

Anusha Shankar

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Education

PhD candidate, Ecology and Evolution (Advisor: Dr. Catherine Graham)	2012–Present
Preliminary title: "Field-based physiological ecology: A key component in forecasting species distributions". Stony Brook University, New York.	
M.Sc. Ecology and Environmental Sciences (Advisor: Dr. Priya Davidar)	2009–11
"Malabar Pied Hornbill (<i>Anthracoceros coronatus</i>) nest site parameters in the highly fragmented Northern Western Ghats, India". Pondicherry University, Puducherry, India.	
B.Sc. Advanced Zoology and Biotechnology	2006–09
Stella Maris College, Chennai, India.	

Publications and Manuscripts

Shankar A* , Schroeder RJ*, Wethington SM, Graham CH, Powers DR. Torpid hummingbirds: energy savings in temperate and tropical sites. (In Revision, * Equal first authors)
Graham CH, Supp SR, Powers DR, Beck PA, Lim MCW, Shankar A , Cormier, T, Goetz S, and Wethington S. Winter conditions influence biological responses of migrating hummingbirds. <i>Ecosphere</i> . 7(10): e01470. 10.1002/ecs2.1470
Aguilar JMA, Shankar A , Nieto, AV, Tinoco BA. Year-round occurrences of birds in the Southwestern high Andes of Ecuador. <i>Cotinga</i> . (In Review).
Shankar A , Graham CH, Canepa JR, Wethington SM, Powers DR. Activity has largest effect on daily energy expenditure in a sub-tropical hummingbird. <i>In advanced prep</i>

Grants and Hono(u)rs

David F. Ludwig travel scholarship , AEHS, Aug 2017. For fieldwork on shallow torpor in hummingbirds in Arizona.	\$1000
Distinguished Travel Award , Graduate Student Organization, Stony Brook University, Aug 2017. To attend International Union of Physiological Sciences Meeting.	\$1500
SICB broadening participation travel award , Jan 2017. To attend Society for Integrative and Comparative Biology (SICB) Annual Meeting.	\$489
Experiment crowd-funded grant , Experiment.com, Dec 2016. (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	\$5000
Lewis and Clark field scholarship grant , American Philosophical Society, May 2016. For field work on hummingbird physiological ecology.	\$5000
Midred and Herbert Weisinger dissertation fellowship , Stony Brook University, Mar 2016. For dissertation research on hummingbird physiology and ecology.	\$10,000
Lawrence B. Slobodkin award for Research in Ecology, Feb 2016.	\$750
Departmental unrestricted research grant , Stony Brook University, Mar 2015.	\$750
Tinker field research grant , Tinker Foundation, May 2014. For research in the field in Latin America.	\$2300
National Geographic Society young explorer's grant , Mar 2014. For field research on hummingbird physiology and ecology.	\$4997
Departmental research excellence award , Stony Brook University, Mar 2014.	\$1000
Resource access project award (RAP) , Graduate Student Organization, Stony Brook University, Jan 2013. To attend International Biogeography Society conference.	\$350
Lawrence B. Slobodkin award for Research in Ecology, March 2013.	\$900

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Awards

- National Geographic Leadership and Development Program** for Young Explorers. 2017-18
1 of 15 international grantees selected for this year-long program.
- Charlotte Magnum student support award** for housing costs at the 2017, 2018
Society for Integrative and Comparative Biology (SICB) Meeting.
- Cedar Brook award** for best talk at the Ecology and Evolution departmental Feb 2016
retreat, Stony Brook University.
- National Science Foundation mentoring program** for Young Scientists Jul 2014
(Travel and registration award for GRC 2014: "Unifying Ecology across Scales").

Research Experience

- Visiting Researcher, George Fox University, Oregon** 2018
Analyses and paper writing with Dr. Don Powers, for 1 month
- Visiting Scientist, WSL, Switzerland** 2017
Swiss Federal Institute for Forest, Snow and Landscape, for 2 months
- Field Dissertation Research (12 months), Ecuador** 2015
Led a team of 11 field assistants for 12 months over 4 years to study hummingbird physiology and ecology.
- Research Assistant, NASA hummingbird diversity grant, Stony Brook University, NY.** 2013
Compiled data and performed preliminary data analyses (in R), generated maps for publication, suggested improvements to methods of data collection and storage.
- Field Technician, Shola evolution project, NCBS Bangalore.** 2012
Mist-netted, collected blood samples, made morphological measurements, extracted DNA and carried out PCR for high elevation bird species.
- Summer Research Fellow, Indian Academy of Sciences, Bangalore.** 2010
Carried out preliminary observational studies on the vertebrate visitors to *Ficus benghalensis* (Banyan), and Lepidopteran visitors of the invasive *Lantana camara*.
- Volunteer, King Cobra Telemetry Project, Agumbe Rainforest Research Station, Karnataka.** 2010
Streamlined data entry, tracked king cobras, set up pitfall traps, did some organic farming.
- Volunteer, Wildlife Trust of India, at Kaziranga, Assam, India.** 2008
Tracked and studied the behavior of a Hoolock gibbon (*Hoolock hoolock*) being rehabilitated into the wild.

