

Vijay Ramesh (he/him)

K. Lisa Yang Center for Conservation Bioacoustics
Lab of Ornithology
Cornell University
Ithaca, NY 14850

vr292@cornell.edu
<http://evolecol.weebly.com>

PROFESSIONAL APPOINTMENTS:

Rose Postdoctoral Fellow, Cornell University	2022 - 2025
Dean's Fellow, Columbia University	2017 - 2022
Spatial and Computational Ecologist, Cary Institute of Ecosystem Studies	2016 - 2017
Research Assistant, Indian Institute of Science	2013 - 2014

EDUCATION:

PhD Columbia University, Dept. of Ecology, Evolution and Environmental Biology Advisor(s): Prof. Ruth DeFries and Prof. Don J Melnick	2017 - 2022
MA Columbia University, Dept. of Ecology, Evolution and Environmental Biology Advisor: Prof. Don J Melnick	2014 - 2016
BTech Rashtreeya Vidyalyaya College of Engineering, Dept. of Biotechnology Advisor(s): Dr. Kartik Shanker, Dr. S P Vijayakumar	2009 - 2013

PUBLICATIONS:

[Google Scholar](#) | equal authorship^{EA}; senior authorship^S | mentees: graduate^G; undergraduate^U

Nearing completion:

15. **Ramesh, Vijay**, Srivathsa, Meghana, Hariharan, Priyanka, Symes, Laurel. Current stage: *Analysis*. Diurnal variation in avian vocal activity across a gradient of forest regeneration. Target journal: *Philosophical Transactions of the Royal Society (Special Issue on Passive Acoustic Monitoring)*
14. **Ramesh, Vijay**, Hariharan, Priyanka, Robin, VV, Symes, Laurel. Current stage: *Writing*. Abundance is highly correlated with vocal activity across a community of tropical birds. Target journal: *Proceedings of the Royal Society*
13. **Ramesh, Vijay**, Akshay, VA^G, Chandrasekar, S, Gupte, Pratik Rajan, Rajan, Amrutha^G, Mohan, Ashwini V, Mohanraj, S, Robin, VV, Tingley, Morgan W, DeFries, Ruth S. Current stage: *Writing*. Historical resurveys of birds reveal range shifts along a tropical montane gradient in the Western Ghats. Target journal: *Proceedings of the National Academy of Sciences*.

Peer-reviewed manuscripts:

12. Menon, Tarun, **Ramesh, Vijay**, Barve, Sahas. Himalayan birds that show the greatest elevational shifts remain within the narrowest thermal regimes. 2023. *Global Ecology and Biogeography*.
11. Sethi, Sarab S., Bick, Avery, Ewers, Robert M., Klinck, Holger, **Ramesh, Vijay**, Tuanmu, Mao-Ning, Coomes, David A. 2023. Is there an accurate and generalisable way to use soundscapes to monitor biodiversity? *Nature Ecology and Evolution*.

