

Alexis L. Brewer

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Education

- 2020 **PhD, Ecology, Evolutionary Biology, & Behavior, the Graduate Center, City University of New York (CUNY), New York.**
Dissertation: *The effects of urbanization on macro-vertebrate scavenging in the northeastern United States*
Advisor: Dr. José D. Anádon.
- 2014 **MA, Animal Behavior & Conservation, Hunter College, CUNY, New York.**
Thesis: *Nutritional composition of leaves eaten by mantled howler monkeys (Alouatta palliata) in a highly fragmented forest.*
Thesis Committee: Dr. Mark E. Hauber (advisor) and Dr. Jessica M. Rothman
- 2005 **BA, Neuroscience, University of Virginia, Charlottesville, VA**

Research Experience

- 2016—Present **The response of community composition and structure and the ecosystem services these communities provide to urbanization in New York State.** *Queens College, CUNY.* Used camera trap data to investigate the changes in community composition and structure, as well as, carcass removal rates along a 400-mile urbanization gradient in the state of New York.
- 2016—Present **Movement patterns of black and turkey vultures due to human food subsidies.** *Queens College, CUNY.* In collaboration with Hawk Mountain (PA), I used geospatial data from trackers placed on vultures from 2003 to 2016 to determine movement patterns based on the location of anthropogenic food sources. The analyses were divided into two sections, pre-migration and post-migration.
- 2016—Present **Changes in turkey vulture dietary niche along an anthropogenic gradient.** *Queens College, CUNY.* Used stable isotope analysis to determine the contribution of anthropogenic waste to the diet of turkey vultures. Compared migration patterns between subpopulations of turkey vultures via stable isotope analysis. Determined stress responses to alternative food sources via corticosterone analysis.
- 2016—Present **The effects of urbanization scavenger community.** *Queens College, CUNY.* Investigated the scavenger community composition along a 400-mile corridor in New York area via motion sensitive cameras (e.g. “camera traps”).
- 2015 **Pyrogenic organic material degradation in soils.** *Queens College, CUNY.* Used phospholipid fatty acid and benzene polycarboxylic acid analyses to determine the

microbial biomass's utilization of black carbon in soil ecosystems via stable isotope tracer dissemination.

- 2015 **Gender genomics.** *Hunter College, CUNY, New York, NY.* Developed dataset for meta-analysis study on the use and differentiation of gender in genomics studies.
- 2013—2014 **Nutritional variation between edge and interior habitats.** *Hunter College, CUNY, New York, NY and La Suerte Biological Field Station, Costa Rica.* Designed Master's thesis in total. Field work included daily focal animal follows and plant sample collection. Laboratory work included chemical analysis of nutrients within food sources collected during field work.
- 2002—2003 **Attention and awareness as exhibited by the p50 response to external stimuli.** *University of Arkansas, Medical School, Little Rock, AR.* Conducted neural scans of human and non-human subjects, both with and without clinical symptoms, including Alzheimer's Disease, Autism, and spinal injuries. Cared for laboratory animals. Performed physical therapy for animals used in the spinal research. Assisted in animal spinal surgeries.

Publications and Presentations (*student collaborations)

Abstracts

Angtuaco, M., Brewer, A., Mamiya, N., Bray, P., Skinner, R.D., and Garcia-Rill, E. (2003). Effects of music on the sleep state-dependent P50 midlatency auditory evoked potential. *Sleep*, 26, A69.

Manire, H., Mamiya, N., Brewer, A., Angtuaco, M., Skinner, R.D., and Garcia-Rill, E. (2004). Effects of music on the sleep state-dependent P50 potential and frontal lobe blood flow. *Sleep* 27, A43.

Posters

Christina Lee*, Leah Naraine*, Jing Zheng*, Alexis L. Brewer, and José D. Anadón. 2017. Scavenger population based on levels of urbanization. Poster Presentation at College NOW, Queens College, Queens, NY.

Tasfia Tabassum*, Alexis L. Brewer, Aishwarya Bhattacharjee, and José D. Anadón. 2016. Scavenger community compositing of Black Rock Forest. Poster Presentation at College NOW, Queens College, Queens, NY.

Brewer, A.L. 2014. Nutritional variation in the mantled howler monkey (*Alouatta palliata*) diet in edge and interior habitats. Poster Presentation at Nor'Eastern Primate Ecology, Evolution and Behavior Group, New Brunswick, NJ.

Presentations

Brewer, A. L., Bhattacharjee, A., & Anadon, J. D. 2016. The effects of urbanization on scavenging in the northeast. Biology Symposium 2017. Department of Biology, Queens College, CUNY, Queens, NY.

Bhattacharjee, A. & Brewer, A.L. 2016. Impact of climate change on scavenger communities across an altitudinal range in Nepal: A stable isotope approach to vulture ecology. Ecology and Evolutionary Biology Symposium. The Graduate Center, CUNY, New York, NY.

Brewer, A.L. 2016. My Master's Research in Primatology: Methods and Considerations. Primate Behavior and Cognition Event, Animal Behavior and Conservation Program. Hunter College, New York, NY.

Brewer, A.L. 2014. Research methods in resource competition, environmental changes, and behavioral ecology. Guest Lecturer at Rocking the Boat, Bronx, NY.

Training Experiences

A Survivor's Guide to Stable Isotope Ecology Workshop Intensive in Siracusa, Italy (2017).

