Aishwarya Levy-Bhattacharjee

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Research Interests

Community ecology, macroecology, ecosystem services, ecosystem function, biodiversity, conservation biology, avian conservation, spatial modeling, species distribution models, population dynamics, global change, land-use impacts, anthropogenic change, climate change impacts, human-wildlife conflicts, community-based conservation, social ecology

Education

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

2015 – Anticipated Winter 2020

- Potential dissertation title: "Community ecology, ecosystem service and population dynamics of vertebrate scavengers across an altitudinal and biome gradient of Central Nepal".
- 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
- Honors Thesis Advisor: Dr. Peter Morin

High school (IB Honors Diploma*)* **2007 - 2011**

- American International School of Dhaka, Bangladesh

Primary education (Grades 1 – 8) **2000 - 2007**

- Ruamrudee International School of Bangkok, Thailand

Publications

Sebastián-González, E., Morales-Reyes, Z., Botella, F., Naves-Alegre, L., Pérez-García, J. M., Mateo-Tomás, P., ... & Arrondo, E., Donázar, 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., Donázar, 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.

Presentations and Abstracts

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.

Previous Research Experience

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

USA & Nepal | Jan 2016 - Dec 2017

- USAID-funded Integrated Pest Management Innovation Lab (IPM IL)'s project awarded for a collaboration between CUNY and Tribhuvan University (TU).
- Assisting my PhD supervisor in his role as a student mentor and lead researcher for the project
- Strengthening technical capacity for applied biodiversity research in Nepal, through collaborative student mentoring for graduate students at TU, drafting presentations and holding technical workshops
- 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.
- Surveyed avifauna via point counts (sighting of critically endangered Manumea, *Didunculus strigirostris*).
- Assembled a literature review and report on preliminary data collected for climate change effects on vegetation of central, upland and cloud forests of Savai'i.
- Produced science communication content through a blog post for CI on my personal experience of working in the cloud forests of Samoa and being a member of the BIORAP survey.

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
- Species focus on five Old World Vultures species: *Gyps himalayensis, Gyps fulvus, Gypaetus barbatus, Aegypius monachus, Neophron percnopterus*
- 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

- Team member of the Avian Species Unit supervised by Dr. Borja Heredia
- Prepared presentation for the Siberian Crane and Eastern Flyway Workshop held in China
- Assisted with preparation of materials on bird poisoning in the South African region and logistics for the Bird Poisoning Workshop held in South Africa, including a presentation on CMS Guidelines on Preventing Poisoning of Migratory Birds
- Drafted background document on land-use change in West Africa and its impact on migratory landbirds

The George H. Cook Scholars Program – Honors Thesis

New Brunswick, NJ, USA | Sep 2014 – May 2015

- "A study of the environmental warming effects on growth rate in Protozoa at varying trophic levels in a community"

Tuanan Biological Research Station – Study Abroad

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

- Undergraduate field research assistant studying "Primates, Ecology and Conservation"
- Surveying habitat characteristics and phenological data of a peat-swamp forest in Tuanan Field Research Station
- Primate census that includes nest counts and daily food/activity surveys
- Holding focused group discussions on deforestation and climate change impacts to natural resource availability and sustainable livelihoods while living near a conservation area
- 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 – *Pinsky lab*
  Reviewing global marine micro-satellite data sets and data entry
- Research on the interactions between native and non-native plants and associated soil microbial communities – *Morin lab*
  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 – *John-Alder lab*
  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 2014

- Studying the relationship between area and species richness in an extreme urban setting: *"Under Your Car: Island Biogeography in an Urban Setting"*
- Field work included survey, identification and collection of flora in parking lots
- Compilation of life history and morphological traits for parking lot plant species

Appointments

Graduate Assistant and Teaching Instructor for "Introduction to College Biology", Queens College	**2016 – 2020**
Graduate Teaching Instructor for "Life-forms and Ecosystems", Queens College	**2019 – 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	**2019-2020**
Student Member of the Society of Conservation Biology	**2020**

Languages

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

Additional Technical Skills

Biodiversity measurement/monitoring techniques: vegetation surveys, camera-trapping (specialized on carnivore, mesocarnivores and large avian species), avian point counts, mist netting, social/household surveys, environmental data collection (in-field and online), GIS data collection, Google Earth.

Data analysis: R software, ArcGIS, species-distribution modeling, general statistics, general linear and mixed models, population models, multivariate ordination analyses.

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