

# Katherine A. Corn

Department of Evolution and Ecology  
Population Biology Graduate Group  
University of California, Davis  
Davis, CA 95616

kacorn@ucdavis.edu  
2320 Storer Hall

## 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. (*in review*)  
Building a body shape morphospace of teleostean fishes. *Integrative and Comparative Biology*.

Farina, S.C., M.L. Knope, **K.A. Corn**, A.P. Summers, W.E. Bemis. (*in press*) Functional coupling in the evolution of suction feeding and gill ventilation of sculpins (Perciformes: Cottoidei). *Integrative and Comparative Biology*.

**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 11<sup>th</sup> Meeting of the ISVM.
- 2015 Sigma Xi Undergraduate Poster Prize at the 40<sup>th</sup> 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. 40<sup>th</sup> 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: 5 June 2019