Science Communication

- Co-founder** and contributor: [Science Outside](#), 2017-current
For field scientists to share their crazy, silly, fun stories with the world
- 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
- Shankar Anusha**, Voiceover for National Geographic Learning *Panorama* 2017
Video for Grade 1 "How do animals use their body parts?"
- Shankar Anusha**, *Hummingbirds Are the World's Hungriest Birds*. October 22, 2016
National Geographic "Today I Learned" series. [YouTube](#).
- Shankar Anusha**, *Youth for Tigers*. The Hindu NxG January 5, 2011

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In the news

- Sharma, Pooja. [Dainik Bhaskar](#) (in Hindi) December 6, 2014
- Parthasarathy, Anusha. *On the Wild Side*. The Hindu Education Plus October 6, 2014

Talks and posters

Invited talks

- National Geographic Family Day 2018** | Why Birds Matter 2018
Washington D.C. *The secret nightlife of hummingbirds.*
- Nat Geo Nights | Bird Nerd: For the Birds** 2018
Washington D.C. *The secret nightlife of hummingbirds.*
- Virtual speaker:** Comparative animal physiology class, Pontificia Universidad 2017
Javeriana, Cali, Colombia. *Hummingbird energy management, and a career in Ecology.*
- Chief Guest, Valedictory speech:** Stella Maris College, Zoology Culturals 'Synapse', 2017
Chennai, India. *Turning failures into successes in a Zoology career.*
- School of Biology, Universidad del Azuay, Cuenca, Ecuador.** *Colibríes hipotérmicos* 2016
y su presupuesto energético (Spanish for: *Hypothermic hummingbirds and their energy budgets*)
- Ecology Students' Society, Indian Institute of Science,** Bengaluru, India. 2016
Hypothermic hummingbirds: an energy management story.
- National Centre for Biological Sciences,** Bengaluru, India. 2016
Hypothermic hummingbirds: an energy management story.
- Guest lecture:** Chordate Zoology lecture, Stony Brook University. *The Biology of Birds.* 2015
- Gordon Research Seminar: Unifying ecology across scales,** University of New 2014
England, Maine. *Field physiology: A key component in forecasting species distributions.*
- To high-school & undergraduate students:** at Bala Vidya Mandir Senior Secondary 2010-12
School; Department of Zoology, Stella Maris College; and at Science Sense, Chennai.

Conference Talks and Posters

- Society for Integrative and Comparative Biology,** San Francisco, CA. 2018
Talk and session co-chair, *From shallow to deep: A torpor spectrum in hummingbirds*
- SBU Natural History Club** Talk - I Know What You Did Last Summer 2017
Stony Brook, NY. *The secret nightlife of hummingbirds.*
- International Union for Physiological Sciences.** Rio de Janeiro, Brazil. Poster, 2017
Activity has largest effect on daily energy expenditure in a sub-tropical hummingbird.
- Society for Integrative and Comparative Biology,** New Orleans, LA. 2017
Talk, *Energy budgeting in a temperate hummingbird.*
- National Geographic, Washington D.C.** Talk, *Hummingbird energy management!* 2016
- North American Ornithological Conference,** Washington D.C. 2016
Talk, *Hypothermic hummingbirds - an energy management story.*
- Reunión Ecuatoriana de Ornithología, Zamora, Ecuador.** Poster, Córdova G*, 2016
Urgilés G*, Tinoco BA, **Shankar A.** *Ahorro energético nocturno en cuatro especies de colibríes en los Andes del austro Ecuatoriano.* (Spanish for: *Nocturnal energy savings in four hummingbird species of the southern Ecuatorian Andes*)

