

Briana Anne Betke

Meyers Lab
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EDUCATION

Ph.D. – Ecology, Evolution and Behavior In progress (Fifth Year)
University of Texas at Austin, Department of Integrative Biology
Supervisor: Lauren Ancel Meyers
Co-advisor: Nicole Gottdenker

B.S. - Wildlife Conservation and Management, Veterinary Science minor 2017
University of Arizona, School of Natural Resources and the Environment
Undergraduate Research: “Fecal Cortisol and Chlorophyll Analysis: Is there a correlation between stress levels and forage quality in Sonoran Pronghorn?”
Advisor: David Christianson

RESEARCH INTERESTS

- Disease ecology of wildlife and humans
- The impacts of urbanization on wildlife health and disease spread
- Human-wildlife interactions

TEACHING AND RESEARCH EXPERIENCE

Graduate Research Assistant Spring 2022 – Summer 2022
Meyers lab, Department of Integrative Biology, University of Texas at Austin

- Weekly comparisons of COVID-19 variant prevalence in Texas with genomic surveillance data.

Graduate Research Assistant Fall 2020 – Summer 2021
Meyers lab, Department of Integrative Biology, University of Texas at Austin

- Spatial analysis of COVID Hospitalizations in Austin and the greater Austin area.
- Assessment of Social Vulnerability as a predictor of COVID Hospitalizations in Austin and the greater Austin area.

Teaching Assistant - Biostatistics (SDS 328M, SDS 320E) Fall 2018 – Spring 2020, Fall 2021
Department of Statistics and Data Sciences, University of Texas at Austin

- Taught labs in introductory data manipulation and statistical analysis using R.
- Grading of all exams and assignments relating to individual projects.
- Provided feedback for the development of student research projects.
- Helped simulate an academic poster session environment for students to present their projects at the end of each semester.

Undergraduate Preceptor – Field Botany September 2013 – December 2013
School of Natural Resources and the Environment, University of Arizona

- Provided feedback and grades for essays.
- Offered study sessions and office hours for writing and exam preparation.
- Assisted with labs conducted in the field.

Summer Intern

June 13th - August 5th, 2016

California Department of Fish and Wildlife

Rancho Cordova, CA

- Assisted in the collection and management of data for disease and mortality monitoring of multiple wildlife species.
- Performed necropsies on deer, mountain lions, skunks, and several bird species for the surveillance of disease.
- Extraction and transportation of tissues for histology.

Lead Lab Technician

August 2015 - December 2016

University of Arizona, Sonoran Pronghorn Project

Tucson, Arizona

- Used standard laboratory techniques and protocol (fecal extractions, ELISA hormone assays) to assist with the research on Sonoran pronghorn in Ajo Arizona and having an individual project.
- Trained undergraduate and graduate students in ELISA hormone testing and photospectroscopy protocol.

Summer Field Assistant

May 2015-July 2015

Doris Duke Conservation Scholars Program

Tucson and Sierra Vista, Arizona

- Bighorn Sheep Project
 - Collected information about the recovering bighorn sheep population in Tucson, Az.
 - Used telemetry equipment to locate sheep with VHF collars.
 - Conducted vegetation surveys.
 - Maintained trail cameras and organized photos for analysis.
- Grey Hawk Project
 - Assistance in observing 53 nests located in Sierra Vista, Az.
 - Collection of the number of alarm calls heard when nests were being observed.
 - Maintenance of camera and call data via Dropbox.
 - Presented about this project at the Southwest Wings Festival (oral presentation location below)

Intern

May 2014- May 2015

Undergraduate Biology Research Program (UBRP)

Tucson, Arizona

- Cataloging of bison and Sonoran pronghorn fecal samples by means of Excel.
- Processed pronghorn and bison feces to conduct hormone and glucocorticoid analysis by means of extraction.
- Performed hormone assays with extracted samples via cortisol and progesterone ELISA tests.
- Development of an individual research project.

Data Base Entry Intern

Fall semester of 2013

University of Arizona

Tucson, Arizona

- Identification of Arizona fauna and people in trail camera photos using Microsoft Access to understand human-wildlife interactions.

ACADEMIC AND COMMUNITY SERVICE

All Things Wild Rehabilitation Center, Georgetown, TX **July 19th – October 27th, 2020**
 Volunteer **July 31st, 2022 – Present**

- Assisted in animal care during the peak season for baby animals (cleaning of cages, feeding, and bottle feeding).
- Worked with technician to administer any medications or conduct examinations of injured wildlife.

Wildlife Trail Camera Monitoring, Coyote and Fox Project, Balcones Canyonland Preserve, Travis County, Tx **February 1st – August 31st, 2022**

Volunteer

- Placement and maintenance of trail cameras
- Processed photos for analysis

Annual Roots and Wings Festival, Austin Botanical gardens, Austin, TX **October 26, 2019**

Volunteer.

- Distributed maps and information to visitors at the entrance of the event.
- Spoke to visitors about the environment and disease ecology.

Laboratory of the Evolution and Endocrinology of Primates (LEEP), The University of Arizona, Tucson, AZ **January 2016 – May 2016**

Volunteer

- Assisted in the research of lemur health using in-house hormone assays conducted with fecal extracts.

ACOMA Animal Clinic, Tucson, Arizona **May 2012 – July 2012**

Volunteer/Shadow

- Cleaning of kennels, office counters, and medical equipment.
- Preparation of vaccines.
- Post operation animal care.
- Assistance with restraint for blood draws.

