

# 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 (*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**

Stella Maris College, Chennai, India.

## Publications and Manuscripts

**Shankar A\***, Schroeder RJ\*, Wethington SM, Graham CH, Powers DR. Hypothermic hummingbirds: energy savings in temperate and tropical sites. *Proc. Roy. Soc. B* (In Review, \* 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. *Ecosphere*. 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. *Cotinga*. (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. *In advanced prep*

## Grants and Hono(u)rs

**Distinguished Travel Award**, Graduate Student Organization, Stony Brook University to attend International Union of Physiological Sciences Meeting, Aug 2017. \$1500

**SICB broadening participation travel award** to attend Society for Integrative and Comparative Biology (SICB) Annual Meeting, Jan 2017. \$489

**Experiment crowd-funded grant**, Experiment.com, December 2016. \$5000  
(Together with Erich Eberts\*, Dr. Peter Auger, Maria Curley, and Dr. Glenn Tattersall.)  
To study nesting female hummingbirds' torpor use with thermal cameras.

**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**, March 2016. \$10,000  
For dissertation research on hummingbird physiology and ecology.

**Lawrence B. Slobodkin award** for Research in Ecology, February 2016. \$750

**Departmental unrestricted research grant**, Stony Brook University, March 2015. \$750

**Tinker field research grant**, Tinker Foundation, May 2014. For research in the field in Latin America \$2300

**National Geographic young explorer's grant**, March 2014. For field research on hummingbird physiology and ecology. \$4997

**Departmental research excellence award**, Stony Brook University, March 2014. \$1000

**Resource access project award (RAP)**, Graduate Student Organization, Stony Brook University for conference attendance, to attend IBS 2013. \$350

**Lawrence B. Slobodkin award** for Research in Ecology, March 2013. \$900

\* Mentored student

## Awards

**Charlotte Magnum student support award** for housing costs at the Society for Integrative and Comparative Biology (SICB) Meeting. Jan 2017

**Cedar Brook award** for best talk at the Ecology and Evolution departmental retreat, Stony Brook University. Feb 2016

**National Science Foundation mentoring program** for Young Scientists (Travel and registration award for GRC 2014: "Unifying Ecology across Scales"). Jul 2014

## Research Experience

**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 Assistant, NASA hummingbird diversity grant, Patagonia, AZ.** 2013  
Performed physiological and morphological measurements on hummingbirds.

**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.

## Teaching

Teaching Assistant, **Conservation Biology** (BIO 336), SBU. 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

## Talks and Posters

- Poster:** International Union for Physiological Sciences. Rio de Janeiro, Brazil. 2017  
*Activity has largest effect on daily energy expenditure in a sub-tropical hummingbird.*
- Invited virtual speaker:** Comparative animal physiology class, Pontificia Universidad Javeriana, Cali, Colombia. Hummingbird energy management, and a career in Ecology. 2017
- Chief Guest, Valedictory speech:** Stella Maris College, Zoology Cultural's 'Synapse', Chennai, India. *Turning failures into successes in a Zoology career.* 2017
- Oral presentation:** Society for Integrative and Comparative Biology, New Orleans, LA. 2017  
*Energy budgeting in a temperate hummingbird.*
- Oral presentation:** National Geographic, Washington D.C. 2016  
*Hummingbird energy management!*
- Oral presentation:** North American Ornithological Conference, Washington D.C. 2016  
*Hypothermic hummingbirds - an energy management story.*
- Poster:** Reunión Ecuatoriana de Ornithología, Zamora, Ecuador. 2016  
Córdova G\*, 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*)
- Poster:** Reunión Ecuatoriana de Ornithología, Zamora, Ecuador. 2016  
Morales AC \*, **Shankar A**, Graham CH, Powers DR. *Costos de termorregulación de Helianthus viola en los Andes sur del Ecuador* (Spanish for: *Thermoregulatory costs of Helianthus viola in the Andes in the south of Ecuador*)
- Invited speaker:** School of Biology, Universidad del Azuay, Cuenca, Ecuador. 2016  
*Colibríes hipotérmicos y su presupuesto energético* (Spanish for: *Hypothermic hummingbirds and their energy budgets*)
- Invited speaker:** Ecology Students' Society, Indian Institute of Science, Bengaluru, India. 2016  
*Hypothermic hummingbirds: an energy management story.*
- Informal talk:** 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
- Invited speaker:** Gordon Research Seminar: Unifying ecology across scales, University of New England, Maine. *Field physiology: A key component in forecasting species distributions.* 2014
- Poster:** Gordon Research Conference: Unifying ecology across scales. University of New England, Maine. *Field physiology: A key component in forecasting species distributions* 2014
- Poster:** International Biogeography Society. International Biogeography Society 6th Biennial Meeting, *Frontiers of biogeography* 4:1, p. 174. A. Shankar, A.L. Rosenthal, J-P Puyravaud, J. Sarnaik, A. Godbole, & P. Davidar. *The Malabar Pied Hornbill (Anthracoceros coronatus) nests near human habitations in highly fragmented landscapes in the Northern Western Ghats, India.* 2013
- Oral Presentation:** Students Conference for Conservation Science (SCCS), Bangalore. 2011
- Invited speaker:** at Bala Vidya Mandir Senior Secondary School; Department of Zoology, Stella Maris College; and at Science Sense, Chennai. 2010-12

