

Anusha Shankar

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Professional Appointments

- Rose Postdoctoral Fellow, Lab of Ornithology (Supervisor: Dr. Irby Lovette)** 2020–2022
Transcriptomics of a sleep-torpor spectrum in hummingbirds.
Cornell University, Ithaca, USA.
- Postdoctoral Fellow, Institute of Arctic Biology (Supervisor: Dr. Cory Williams)** 2019–current
Seasonal Affective Disorder in diurnal Nile grass rats: behavior & neuroendocrinology.
University of Alaska Fairbanks, Alaska, USA.

Education

- PhD, Ecology and Evolution (Advisor: Dr. Catherine Graham)** 2012–2018
Co-adviser: [Donald R. Powers](#). "Field physiology to build hummingbird daily energy budgets: Hummingbirds are energetically flexible". Stony Brook University, New York, USA.
- M.Sc. Ecology and Environmental Sciences (Advisor: Dr. Priya Davidar)** 2009–11
First Class
"Malabar Pied Hornbill (*Anthracoceros coronatus*) nest site parameters in the highly fragmented Northern Western Ghats, India". Pondicherry University, Puducherry, India.
- B.Sc. Advanced Zoology and Biotechnology** 2006–09
First Class with Distinction
Stella Maris College, Chennai, India.

Publications and Manuscripts (Published N = 3; In Revision N = 2; In prep N = 2)

- Shankar A**[†], Schroeder RJ[†], Wethington SM, Graham CH, Powers DR. 2020. Hummingbird torpor in context: duration, more than temperature, is the key to nighttime energy savings. ([†]Equal authors). *Journal of Avian Biology*. Early View. DOI: 10.1111/jav.02305
- Shankar A**, Powers DR, Dávalos LM, Graham CH. 2020. The allometry of daily energy expenditure in hummingbirds: an energy budget approach. *Journal of Animal Ecology*. Early View. DOI: 10.1111/1365-2656.13185
- Shankar A**, Graham CH, Canepa JR, Wethington SM, Powers DR. 2019. Hummingbirds budget energy flexibly in response to changing resources. *Functional Ecology*. 3(10):1904-16. DOI: 10.1111/1365-2435.13404.
- Graham CH, Supp SR, Powers DR, Beck PA, Lim MCW, **Shankar A**, Cormier, T, Goetz S, and Wethington S. 2016. Winter conditions influence biological responses of migrating hummingbirds. *Ecosphere*. 7(10):e01470. DOI:10.1002/ecs2.1470.
- Shankar A**, Cisneros INH*, Thompson S*, Graham CH, Powers DR. Bird torpor, shallow and deep: A torpor spectrum in hummingbirds uncovered using thermal imaging. *Submitted: Ecology*. (*Student mentees)
- Eberts E*, Auger P, Curley M, Welch K, Tattersall G, **Shankar A**. Thermal imaging: Do nesting female hummingbirds use torpor? *In prep*. *Student mentee
- Shankar A**, McCahon S*, Callegari K*, Seitz TJ, Drown DM, Williams CT. SAD rats: Effects of short photoperiod on sleep disruption, the gut microbiome, and carbohydrate consumption in diurnal grass rats. *In prep* *Student mentees.
- Shankar A**, Williams CT. Diurnal rodent models for depression: A review. *In prep*: Invited Review for *Disease Models and Mechanisms*.

Selected Grants, Awards, and Honours (over \$35,000 raised)

- National Geographic Leadership and Development Program for Young Leaders.** 2017-18
- Best Teaching Assistant Award**, Department of Ecology and Evolution. Mar 2018
Stony Brook University
- David F. Ludwig travel scholarship, AEHS, \$1000.** Aug 2017
For fieldwork on shallow torpor in hummingbirds in Arizona.

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Experiment crowd-funded grant , Experiment.com , \$5026. (Together with Erich Eberts*, Dr. Peter Auger, Maria Curley, and Dr. Glenn Tattersall) To study nesting female hummingbirds' torpor use with thermal cameras. *Mentored student	Dec 2016
Lewis and Clark field scholarship grant , American Philosophical Society For field work on hummingbird physiological ecology, \$5000.	May 2016
Mildred and Herbert Weisinger dissertation fellowship , Stony Brook University . For dissertation research on hummingbird physiology and ecology, \$10,000.	Mar 2016
Tinker field research grant , Tinker Foundation. For field research in Ecuador, \$2300.	May 2014
National Geographic Society Young Explorer's Grant . For field research on hummingbird physiology and ecology, \$4997.	Mar 2014