10. **Ramesh, Vijay**, Hariharan, Priyanka, Akshay, VA^G, Choksi, Pooja, Khanwilkar, Sarika, DeFries, Ruth S, Robin, VV. 2023. Using passive acoustic monitoring to examine the impacts of ecological restoration on faunal biodiversity in the Western Ghats. *Biological Conservation*. Media coverage: [Nature India](#), [Documentary](#)
9. Choksi, Pooja, Kotian, Mayuri, Biniwale, Siddarth, Mourya, Pravara, Korche, Devendra, Agarwala, Meghna, Khanwilkar, Sarika, **Ramesh, Vijay**, DeFries, Ruth. 2022. Listening for Change: Quantifying the Impact of Ecological Restoration on Soundscapes in a Tropical Dry Forest. *Restoration Ecology*. Media coverage: [Columbia Climate School](#), [DownToEarth](#)
8. **Ramesh, Vijay**, Gupte, Pratik R., Robin, VV, Tingley, Morgan W., DeFries, Ruth S. 2022. Using citizen science to parse climatic and landcover influences on bird occupancy within a tropical biodiversity hotspot. *Ecography*. Media coverage: [Deccan Herald](#)
7. Shetty, Sarthak J.^U, **Ramesh, Vijay**^S. 2021. pyResearchInsights - An open-source Python package for scientific text analysis. *Ecology and Evolution*.
6. Barve, Sahas, **Ramesh, Vijay**, Dotterer, Toni M., Dove, Carla J. 2021. Elevation and body size drive convergent variation in thermo-insulative feather structure of Himalayan birds. *Ecography*. Media coverage: [BBC News](#), [BBC Global News podcast](#), [NPR News Now podcast \(02/15 9pm\)](#), [Smithsonian Magazine](#).
5. **Ramesh, Vijay**, Vijayakumar, SP, Gopalakrishna, Trisha, Jayarajan, Aditi, Shanker, Kartik. 2020. Determining levels of cryptic diversity within the endemic frog genera, Indirana and Walkerana, of the Western Ghats, India. *PLOS ONE*. Media coverage: [Research Matters](#)
4. Dinesh, KP, Vijayakumar, SP, **Ramesh, Vijay**, Jayarajan, Aditi, Chandramouli, SR, Shanker, Kartik. 2020. A deeply divergent lineage of Walkerana (Anura: Ranixalidae) from the Western Ghats of Peninsular India. *Zootaxa*. 4729 (2), 266-276. Media coverage: [Mongabay](#), [Deccan Herald](#).
3. Hager, Ann Marie, Larson, James, Ugbah, Nene Kumashe, **Ramesh, Vijay**^S. Oil Extraction in the Ecuadorian Amazon: Incorporating Conflict Resolution Theory and Practice. *Conflict Resolution Quarterly*. DOI: 10.1002/crq.21205
2. **Ramesh, Vijay**, Gopalakrishna, Trisha, Barve, Sahas, Melnick, Don J. Finer spatial resolution improves accuracy of species distribution models in heterogeneous landscapes - A response to Praveen J. *Biological Conservation*, 213A (2017): 247-248.
1. **Ramesh, Vijay**, Gopalakrishna, Trisha, Barve, Sahas, Melnick, Don J. IUCN greatly underestimates threat levels of endemic birds in the Western Ghats, *Biological Conservation*, 210 (2017): 205-221. Media coverage: [Mongabay](#), [FactorDaily](#), [EurekAlert](#), [EarthWise](#), [ScienMag](#), [Phys.Org](#), [The Hindu](#), [Columbia NewsRoom](#), [ScienceDaily](#), [HindustanTimes](#), [Indian Express](#), [Bangalore Mirror](#), [El Pais](#), [Times of India](#).

Popular science articles:

4. Hari Haran, Priyanka and **Ramesh, Vijay**. [Remembering the Magic of Natural History Museums - and Why We Need Them](#). *The Wire*. 2020.
3. **Ramesh, Vijay**, Rajan Gupte, Pratik, Mary Paul, Mridula. [Analysing India's Environmental Governance](#). *Sanctuary Asia*. 2020.
2. Hari Haran, Priyanka and **Ramesh, Vijay**. [Listen closely: Using bioacoustics in wildlife conservation](#). *Mongabay India*. 2020
1. Melnick, Don J and **Ramesh, Vijay**. [When it comes to the IUCN Red List, accuracy is the order of the day \(commentary\)](#). *Mongabay*. 2017

GRANTS, AWARDS, AND FELLOWSHIPS:

Grants:

National Geographic Society Meridian Grant (\$24,678)(co-PI)	2022
Microsoft Azure Compute Grant (\$5,000) (co-PI)	2021
Echo Pictures (\$3,250)	2021
National Geographic Society Supplemental Grant (\$4,772)	2021
National Geographic Society Exploration Grant (\$20,000) (co-PI)	2021
Explorers Club Mamont Scholar Grant (\$4928)	2020
Conservify Weather Station Grant	2020
Lewis and Clark Fund for Exploration and Field Research (\$4900)	2020
National Geographic Society Early Career Grant (\$9721)	2020
Center for Science and Society Seed Grant (\$3500)	2020
Rufford Foundation Small Grant (£5099)	2019
Earth Institute Travel Grant (\$2000)	2019
National Geographic Society Early Career Grant (\$9500) (co-PI)	2019
Travel Grant, Arts & Sciences Graduate Student Council (\$600)	2018
E3B Exploratory Research Grant (\$3000)	2018
North American Ornithological Congress Travel Grant (<i>declined</i>) (\$200)	2016
Society for Systematic Biologists Software School and Symposium Travel Grant (\$500)	2015
Society of Systematic Biologists Standalone Meeting Travel Grant (\$1000)	2015
Columbia University Summer Research Grant (\$1500)	2015
IDEA Wild Equipment Grant (\$1200)	2015

