

Aishwarya Levy-Bhattacharjee

New York, NY, USA 11372

Contact information: abhattacharjee@gradcenter.cuny.edu - or - bhattacharjee.ash@gmail.com

Research Interests

Biodiversity monitoring, conservation ecology, wildlife biology, community ecology, social ecology, ecosystem services, ecosystem function, environmental policy and decision-making, community-based conservation, human-wildlife coexistence, avian conservation, population dynamics, global change, land-use impacts, anthropogenic change, climate change impacts

Education

PhD in Biology (subprogram Ecology, Evolutionary Biology and Behavior)

2015 - 2021

- Dissertation title: "Vertebrate scavenger diversity and ecosystem services across an elevational gradient in Central Nepal". *Successfully defended on July 1st.*
- The City University of New York
- Graduate Advisor: Dr. José Daniel Anadón

B. Sc. in Ecology, Evolution and Natural Resource (*magna cum laude*)

2011 - 2015

- School of Environmental and Biological Sciences, Rutgers, The State University of New Jersey
- Minor: Biology
- The George H. Cook Scholars Program, "A study of the environmental warming effects on growth rate in Protozoa at varying trophic levels in a community"; Honors Thesis Advisor: Dr. Peter Morin

Publications

Sebastián-González, E., Morales-Reyes, Z., Botella, F., Naves-Alegre, L., Pérez-García, J. M., Mateo-Tomás, P., Olea, P. P., Moléon, M., Magalhaes, B., Hiraldo, F., Arrondo, E., Donazar, J. A., Cortes-Avizanda, A., Selvia, N., Lambertucci, S. A., **Bhattacharjee, A.**, et al. "Functional traits driving species role in the structure of terrestrial vertebrate scavenger networks." *Ecology* (2021): e03519.

Sebastián-González, E., Morales-Reyes, Z., Botella, F., Naves-Alegre, L., Pérez-García, J. M., Mateo-Tomás, P., ... & Arrondo, E., Donazar, J.A., Cortés-Avizanda, A., Selva, N., Lambertucci, S.A., **Bhattacharjee, A.**, et al. "Network structure of vertebrate scavenger assemblages at the global scale: drivers and ecosystem functioning implications". *Ecography*, 43 (2020): 1-13.

Sebastián-González, E., Magalhães, B.J., Pérez-García, J.M., Morales-Reyes, Z., Botella, F., Olea, P.P., Mateo-Tomás, P., Moleón, M., Hiraldo, F., Arrondo, E., Donazar, J.A., Cortés-Avizada, A., Selva, N., Lambertucci, S.A., **Bhattacharjee, A.**, et al. "Scavenging in the Anthropocene: Human impact drives vertebrate scavenger species richness at a global scale." *Global Change Biology*, 25:9 (2019): 3005-3017.

Bhattacharjee, A., Anadon JD, Lakhankar T, Krakauer N, Tiwari S, Thapa P, Devkota D, Jha A, Devkota NR, Pokhrel MR, Luitel DR, Lohman D, Doleck T, Mandal R, Sharma M, Siwakoti M. "The Impact of Climate Change on in Nepal: Current Knowledge, Lacunae, and Opportunities." *Climate*, 5:4 (2017): 80.

Manuscripts *in review/preparation*

Bhattacharjee, A., Sadadev, B., Baral, R., Karmacharya, D., Sanchez-Zapata, T. A., Anadón, J. D. "Human-scavenger relationship in the Chitwan-Annapurna landscape: Perceptions of a scavenging guild reveal differences between value and function". *Under Review*. People & Nature.

Bhattacharjee, A., Karmacharya, D., Baral, R., Garcia, J. M., Sanchez-Zapata, T. A., Anadón, J. D. "Environmental filtering, species turnover, and high functional redundancy shape scavenger community composition across a regional elevation gradient ". *In prep*. Target journal: Ecology

Bhattacharjee, A., Karmacharya, D., Baral, R., Garcia, J. M., Sanchez-Zapata, T. A., Anadón, J. D. "Drivers of scavenging function and stability in a biodiversity hotspot". *In prep*. Target journal: Ecology Letters

Presentations and Abstracts

Bhattacharjee, A., Karmacharya, D., Baral, R., Sánchez-Zapata, T. A., Anadón, J. D. 2021. "Drivers of scavenging efficiency and stability at vertebrate scavenger assemblages in Nepal." **ESA Annual Meeting** (August 2-6). ESA, 2021.

Bhattacharjee, A., Sadadev B.M., Karmacharya, D., Sánchez Zapata, J.A., Anadón J.D. 2019. "A socioecological approach to examining the perceptions of scavengers as ecosystem service providers among farmers in Nepal." **ESA Annual Meeting** (August 11-16). ESA, 2019.