Science Communication

Children's Book with Pratham Storyweaver Illustrated by Harjyot Khalsa. What do Sunbirds Eat All Day?	2020
Current Conservation Kids A day in the life of: Anusha Shankar, Vol 13, Issue 1. Humming with Energy	March 2019
Current Conservation Field notes, Vol 13, Issue 1. A city-girl field ecologist	March 2019
Video feature , Kim Michaels' hummingbird documentary Nature's single mom: A hummingbird nest story	Mar 2, 2019
Featured radio guest , National Geographic Kids' Weird But True radio show	Apr 27, 2018
National Audubon Society <i>Why Anusha Shankar doesn't mind being the 'Hummingbird Pee Person'</i> . By Jayme Moyer. Also feat. on Stony Brook News	Apr 2, 2018
Explorer-Educator partnership through National Geographic: Two year-long partnerships with Kate Craven at a school in Ashford, Connecticut, grades 1-7. And with Steve Kirsche at a school near Jacksonville, Florida, grade 6, to talk science.	2017-2019
Co-founder and contributor: Science Outside , For field scientists to share their crazy, silly, fun stories with the world.	2017-current
Co-founder and contributor: BrainChem & Ecology in collaboration with a Chemical Neurobiologist, to illustrate scientific concepts in simple graphics and videos for the public.	2017-current
"Today I Learned" series for National Geographic <i>Hummingbirds Are the World's Hungriest Birds</i> . YouTube .	Oct 22, 2016

Selected Talks (N = 44)

TEDx Chennai , India. <i>What can hummingbirds teach us about time management?</i>	2019
IISER Tirupati , India. <i>Field physiology and energetics: linking ecology and evolution in free-living hummingbirds.</i>	2019
American Physiological Society: Comparative Physiology , New Orleans, LA. Talk, <i>Hummingbird daily energy expenditure allometry: Is bigger better?</i>	2018
Max Planck Institute for Ornithology , Radolfzell, Germany. <i>Day and night: energy balance in hummingbirds.</i>	2018
National Geographic Explorer's Festival , Washington D.C. <i>Hummingbirds and Tequila.</i>	2018
Explorer classroom through National Geographic: Live Youtube hangout with seven school classrooms reaching over a 1000 students live.	2018

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- Society for Integrative and Comparative Biology**, San Francisco, CA. 2018
Talk and session co-chair, *From shallow to deep: A torpor spectrum in hummingbirds.*
- North American Ornithological Conference**, Washington D.C. 2016
Talk, *Hypothermic hummingbirds - an energy management story.*
- School of Biology, Universidad del Azuay, Cuenca, Ecuador.** *Colibríes hipotérmicos y su presupuesto energético* (Spanish for: *Hypothermic hummingbirds and their energy budgets*) 2016
- Gordon Research Seminar: Unifying ecology across scales**, University of New England, Maine. *Field physiology: A key component in forecasting species distributions.* 2014

Teaching Assistantships at Stony Brook (N semesters = 9; N students ≈ 570)

Courses taught: Conservation Biology (Active learning lecture, 3 semesters); Ecology Lab (Field lab, 1 semester); Chordate Zoology (Lecture and Lab, 4 semesters); Fundamentals of Scientific Inquiry in the Biological Sciences I (Lab, 1 semester)

Students mentored (N = 17)

- Meret Beutler**, Lab assistant, Univ of Alaska, Fairbanks. Oct 2019 - current
- Shelby McCahon**, Lab assistant & BLAST scholar, Univ of Alaska, Fairbanks. Feb 2019 - current
- Kyle Callegari**, Lab assistant & BLAST scholar, Univ of Alaska, Fairbanks. Feb 2019 - current
- Erich Eberts**, Field assistant, now: PhD student, Univ Toronto at Scarborough. Dec 2015 - current
- Rebecca Schroeder**, Field assistant, now in the US National Park Service. Jun 2014 - 2017
- Sarah Thompson**, Undergraduate student, George Fox University. Jun - Aug 2018
- Alexis Stark**, Undergraduate student, Northern Arizona University. May - Jun 2018
- Isabelle Cisneros**, Undergraduate student, George Fox University. Jun - Aug 2017
- Ana Morales**, Head field assistant, now: M.Sc. at McGill University, Canada. Oct 2015 - Oct 2016
- Gabriela Cordova**, Universidad del Azuay, Internship & Bachelor's thesis. Aug 2015 - Oct 2016
- Gabriela Urgiles**, Universidad del Azuay, Internship & Bachelor's thesis. Nov 2015 - Oct 2016
- Rosalee Elting**, Field assistant, George Fox University. Sept - Oct 2016
- Julisa Ricart**, Field assistant, University of Wisconsin-Madison. Jul 2015 - Jan 2016
- Amanda Quezada**, Universidad del Azuay, Pasantias (internship) project. Aug - Sept 2015
- Joshua van Bourg**, Field assistant, University of California Berkeley. Sept - Dec 2015
- Pedro Jose Machado Tapia**, Field assistant, Universidad del Azuay. Jun - Sept 2015
- Joseph Canepa**, Undergraduate student, George Fox University. Jun - Aug 2014

Other Skills

LaTeX, GPS, ArcGIS, qGIS, GitHub /nushiamme, small mammal lab maintenance, Radio-telemetry of snakes, photography; handling people, birds, arachnids and reptiles; science communication, mentoring, active learning methods. CPR (and AED) certified (May 2017).

Languages: British and American English, Tamil, Hindi, conversational Spanish, some Malayalam; Also, the skill and interest to learn new skills and languages quickly.