

Katherine A. Corn

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

kacorn@ucdavis.edu

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

Evolution, functional morphology, biomechanics, and ecology of fishes.

Research Experience

- 2017 University of California, Davis at Smithsonian Institution – Fish body shape
- 2016 – pres. University of California, Davis – PhD research: Functional morphology & evolution in fishes
- 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

Teaching Experience

- 2016 Vertebrates: Structure, Function, and Evolution (Cornell University, BIOEE 2740)
Undergraduate Teaching Assistant
- 2015 Introduction to Oceanography (Cornell University, BIOEE 1540)
Undergraduate Teaching Assistant

Publications

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.
<http://dx.doi.org/10.1098/rsos.160141>

Corn, K.A., S.C. Farina, A.C. Gibb, A.P. Summers. Scaling of Burial Mechanics in *Parophrys vetulus*, the English Sole. (in prep for *Journal of Experimental Biology*)

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. (in review at *American Naturalist*)

Fellowships, Grants, & Awards

- 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 **\$25,000:** Bard College at Simon's Rock Acceleration to Excellence Program Scholar. Undergraduate academic merit scholarship.

Invited Seminars

- 2017 **Corn, K.A.** From shark saws to fish jaws: Using biomechanics to explore evolution. Sonoma State University Biology Department Colloquium.

Presentations

- 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.

Service & Outreach

- 2017 – pres. Population Biology Graduate Group Representative [alternate] – UC Davis Graduate Student Association
- 2017 Presenter – UC Davis Picnic Day “Exploring the ‘Tree of Life’” exhibit **Won: Best “Secrets of Nature” Exhibit Award**
- 2017 Presenter – UC Davis Museum Biodiversity Day
- 2016 – pres. Population Biology Student Diversity Committee – Founding member
- 2015 - 2016 Facilitator – Expanding Your Horizons STEM Conference for 7-9th grade girls – Marine Biology Workshop
- 2015 Peer Mentor – Cornell Undergraduate Research Board peer mentor
- 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

Journal of Fish Biology (1)

Professional Affiliations

- 2016 – pres. International Society of Vertebrate Morphology
- 2013 – pres. Society for Integrative and Comparative Biology
- 2016 – pres. PADI Divemaster

Last updated: 6 September 2017