TRAINING AND CERTIFICATIONS

- **Texas Master Naturalist Certification**, Balcones Canyonlands Chapter, Travis County, Tx, Summer 2022
- **Concentration in Science Communication**, Moody College of Communication, University of Texas at Austin, Spring 2021
- **Virtual Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID)**, 13-29 March 2020, Modules include: Introduction to Infectious disease modeling, Contact Networking, Spatial Ecology for Public Health
- **Environmental Leadership Program (ELP)**, DDCSP Alumni Leadership training, White Oak Conservation Center, Yulee, FL, 5-9 March 2017
- Arizona Game and Fish Department, **Chronic Wasting Disease Workshop**, State Government

Office, Phoenix, AZ, 21 November 2015

- **National Hispanic Environmental Council, New Mexico Environmental Training Institute.**
Glorieta Camps, Glorieta, NM, August 8-17, 2015
- **Doris Duke Conservation Scholars Program Collaborative, Conservation Leadership Training.**
National Conservation Training Center, Shepherdstown, WV, 29 May – 05 June 2015

HONORS AND AWARDS

2022 - ESA SEEDS Graduate Mentor Travel Award – Montreal Annual Conference
2020 - SISIMID 2020 Short Course Scholarship (3 courses)
2019 - Ecolab grant, Ecological Laboratory program
2019 - Blair Scholarship in Zoology, IB Joint Graduate Program, University of Texas at Austin
2019 - Honorable Mention, NSF GRFP
2019 - ESA SEEDS Graduate Mentor Travel Award – Kentucky Annual Conference
2017 - Mentoring fellowship, University of Texas at Austin
2015 - Doris Duke Conservation Scholars Program Collaborative, the University of Arizona
(Two summers with stipend)
2014 - Bear Down Scholarship, University of Arizona
2014 - Undergraduate Biology Research Program, the University of Arizona (Summer stipend)

CONFERENCE POSTER PRESENTATIONS

2022 – Briana Betke, Nicole Gottdenter, Lauren Ancel Meyers, Daniel Becker, “Anthropogenic Roosting and Richness in Bats”, Ecological Society of America Annual Meeting, Montreal, Canada.
2020 – Emily Javan, Briana Betke, Lauren Ancel Meyers, “Spatial Distribution of COVID-19 Hospitalization Risk Across Austin, TX”, UT COVID Conference.
2019 – Briana Betke, Lauren Ancel Meyers, “Investigating the spatial pattern and the influence of environmental factors on Murine Typhus incidence in Texas, USA”, Ecological Society of America Annual Meeting, Louisville, KY.
2016 – Briana Betke and David Christianson, “Fecal Cortisol and Chlorophyll Analysis: Is there a correlation between stress levels and forage quality in Sonoran Pronghorn?”, Ecological Society of America Annual Meeting, Fort Lauderdale, FL.

Public Engagement

2021 – Speaker • Urban Mammals • Science Under the Stars • scienceunderthestars.org
2021 – present • Organizing member, author, and speaker for workshops • Minorities in Biological Research • minoritiesinbiologicalresearch.weebly.com
2018 – Speaker • Career Paths in Wildlife Disease Research • Diseases of Wildlife Course, The University of Arizona
2015 – Speaker • Gray Hawk Project • Southwest Wings Festival, Cochise College, Sierra Vista, AZ

PUBLICATIONS

Peer-Review

2022 Omayma Amin, Christina A. Rostad, Mark Gonzalez, Bradley S. Rostad, Shelley Caltharp, Elizabeth Quincer, **Briana A. Betke**, Nicole L. Gottdenker, Jonathan J. Wilson, Andi L. Shane, Mohnd Elmotser, Andres Camacho-Gonzalez, Tal Senior, Oliver Smith, Evan J. Anderson, Inci

Yildirim. (In Press). **Cat-Scratch Disease: 9 Years of Experience at a Pediatric Center.** *Open Forum Infectious Diseases.*

Reports

2021 Emily Javan, Emily Kushnereit, **Briana Betke**, Spencer Woody, Remy Pasco, Kelly Pierce, Kaitlyn Johnson, Maureen Johnson-León, Michael Lachmann, Spencer J. Fox, Lauren Ancel Meyers. **Heterogeneous burden of the COVID-19 pandemic in Central Texas.** *UT COVID-19 Modeling Consortium Reports.*

Media Articles

2021 Briana Betke. **Academic Conference Guide.** *Minorities in Biological Research at UT Austin Undergraduate Resources (posted at minoritiesinbiologicalresearch.weebly.com).*

MENTORSHIP AND LEADERSHIP

Texas Master Naturalist Mentor, 2022 -2023

Currently, I am mentoring two students of the incoming Texas Master Naturalist training class for the 2022-2023 academic year.

Class Representative, Texas Master Naturalist, 2022

Capital of Texas Undergraduate Research Conference Judge, 2022

Graduate Student Mentor for ESA Strategies for Ecology, Education, Diversity and Sustainability Program (SEEDS) at the Annual ESA Conference, 2019 and 2022

I mentored 5-10 students at the 2019 and 2022 annual ESA conferences where I served as a near-peer mentor to aid with navigating the conference and creating professional networks. I also reviewed applications to provide travel funds from SEEDS to students of underrepresented groups in the field of Ecology in 2019.

Doris Duke Conservation Scholars Program (DDCSP) Alumni Mentor, 2019 – 2020

I mentored one current DDCSP undergraduate student while they were preparing for their first academic conference. The DDCSP is a program intended to promote DEI in conservation or related fields. I was part of this program as an undergraduate and try to give back through mentorship to DDCSP students and SEEDS students as an Alumni.

ESA Disease Ecology Section Student Liaison, 2018 – 2021

I organized the mentorship program where Disease Ecology faculty meet with students during the ESA annual conference for all 3 years of my term. I also reviewed abstracts submitted for the conference.