Bhattacharjee, A. 2019. "From A Lowland Rainforest To The Himalayas: Community Structure And Ecosystem Services Provided By Scavengers In South Asia". **National Geographic Explorer Spotlight**, Washington, D.C.

Bhattacharjee, A. 2019. "Careers in Ecology for high school students interested in STEM". **Queens Zoo (The Wildlife Conservation Society)**, Flushing, NY.

Bhattacharjee, A. 2019. "Becoming a conservation ecologist, and notes from the field". **Queens Zoo (The Wildlife Conservation Society)**, Flushing, NY.

Bhattacharjee, A. 2019. "The Scavenger Community and Associated Ecosystem Services along An Altitudinal Gradient In Nepal". Biology Symposium. **Queens College, CUNY**, Flushing, NY.

Bhattacharjee, A., Margalida, A., Colomer Cugat, M.A., Sánchez-Zapata, J.A., Anadón, J.D. 2018. "Population dynamics of Old World Vultures in the Annapurna Conservation Area, Nepal". Student Conference on Conservation Science. **The American Museum of Natural History**, New York, NY.

Bhattacharjee, A. 2018. An altitudinal study of Nepal's scavenger community and the conservation of Old World Vultures. Ecology and Evolutionary Biology Symposium. **The Graduate Center, CUNY**, New York, NY.

Bhattacharjee A, Anadon JD, Lohman DJ, Lakhankar T, Krakauer N, Jha A, Tiwari S, Thapa P, Devkota D, Devkota N, Doleck T, Pokharel MR, Luitel DR, Mandal RA, Sharma M, Siwakoti M, Jha, PK. 2017. "A protocol for the Modeling of Climate Change Impacts on the ChitwanAnnapurna Landscape". **International Conference on Biodiversity, Climate Change Assessment and Impacts in Livelihood**.

Tabassum, T., Brewer AL, **Bhattacharjee A,** Anadón JD. 2016. "Scavenger community compositing of Black Rock Forest". College Now Conference at **Queens College, NY**.

Bhattacharjee, A, Blake-Mahmud J, Struwe L. 2014. "Weeds Under Your Car: Island Biogeography in an Urban Setting". **Botanical Society of America Annual Meeting, BSA**, 2014.

Employment and Research experience

The Nature Conservancy (TNC) - Independent contractor

Remote | Sept 2021 - Oct 2021

- Short-term contract with TNC's Asia-Pacific team to support project analysis of major trends, with respect to natural ecosystems, drivers of loss, and key demographic/development measures, in the Asia-Pacific region for development of their regional Strategic Plan
- Tasks include collating, summarizing, and visualizing spatial datasets, interpretation of trends, and coordination of project tasks and outputs across the team

"Modeling for Biodiversity and Climate Change in Nepal" - Graduate researcher

USA & Nepal | Jan 2016 - Dec 2017

- Assisting my PhD supervisor in their role as lead researcher for the USAID-funded Integrated Pest Management Innovation Lab (IPM IL)'s joint project between CUNY and Tribhuvan University (TU)
- Specifically, organized and co-instructed two training workshops for graduate researchers at the TU in Kathmandu. This workshop introduced species-distribution modeling with the machine learning technique, MaxEnt and applied field techniques for species monitoring with post-data collection analysis
- Systematic review and publication of climate change effects on biodiversity in Nepal

Conservation International (CI) - Trott Field Intern

Apia, Samoa | June - August 2016

- Team member with the climate change unit on CI's Biodiversity Rapid Assessment Programme (BIORAP) Survey of Central, Upland, and Cloud Forests of Savai'i, Samoa.
- Conducted vegetation surveys including quadrat sampling, species abundance counts, posthoc pressing and preservation of selected flora samples, and avifauna surveys via point counts
- Assembled a literature review and preliminary data collection report on climate change effects on vegetation of central, upland and cloud forests of Savai'i

Annual Vulture Population Survey - Expedition team member

Annapurna Conservation Area, Nepal | May - June 2016

- Team member for walking-transect survey of raptor species in the Annapurna Conservation Area, under the supervision the Peregrine Fund's Asia director (Dr. Munir Virani)
- Sampled avian point count methodology during walking-transect, which was applied towards my dissertation study design

United Nations Environmental Programme (Convention on the Conservation of Migratory Species)

Bonn, Germany | Jun - Aug 2015

- Intern for the Avian Species Unit supervised by Dr. Borja Heredia
- Prepared a presentation for the Siberian Crane MoU and Eastern Flyway Workshop held in China, assembled technical materials, including a background document and presentation on CMS Guidelines on Preventing Poisoning of Migratory Birds, and drafted a background document on impacts of land-use change on avian species in relation to the African-Eurasian Landbirds working group