Research Skills

Stable Isotopic Analysis (SIA) for trophic and movement ecology

Phospholipid Fatty Acid (PLFA) analysis

Benzene Polycarboxylic Acid (BPA) analysis

Macronutrient assays

 Dry matter analysis

 Neutral Detergent Fiber analysis

 Acid Detergent Fiber analysis

 Acid Detergent Lignin analysis

 Crude Protein analysis

 Tannin analysis

 Sugars analysis

 Energetic Contribution analysis

Electroencephalography (EEG)

Camera trap survey techniques

Orienteering and backcountry skills

Environmental (I-button) data loggers

Digital Photography

Raptor Identification and Survey techniques

Small mammal trapping

Computer Skills

R Programming Language

GIS techniques and applications

 ArcGIS

 DIVA

 QGIS

Office Suite

SPSS

Excel

JMP

Grants and Awards

2017 Doctoral Student Research Grant, the Graduate Center, CUNY

2016 Biology Mini-Grant, Department of Biological Sciences, Queens College, CUNY

2015 Science Fellow, the Graduate Center, City University of New York

2003 Neuroscience Distinguished Majors Program, University of Virginia
 2002 Deans List, University of Massachusetts, Boston
 2001 Deans List, University of Massachusetts, Boston

Courses Taught

Lifeforms and Ecosystems, Laboratory. Queens College, City University of New York
Animal Behavior, Recitation. Queens College, City University of New York

Students Mentored

<i>Name</i>	<i>Level</i>	<i>Years Mentored</i>	<i>Current Position or Outcome</i>
Chad Persaud	Undergraduate	2016—2017	Master of Science College of Staten Island
Dovounnae Green	Undergraduate	2017	Undergraduate Queens College
David Rodriguez	Undergraduate	2016— 2018	Undergraduate Queens College
Isaac Deonarine	Undergraduate	2016— 2017	Seamounts Research Intern, Charles Darwin Foundation
Maria Roe	Undergraduate	2016— 2017	Master’s student Queens College
Meethila Rahman	Undergraduate	2016— 2017	Student Scientist National Oceanic & Atmospheric Administration
Tasfia Tabassum	High School	2016—2017	Preliminary Round New York City Science & Engineering Fair
Jing Zheng	High School	2017	Results TBA New York City Science & Engineering Fair
Christina Lee	High School	2017	Results TBA New York City Science & Engineering Fair
Leah Naraine	High School	2017— 2018	Results TBA New York City Science & Engineering Fair; Full 4 yr. scholarship to Brandeis University
Douglas Page	Undergraduate	2017	Undergraduate North Carolina A&T State University
Kerste Milke	Undergraduate	2018	Undergraduate Northeastern University
Ella Shea	High School	2018	Continuing student researcher College Now, Queens College, CUNY
Laura Troung	High School	2018	Continuing student researcher College Now, Queens College, CUNY
Alexis Tendilla	High School	2018	Continuing student researcher College Now, Queens College, CUNY

Institutional Service

Ecology, Evolutionary Biology, & Behavior Advisory Committee, Student Rep, 2016, 2017, 2018

Doctoral Student Council, Biology Student Rep, 2017-2018
Graduate Council, The Graduate Center, CUNY, Biology Student Rep, 2018-2020
Ecology, Evolutionary Biology, & Behavior Executive Committee, Student Rep, 2018-2019

Scientific Journal Reviewer

Journal of Raptor Research (2016—Present)

Selected Employment, Mentorship, and Leadership Experience

- 2015 **Interim Administrative Coordinator, Belfer Research Building.** *Office of the Provost, Hunter College, New York, NY.* Transitioned 11 research laboratories to the new research facilities. Research equipment to be purchased and developed purchasing rationale for approximately \$1.5M worth of new equipment. Installed, maintained, and troubleshooted for laboratory equipment. Developed protocols for researchers within new building. Acted as a liaison with Weill Cornell Medical College personnel to develop policies and procedures for the Hunter College researchers. Developed a budget and spending protocol that encompassed 11 faculty from 3 departments and approximately 100 to 150 students for research floor.
- 2014—2015 **Assistant to the Associate Provost of Research.** *Office of the Provost, Hunter College, New York, NY.* Reviewed publications relevant to research staff at Hunter College. Reviewed and applied for grant. Researched and built support structures for scientific research at Hunter College. Created promotional paraphernalia. Organized writing boot camps for Hunter College faculty. Assisted in the promotion of Hunter College as a research oriented institution. Edited manuscripts for students and faculty. Assisted with research activities in the Hauber lab as necessary.
- 2012 **Mentor.** *City Rocks, Brooklyn Boulders Foundation, Brooklyn, NY.* Taught rock climbing techniques to middle school students. Encouraged scholastic improvements in students and linked hard work on the rock wall to hard work and success in the class room.
- 2004—2005 **Mentor.** *Young Women Leaders Program at UVA, University of Virginia, Charlottesville, VA.* Coached young women at the University and surrounding areas to pursue their dreams, education, and taught other important life skills.
- 2003—2004 **Transfer Student Peer Advisor.** *University of Virginia, Charlottesville, VA.* Helped incoming transfer students adjust to their new classes and environment.

Society and Professional Memberships

Ecological Society of America
Northeastern Primate Ecology, Evolution and Behavior Group
Animal Behavior Society
Animal Behavior and Conservation Club, Hunter College
CUNY Animal Behavior Initiative

CUNY Adjunct Project
PCS CUNY