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- Reunión Ecuatoriana de Ornithología, Zamora, Ecuador.** Poster, Morales AC *, 2016
Shankar A, Graham CH, Powers DR. *Costos de termorregulación de Heliangelus viola en los Andes sur del Ecuador* (Spanish for: *Thermoregulatory costs of Heliangelus viola in the Andes in the south of Ecuador*)
- Gordon Research Conference: Unifying ecology across scales.** University of New 2014
England, Maine. Poster, *Field physiology: A key component in forecasting species distributions*
- International Biogeography Society. International Biogeography Society** 2013
6th Biennial Meeting, *Frontiers of biogeography* 4:1, p. 174. **Shankar A.** et al.
Poster, *The Malabar Pied Hornbill (Anthracoceros coronatus) nests near human habitations in highly fragmented landscapes in the Northern Western Ghats, India.*
- Students Conference for Conservation Science (SCCS), Bangalore.** 2011
Talk, *Malabar Pied Hornbills nest in fragmented habitats in the Western ghats*

* Mentored students, Poster presenters

Teaching

- Teaching Assistant, **Conservation Biology** (BIO 336), SBU (Active learning). Fall 2016, 2017
- Head Teaching Assistant, **Chordate Zoology** (BIO 344), SBU. Spring 2015, 2016
- Teaching Assistant, **Ecology Lab** (BIO 352), SBU. Fall 2014
- Teaching Assistant, **Chordate Zoology Lab** (BIO 344), SBU. Spring 2013, 2014, 2016
- Teaching Assistant, **Fundamentals of Scientific Inquiry in the Biological Sciences I** (BIO 204), SBU. Fall 2012

Additional Experience

- Workshop**, Functional Ecology Genomics, Lacawac Sanctuary, Philadelphia. 2017
- Volunteer**, International Biogeography Society 6th Biennial Meeting, Miami, FL. 2013
- Workshop** on rescue and relocation of snakes conducted by Gowri Shankar of the 2012
Agumbe Rainforest Research Station and Snake Shyam, Mysore, India.
- Workshop** on basic remote sensing and GIS with a focus on conservation planning, 2012
conducted by FERAL, supported by an ATREE-CEPF small grant.
- Workshop** on wetland bird survey and mark-recapture, by Bombay Natural History 2011
Society at Point Calimere, India.
- India's Youth Tiger Ambassador**, one of two selected by WWF-India to represent 2010
the country at the Youth Tiger Summit held in Vladivostok, Russia.
- Volunteer** for one year at the Madras Crocodile Bank, Chennai, India. 2008-2009
Young reptiles center, public education and outreach.

Students mentored

- Isabelle Cisneros**, Undergraduate student, George Fox University. Jun - Aug 2017
- Ana Morales**, Head field assistant, 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

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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
Erich Eberts , Field assistant, Loyola Marymount Univeristy.	Dec 2015 - Jan 2016
Pedro Jose Machado Tapia , Field assistant, Universidad del Azuay.	Jun - Sept 2015
Rebecca Schroeder , Undergraduate student, George Fox University.	Jun 2015 - Aug 2014
Joseph Canepa , Undergraduate student, George Fox University.	Jun 2015 - Aug 2014

Skills

Coding in R; LaTeX, GPS, ArcGIS, qGIS, GitHub /nushiamme, Mist-netting, bird morphology measurements, DNA extraction, PCR, doubly-labeled water (DLW) method, open-flow respirometry, stable isotope micro-distillation, Radio-telemetry of snakes, photography; handling people, birds, arachnids and reptiles. CPR (and AED) certified (May 2017).

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

Professional Service

Member - Madras Naturalists Society, American Ornithologists' Union, Society for Integrative and Comparative Biology, American Association for University Women, American Physiological Society.

Reviewer- Ecology and Evolution, International Journal of Biometeorology; [Publons profile](#)

Reviewer, Distinguished Travel Award committee, Graduate Student Organization, 2017
Stony Brook University

Founder, Departmental mentoring program for & by graduate students, 2016-18
Stony Brook University

Founder, cross-departmental Silent Writing group, Stony Brook University 2017

Vice President, Graduate Women in Science and Engineering (GWISE), 2017-18
Stony Brook University

Mentor, The New York Academy of Sciences' (NYAS) Next Scholar Program 2017

Judge, 5th Annual Nassau County Science Competition 2017

Event manager and Newsletter writer, GWISE, 2016-17
Stony Brook University

Student representative to the Faculty, Ecology & Evolution, Stony Brook University 2016-17

Participant in Grads for Education and Outreach (GEO) - to teach science concepts to 5th graders 2016

Treasurer of the Ecology Club, Stony Brook University 2013-14

Departmental representative to the RA union Stony Brook University 2013-14

Senator, Graduate Student Organization, Stony Brook University 2013-15

Executive Officer, Freewheel Collective (helping students learn how to repair their own bicycles), Stony Brook University 2014-18

Co-administrator of Facebook group Youth Environment Options, India to mentor young environmentalists and ecologists 2013-15