Tuanan Biological Research Station - Study Abroad

Halimun Salak and Tuanan Borneo, Indonesia | Jun - Jul 2014

- Undergraduate field research assistant studying "Primates, Ecology and Conservation", supervised by Drs. Erin Vogel and Robert Scott, Department of Anthropology at Rutgers University
- Conducted a survey on habitat characteristics, and a primate census through nest counts and daily food/activity surveys of orangutans in a peat-swamp forest near the Tuanan Field Research Station

- Participated in focused group discussions with local community members on deforestation, primate-focused conservation management activities, climate change impacts to natural resource availability and sustainable livelihoods while living near a conservation area, and setting up a new composting system in the village, and training residents on use and benefits

Department of Ecology, Evolution & Natural Resources, Rutgers University - Research Assistant

New Brunswick, NJ, USA | May 2013 - May 2015

- Meta-analysis on global study of genetic diversity in marine animals (supervisor: Dr. Malin Pinsky): *Reviewing global marine micro-satellite data sets and data entry*
- Interactions between native and non-native plants and associated soil microbial communities (supervisor: Dr. Peter Morin): *DNA extractions, PCR procedures, gel electrophoresis, and green house fieldwork*
- Sexual dimorphism in Eastern-fence lizards (*Sceloporus undulates*) and the effects of testosterone as a bipotential growth regulator (supervisor: Dr. Henry John-Alder): *Animal care, collecting blood samples, capturing and marking of species in field (Pine Barrens, NJ)*

Aresty Program, Rutgers University

New Brunswick, NJ, USA | Sep 2013 - May 2015

- *"Under Your Car: Island Biogeography in an Urban Setting"*, the relationship between area and species richness in an extreme urban setting; Aresty Fellowship recipient (supervisor: Dr. Lena Struwe)
- Field work included flora survey, identification and collection in parking lots, and a compilation of life history and morphological traits for parking lot plant species

Appointments

Graduate Teaching Instructor for "Life-forms and Ecosystems", Queens College	2019 - 2021
Graduate Assistant and Teaching Instructor for "Introduction to College Biology", Queens College	2016 - 2020
Graduate Teaching Instructor for "R: Introductory Biostatistics Laboratory", Queens College	2018 - 2019
Undergraduate Teaching Assistant for English, Rutgers University	2014 - 2015
Peer Instructor, Aresty Undergraduate Research Program, Rutgers University	2014 - 2015

Fellowships, Grants and Awards

CUNY Science Fellowship, PhD fellowship and tuition waiver	2015-2020
National Geographic Early Career Grant: "From A Lowland Rainforest To The Himalayas: Community Structure And Ecosystem Services Provided By Scavengers In South Asia"	2019
Doctoral Student Research Grant, CUNY	2017
Bryon Trott Field Scholarship	2016
USAID Graduate Student Research Stipend	2016
Peter S. Smouse Award for Outstanding Student in Evolution	2015
Rutgers School of Environmental and Biological Sciences International Summer Scholarship	2014
Global Research Summer Scholarship	2014
Dunbar Fund for Excellence	2014
Rutgers Academic Excellence Award; top 10% of sophomores at Rutgers University based on GPA	2013

Service

Volunteer for Queens Zoo, The Wildlife Conservation Society, Flushing, NY, USA	2019-current
Doctoral Student Council Representative for Biology, CUNY Graduate Center	2017- 2018
Co-development and presentation of Species Distribution Modeling workshop for undergraduate and graduate students at Tribhuvan University in Kathmandu, Nepal	2016
New Jersey PIRG Water Watch, Environmental Awareness Campus Chapter	2011 - 2012
Founder and President of Hands and Paws, Community Service Organization for Animal Welfare in Dhaka, Bangladesh	2010 - 2011
Volunteer for Soi Cats and Dogs Foundation, Bangkok, Thailand	2008 - 2011

Affiliations & Memberships

Student Member of the Ecological Society of America	2018-2020
Sponsored Member of the New York Academy of Sciences	2019-2021
Student Member of the Society of Conservation Biology	2020-2021

Languages

English (fluent), French (intermediate working proficiency), Thai (conversational), Hindi (fluent in communication), Urdu (conversational), Bengali (conversational), Spanish (beginner).

Additional Technical Skills

Biodiversity measurement/ monitoring techniques: vegetation surveys, camera-trapping (specialized on large mammals, mesocarnivores and large avian species), point counts, mist netting, social/household surveys, in-field and open-access environmental data collection and/or sourcing.

Data analysis: R software, ArcGIS, Google Earth, species-distribution modeling, general statistics (descriptive and inferential), regression analyses, population/ecosystem modeling, multivariate ordination analyses.

Communication: National Geographic's Science-telling Bootcamp Participant 2019 (Public Speaking, Writing, Social Media, Photography).