\* Mentored students, Poster presenters

## In the News/Media

SHANKAR A. <i>Hummingbirds Are the World's Hungriest Birds</i> . National Geographic "Today I Learned" series. <a href="#">YouTube</a> .	October 22, 2016
Sharma, Pooja. <a href="#">Dainik Bhaskar</a> (in Hindi)	December 6, 2014
Parthasarathy, Anusha. <i>On the Wild Side</i> . The Hindu Education Plus	October 6, 2014
SHANKAR Anusha. <i>Youth for Tigers</i> . The Hindu NxG	January 5, 2011

## Additional Experience

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

## Students mentored

<b>Ana Morales</b> , Head field assistant, McGill University, Canada.	Oct. 2015 - Oct. 2016
<b>Gabriela Cordova</b> , Universidad del Azuay, Internship & Bachelor's thesis.	Aug. 2015 - Oct. 2016
<b>Gabriela Urgiles</b> , Universidad del Azuay, Internship & Bachelor's thesis.	Nov. 2015 - Oct. 2016
<b>Rosalee Elting</b> , Field assistant, George Fox University.	Sept. - Oct. 2016
<b>Julisa Ricart</b> , Field assistant, University of Wisconsin-Madison.	Jul. 2015 - Jan. 2016
<b>Amanda Quezada</b> , Universidad del Azuay, Pasantias (internship) project.	Aug. - Sept. 2015
<b>Joshua van Bourg</b> , Field assistant, University of California Berkeley.	Sept. - Dec. 2015
<b>Erich Eberts</b> , Field assistant, Loyola Marymount University.	Dec. 2015 - Jan. 2016
<b>Pedro Jose Machado Tapia</b> , Field assistant, Universidad del Azuay.	Jun. - Sept. 2015
<b>Rebecca Schroeder</b> , Field assistant, George Fox University.	Jun. 2015 - Aug. 2014
<b>Joseph Canepa</b> , Field assistant, 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.

Languages: English, Tamil, conversational Spanish, some Malayalam, Hindi, French and 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.

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

Co-founder and contributor: 'BrainChem & Ecology' - a Facebook page in collaboration with a Chemical Neurobiologist, where we publish scientific concepts in simple graphics and videos for the public

Mentor, The New York Academy of Sciences' (NYAS) Next Scholar Program	2017
Vice President, Graduate Women in Science and Engineering (GWISE), Stony Brook University	2017-18
Eboard member, Event manager and Newsletter writer, GWISE, Stony Brook University	2016-17
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
RA Union departmental representative 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	2014-17
Co-administrator of Facebook group Youth Environment Options, India to mentor young environmentalists and ecologists	2013-15