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EDUCATION

- 2017–present Dartmouth College
Ph.D. candidate, Graduate Program in Ecology, Evolution, Environment and Society
Advisor: Dr. Hannah ter Hofstede
- 2017 University of Pittsburgh
B.S., Ecology and Evolution, *magna cum laude*
Honors thesis: Integration of Spatial and Acoustic Information in Frog-Eating Bats.

PUBLICATIONS

- 2020 Geipel, I.[†], **Kernan, C.E.**[†], Litterer, A.S., Carter, G., Page, R.A.[‡], ter Hofstede, H.M.[‡]
2020. Predation risks of signaling and searching: bats prefer moving katydids. *Biol. Lett.*
16: 20190837. [Link](#) | [Cover](#)
- in review (target journal: *Proceedings B*): Symes, L.B.[†], Martinson, S.J.[†], **Kernan, C.E.**, and ter Hofstede, H.M. Sheep in wolves' clothing: prey rely on passive defenses when predator and non-predator cues are similar.

^{††}*Equal authorship contributions*

PRESENTATIONS

Talks

- 2019 **Kernan, C.E.**, Ralston, J., ter Hofstede, H.M. How do different conspecific receivers respond to a multicomponent cricket call? Talk at Animal Behavior Society annual conference (Behavior 2019).
- 2017 **Kernan, C.E.** Integration of Spatial and Acoustic Information in Frog-Eating Bats. Senior honors thesis presentation at the University of Pittsburgh.
- 2016 **Kernan, C.E.** Behavioral observations of *Brookesia superciliaris* in Ranomafana National Park. Independent project presentation at Centre ValBio in Madagascar.

Posters

- 2019 **Kernan, C.E.**, Jones, J. ter Hofstede, H.M. Bat Monitoring at Hubbard Brook Experimental Forest. Poster presented at The Future of the Northern Forest workshop, hosted

by Dartmouth College.

Iwan, A.*, **Kernan, C.E.**, Litterer, A.S., ter Hofstede, H.M., and Hamel, J. Studying the functions and contexts of vibrational communication in Neotropical katydids. Poster presented by A. Iwan at Behavior 2019.

Hamel, J., Iwan, A.*, **Kernan, C.E.**, Martinson, S., Symes, L., and ter Hofstede, H.M. A comparative study of vibrational signaling in Neotropical katydids. Poster presented by J. Hamel at Behavior 2019.

Kernan, C.E., Hamel, J., Iwan, A.*, Litterer, A., Martinson, S., Symes, L., and ter Hofstede, H. Flexible signaling strategies in a Neotropical katydid. Poster for the 2019 Smithsonian Tropical Research Institute Fellows' Symposium.

2018 **Kernan, C.E.**, Hamel, J., Iwan, A.*, and ter Hofstede, H.M. Calling, Courtship, and Post-Mating Tremulations in a Neotropical Katydid. Poster / flash talk for the Second International Symposium on Biotremology.

2017 Laing, A.M., Turner, A.H., **Kernan, C.E.**, Werning, S., Smith, N., Irmis, R. and Nesbitt, S.J. A New Shuvosaurid Taxon (Archosauria: Pseudosuchia) from the Late Triassic Hayden Quarry of New Mexico, USA. Poster presented by A. Laing at the Society of Vertebrate Paleontology.

**Undergraduate author*

GRANTS, FELLOWSHIPS & AWARDS

2019 Scholarly Studies Award (as Co-Investigator). Smithsonian Institution.

Graduate Research Fellowship. National Science Foundation.

2018 EEES External Course Award. Dartmouth.

Travel Award. Dartmouth.

Graduate Fellowship. Dartmouth.

2017 Graduate Assistance in Areas of National Need (GAANN) Fellowship. Dartmouth.

Cramer Research and Professional Development Funds. Dartmouth.

Honorable mention – Graduate Research Fellowship. National Science Foundation.

2016 Short Term Fellowship. Smithsonian Tropical Research Institute.

2015 Research Experience for Undergraduates (REU). Smithsonian Tropical Research Institute.

First place, Ossip Writing Award. For sensory ecology essay. University of Pittsburgh.

TEACHING & MENTORING

Courses

2019

- Conservation of Biodiversity – teaching assistant. Dartmouth College.
- 2018 Ecology – lab instructor. Dartmouth College.
- 2017 Physiology – lab instructor. Dartmouth College.
- 2015 Organic chemistry – lab co-instructor. University of Pittsburgh.