Awards and accolades:

Best Talk for use of Quantitative Methods in Conservation Research, SCCS	2017
Real Brown Travel Award, Ecological Society of America (<i>declined</i>)	2017
Masters SynThesis Competition, Columbia University, 2nd Runner-Up	2016
Best Speed Talk award, SCCS	2015
Mewaldt-King Student Research Award, Cooper Ornithological Society	2015
AOU Student Membership Award	2015

Fellowships:

Rose Postdoctoral Fellowship, Cornell Lab of Ornithology (\$168,000)	2022-2025
AC4 Graduate Student Research Fellowship, Earth Institute (\$6000)	2019
Dean's Fellowship, Columbia University (\$82,078)	2017-2022
AC4 Graduate Student Research Fellowship, Earth Institute (\$2000)	2016
Summer Research Fellow, Jawaharlal Nehru Centre for Advanced Scientific Research	2012

PRESENTATIONS:

Invited talks and seminars:

Webinar, <i>Ecological Restoration Alliance - India</i> , Virtual.	2024
Panelist, <i>National Geographic Society Workshop</i> , Coimbatore, IN.	2023
Ornithology Seminar, <i>Cornell University</i> , Ithaca, NY.	2022
Seminar, <i>Ears to the ground</i> . Mumbai, IN. Virtual.	2022
Guest lecture, <i>National Centre for Biological Sciences</i> . Bangalore, IN. Virtual.	2022
Seminar, <i>Indian Institute of Science Education and Research</i> . Tirupati, IN.	2022
Conservation Bioacoustics talk, <i>Cornell University</i> . Ithaca, NY. Virtual	2021

Seminar, <i>University of Florida</i> . Gainesville, FL. Virtual.	2021
World Forests Day Seminar, <i>Kalinga Centre for Rainforest Ecology</i> . Virtual.	2021
Seminar, <i>International Centre for Theoretical Sciences</i> . Bangalore, IN.	2021
Panel, National Geographic Explorers Festival (<i>declined</i>)	2021
Student Seminar, <i>Kalinga Centre for Rainforest Ecology</i> . Virtual.	2020
Lunch Seminar, <i>Linnean Society of London</i> . Virtual.	2020
Conservation Genetics Seminar, <i>Columbia University</i> . New York, NY.	2019
Seminar, <i>Keystone Foundation</i> . Kotagiri, IN.	2018
Seminar, <i>Indian Institute of Science</i> . Bangalore, IN.	2018
Seminar, <i>Indian Institute of Science Education and Research</i> . Tirupati, IN.	2018
Lunch Seminar, <i>Cary Institute of Ecosystem Studies</i> . Millbrook, NY.	2017

Contributed symposia (lead organizer):

Mini symposia on ' Studying birds using passive acoustic monitoring '	2023
Bird Monitoring in India symposium (9 oral presentations and 1 keynote). Virtual.	
Symposium on ' Conservation bioacoustics '	2023
Association for Tropical Biology and Conservation (8 oral presentations). Coimbatore, IN.	

Contributed talks:

Association for Tropical Biology and Conservation, Coimbatore, India. (2 talks)	2023
Association for Tropical Biology and Conservation, Cartagena, Colombia	2022
American Ornithological Society, Puerto Rico	2022
North American Cartographic Information Society, Tacoma, WA.	2019
International Association of Landscape Ecology, Chicago, IL.	2018
Student Conference on Conservation Science, New York, NY.	2017
Ecological Society of America Annual Meeting, Fort Lauderdale, FL	2016
Student Conference on Conservation Science, New York, NY.	2015
Society for Systematic Biologists Annual Meeting, Ann Arbor, MI.	2015

TEACHING:

Classes taught at Columbia University

UN2001: Environmental Biology I	Fall 2019
GU4192: Intro to Landscape Analysis	Spring 2019
UN2330: Science for Sustainable Development	Fall 2018
ENVP6111: Principles of Ecology	Summer 2016
GR6905: Graduate Seminar in Conservation Biology	Spring 2016
ENVP6111: Principles of Ecology	Summer 2015
GR5005: Introduction to Statistics for Ecology and Evolutionary Biology	Fall 2015

