated Use on Cutting. Cornell Institute of Biological Engineering BioExpo. March 18, Ithaca, NY. Poster.

2015 **Corn, K.A.**, S.C. Farina, J. Brash, A.P. Summers. Jawzall: Effects of Shark Tooth Morphology and Repeated Use on Cutting. Society for Integrative and Comparative Biology. January 3-7, West Palm Beach, FL. Poster.

Research Experience

2017 – 2018 University of California, Davis at Smithsonian Institution – Macroevolution of body shape in fishes

2016 – pres. University of California, Davis – PhD research: Effects of coral reefs on evolution of fish feeding mechanisms

2015 – 2016 Cornell University – Undergraduate honors thesis: Microstructure and histology of Sixgill and Sevengill shark teeth

2015	NSF-REU, Friday Harbor Laboratories – Biomechanics of flatfish burial
2015	Cornell University – Evolutionary morphology of sculpin cranial anatomy
2014	Friday Harbor Laboratories – Shark tooth cutting ability
2013	Bard College at Simon's Rock Biology internship – Fish ecology, molecular biology

Service & Outreach

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 and Comparative Biology
2017 – pres.	Station Leader and Presenter – UC Davis Annual Picnic Day "Explore the Tree of Life" exhibit **Won: Best "Secrets of Nature" Exhibit Award** (2017) **Won: Best "Planet Earth" Exhibit Award** (2019)
2017 – pres.	Presenter – UC Davis Annual Museum Biodiversity Day, fish exhibit
2017 – 2018	Graduate Student Association Representative to the UC Davis Academic Senate Distinguished Teaching Awards Committee
2017 – 2018	Population Biology Graduate Group Representative – UC Davis Graduate Student Association
2016 – pres.	Population Biology Student Diversity Committee ***Coordinator: Winter 2019**
2015 – 2016	Facilitator – Expanding Your Horizons STEM Conference for 7-9th grade girls – Marine Biology Workshop
2015	Peer Mentor – Cornell Undergraduate Research Board mentorship program
2015	Presenter – Cornell Office of Undergraduate Biology research outreach
2015	Interview with Science Magazine. "A chainsaw spiked with shark teeth."
2015	Interview with Popular Science website. "Watch A Power Saw Made With Shark Teeth Slice Through Salmon."

Reviews

Integrative and Comparative Biology (1)
Journal of Fish Biology (2)

Professional Affiliations

2019 – pres.	American Society of Naturalists
2016 – pres.	International Society of Vertebrate Morphology
2013 – pres.	Society for Integrative and Comparative Biology

2016 – pres. PADI Divemaster

Last updated: 30 July 2019