- 2020 Animal communication guest lecture. Dartmouth College.

PAST RESEARCH EXPERIENCE

- 2015-2016 Acoustic preferences and spatial biases in frog-eating bats
REU intern; Short-term fellow, Rachel Page lab. Smithsonian Tropical Research Institute.
 - Conducted flight cage experiments investigating how spatial information influences foraging behavior in predatory bats.

- 2015-2016 Color vision in jumping spiders
Research assistant, Nate Morehouse lab. University of Pittsburgh.
 - Projects included GIS mapping of field sites; spider identification and macrophotography; and improving spiderling survival rates in a lab colony.

- 2014-2015 Physiological and genetic variation in Arabidopsis populations
Research assistant, Steven Tonsor lab. University of Pittsburgh.
 - Helped grow, harvest, and extract DNA from hundreds of plants for SNP genotyping and next-generation sequencing.

- 2014 Classification of a shuvosaurid
Research assistant, Alan Turner lab. Stony Brook University.
 - Described fossils from and scored a phylogenetic matrix for a new specimen of a clade of Triassic crocodylians.

Field courses

- 2016 Ranomafana National Park, Madagascar
Stony Brook University field course
 - Included field methods for studying primates, comparing ecosystem types across Madagascar, and Malagasy language lessons.

- 2014 Laramie and Rock River, Wyoming
University of Pittsburgh Honors College field course
 - Included stream arthropod and sediment sampling, compass mapping, bird mist-netting and banding, plant identification, rock and soil classification, and paleontology.

OUTREACH

- 2019 Barro Colorado Island, Panama
 - Answered New Jersey primary school student questions about rainforests and insects via videochat for the “Rainforest Connection” program.

 - Top identifier of katydids in Panama on the community science network iNaturalist.
 Profile: [@greatest_auk](#)

- Hanover, N.H., U.S.A.
 - Created activities about insects and animal communication and presented them at Dartmouth College “Science Day,” an outreach, open-lab event for primary school children.

2018

Hubbard Brook, N.H., U.S.A.

- Wrote a public website feature about the bats species recorded at the Hubbard Brook Experimental Forest. URL: <http://multimedia.hubbardbrook.org/the-bats-of-hubbard-brook>

2016 Gamboa, Panama

- Led mist-netting demonstrations for field courses and at monthly community [Bat Nights](#).

2016 Pittsburgh, P.A., U.S.A.

- Created animal communication activities for Assemble!, a non-profit that hosts after-school workshops for Pittsburgh primary and secondary public school students.
- Designed a series of *Habronattus* jumping spider button pins for Morehouse Lab outreach at workshops & conferences.

2013 Cold Spring Harbor, N.Y., U.S.A.

- Updated and redesigned exhibits on local historical figures and cetacean evolutionary morphology for the Cold Spring Harbor Whaling Museum.

PROFESSIONAL ACTIVITIES

Journal reviewer

2018 Frontiers of Ecology & Evolution (1)

Current society membership

Entomological Society of America
Animal Behavior Society
Sigma Xi
Phi Beta Kappa

Workshop participant

- 2018 Responsible stewardship of academic environments: lessons in professional conduct at field sites. Dartmouth College, led by Dr. Katie Hinde and Dr. Robin Nelson.
- 2018 Sound Recording and Analysis Workshop. Cornell Lab of Ornithology, at San Francisco State University Sierra Nevada Field Campus. Training in wildlife field recording and sound analysis techniques using Raven Pro.
- 2018 Creating an inclusive learning environment. Dartmouth Center for the Advancement of Learning.
- 2017 TA training panel. Dartmouth Center for the Advancement of Learning.

SKILLS

Sound recording and analysis

Other technical skills

R (incl. tidyverse, ggplot2)	JMP Pro	Adobe Illustrator
R Markdown	L ^A T _E X	Adobe Photoshop

SOFTWARE:

Avisoft SASLab
Audacity
Raven
seewave (R package)

HARDWARE:

Avisoft ultrasonic equipment
Polytec Laser Doppler Vibrometer
Pettersen bat detectors
...& more!

Languages

English (native)
Spanish (conversational; ~CEFR B1)