Workshops (lead instructor):

Association for Tropical Biology and Conservation, Coimbatore, India.	2023
Student Conference on Conservation Science, New York, NY.	2018
International Association of Landscape Ecology, Chicago, IL.	2018
Student Conference on Conservation Science, New York, NY	2017

ADDITIONAL RESEARCH AND FIELD WORK:

Research

[*Project Dhvani \(co-founder; 2018 – Present\)*](#) - Long term research initiative established to monitor biodiversity across human-modified landscapes in India, using acoustics (currently employing and mentoring a team of 10 individuals that includes naturalists, student researchers and data scientists).

Field work

Long-term biodiversity monitoring, Western Ghats	2023 - Present
Historical resurveys (doctoral field work), Nilgiris, India	2020 - 2021
Acoustic sampling (doctoral field work), Valparai, India	2020 - 2021
Avian sampling (led by Dr. Sahas Barve), Uttarakhand, India	2014
Camera trapping (led by Dr. Abishek Harihar), Uttarakhand, India	2011

MENTORSHIP:

Graduate Mentees (6)

Swathi C S (2023 – Present); Graduate Student, Pondicherry University, India
Vandana Kannan (2023 – Present); Wildlife Biologist, Keystone Foundation, India
Pavithra Sundar (2022 – Present); Research Assistant, Project Dhvani
Amrutha Rajan (2020 – 2022); Research Assistant, Project Dhvani
Meghana Srivathsa (2021 – 2023); Research Assistant, Project Dhvani
Akshay V Anand (2020 – 2022); Graduate Student, University of Florida

Undergraduate Mentees (2)

Faizee Ali Khan (2023 – Present); BS-MS Student, Indian Institute of Science Education and Research, Tirupati, India
Sarathak J Shetty (2019 – 2021); Graduate student, Carnegie Mellon University

SERVICE TO THE FIELD:

Peer reviews:

Ecology and Evolution, Biotropica, Global Ecology and Conservation, Current Science, Biological Conservation, Global Environmental Change, PeerJ, Conservation Science and Practice, Conservation Biology, Proceedings of the Royal Society, Ornithological Applications, Behavioral Ecology

Subject Editor, Biotropica	2024 - Present
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Reviewer, National Geographic Society	2022 - Present
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Extramural Service

Secretary, [ATBC Asia-Pacific Chapter](#)

March 2023 – March 2025

Assist in the organization of quarterly proceedings of the Asia-Pacific chapter of the Association for Tropical Biology and Conservation

Member, [ATBC Capacity Building Committee](#)

July 2023 – July 2025

Assist in the organization of skills-oriented workshops, mentoring circles, webinars, and field courses to help members of the Association for Tropical Biology and Conservation gain additional research and leadership skills.

Member of AOS Student Affairs Committee

March 2021 – Jan 2022

Assist in the organization of monthly events such as student professional mixers, workshops on varied topics (ranging from soft skills to data manipulation).

Founder, Acoustics Journal Club

Sept 2020 - Present

Organize bi-weekly journal club meetings for Indian students and naturalists interested in discussing topics of research relating to bioacoustics. We also review preprints as a group and provide feedback to the authors.

Other Outreach

Hiding in the Noise (Podcast , Rising with the Tide)	2023
Tech Gone Wild (Interview , Shastra Magazine)	2022
Using sounds to conserve biodiversity (Interview , Hindustan Times)	2021
India's environmental impact assessments (Interview , Hindustan Times)	2020
Using history to study bird ecology (Podcast , IndSciComm)	2018
How does climate change affect birds? (Interview , Mongabay India)	2018

PROFESSIONAL SOCIETIES:

American Ornithological Society (2019 – Present)

Association for Tropical Biology and Conservation (2021 – Present)

SKILLSET:

Technical Skills:

Proficient in R, ArcGIS Pro, Google Earth Engine, QGIS, Python, MS Office, Inkscape, RawTherapee.

Lab Skills:

DNA and RNA extraction, PCR, Purification, Gel electrophoresis, General wet lab maintenance and management.

Field Skills:

Mist-netting, taxidermy, camera trapping, line transects, point counts, use of ecological tools (GPS, densiometer, acoustic recorders, data loggers).

Languages: Proficient in English, Kannada, Tamil, and Hindi