




MELANIE C. BERGER

“In wildness is the preservation of the world” - *Thoreau*

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EXPERIENCE

Scientist IV November 2023 – Present
Environmental Solutions & Innovations, Inc. (ESI) Remote

Managing timelines, budgets, and logistics for environmental permitting projects of various sizes across a broad geographic area. Providing technical guidance to development and implementation of complex projects. Preparing documents for compliance with NEPA, CWA, ESA, and other environmental regulations at federal, state, and local levels. Collaborating with Agency personnel, other project managers, and technical staff to address Client needs. Participating in marketing efforts, including development of project proposals, attendance at meetings and events, and engagement with Clients. Providing guidance and assistance to technical staff in the field. Mentoring junior staff.

Mobile Transect Acoustic Working Group September 2022 – Present
NABat (North American Bat Monitoring Program) Remote

Refining and standardizing acoustic mobile transect protocols for a multi-national, multi-agency coordinated bat monitoring program (NABat). Identifying solutions that address challenges and barriers related to acoustic mobile transect surveys. Contributing practical knowledge from previous academic and field experiences to a small group of members nominated by colleagues within the bat research and conservation community.

Virtual Student Federal Service (VSFS) Intern September 2020 – May 2021
Northeast RISCC Network / USGS Remote

Assisted the Northeast Regional Invasive Species and Climate Change (RISCC) Management team through an internship appointment with the US Geological Survey (USGS). Organized collaborative activities between regional RISCC management working groups. Planned and coordinated the annual RISCC Management Symposium. Developed the first edition of the RISCC guiding principles document. Accepted invitation to continue as a team member beyond the VSFS internship completion date.

Fisheries and Wildlife Biological Scientist II November 2017 – February 2019
Florida Fish and Wildlife Conservation Commission Punta Gorda, Florida

Monitored Florida bonneted bats statewide, with an emphasis on the Babcock-Webb Wildlife Management Area (WMA) population. Collaborated with FWC Research Institute staff on bat capture and tracking to identify and study natural roosts. Conducted acoustic surveys to establish an understanding of habitat use and species distribution. Installed and maintained Passive Integrated Transponder (PIT) tag readers and analyzed data. Supervised permitted research activities and assisted in the development of WMA projects by ensuring compliance with federal and state standards for endangered Florida bonneted bats. Conducted emergence counts, pup counts, and bat house daytime occupancy counts. Provided recommendations and participated in habitat management activities on Babcock-Webb, including prescribed burns. Coordinated and assisted with interagency bat capture activities. Provided updates on the WMA population to interagency partners. Supervised volunteers. Interacted with the public, partners and agency staff to provide information on Florida bonneted bats.

Fish and Wildlife Technician, Bat Unit June 2015 – November 2017
NYS Department of Environmental Conservation Albany, New York

Studied New York's bat populations through year-round surveys and habitat analysis, to improve understanding of their population dynamics and the continued effects of white-nose syndrome. Protected federally listed species through mitigation, public education and permitting. Collaborated with regional cave conservation groups to organize regulations that maintain public underground access while integrating bat conservation strategies. Assisted academic researchers with white-nose syndrome fieldwork, through bat capture, analysis and environmental sampling. Ran volunteer acoustic monitoring programs to contribute to the USDA North American Bat Monitoring Program. Provided bat-related advice to the public through online content and personal communications.

Environmental Educator May 2013 – December 2013
NYS Office of Parks, Recreation & Historic Preservation Albany, New York

Program Assistant October 2013 – December 2013
Continued to lead environmental education and interpretation (EE&I) projects from previous internship with the Student Conservation Association. Planned and produced EE&I materials for children's events and developed EE&I content for the State Parks website. Traveled to various State Parks to develop on-site EE&I programming and strategies.

Student Conservation Association Intern May 2013 – October 2013
Developed alternate approaches to environmental education and interpretation (EE&I) for the Office of Parks, Recreation and Historic Preservation of New York State. Planned and implemented conservation fieldwork in association with other Hudson Valley Corps members. Attended various environmental education training sessions and conferences.

EDUCATION

PhD: Fish and Wildlife Biology and Management *In Progress*
SUNY College of Environmental Science and Forestry Syracuse, New York

- ESF Alumni Association Memorial Scholarship Award
- Moore Family Fund for Conservation Fellowship

MPA: Master of Public Administration 2021
The Maxwell School, Syracuse University Syracuse, New York

MConBio: Master of Conservation Biology w/ High Distinction 2014
University of New South Wales* Sydney, NSW, Australia

- The Merton/Englert Award for Best Team Project in Master of Conservation Biology – Conservation Practice
- Victoria Graduate Award

* in conjunction with Victoria University of Wellington

Sc.B. Biology: Ecology and Evolutionary Biology 2013
Brown University Providence, Rhode Island

- Karen T. Romer Undergraduate Teaching and Research Award (UTRA)
- Levinger Foundation Scholarship

RESEARCH

Frair Laboratory: Graduate Researcher January 2019 – Present
Dept. of Environmental Biology, SUNY ESF Syracuse, New York

Assessing bat species and community resilience following white-nose syndrome and the development of wind energy facilities. Comparing the statistical efficacy of two established abundance estimation methods modified to analyze novel mobile acoustic bat survey data and mapping resulting predictions state-wide. Elucidating and quantifying the environmental drivers influencing each species' detectability and abundance. Assisting in the development and coordination of the New York Mammal Survey.

Volunteer Student Researcher July 2014 – November 2014
Center for Ecosystem Science, University of New South Wales Sydney, NSW, Australia

Assisted in the research of ecosystem dynamics in Australia. Analyzed camera-trap data to determine population dynamics of Australian wildlife. Conducted observational surveys of waterbird abundance, diversity, and behavior. Sampled macroinvertebrates using dipnets and cores. Assessed vegetation using transects. Collected water quality data.

Smith Laboratory: Undergraduate Researcher February 2011 – May 2013
Dept. of Ecology and Evolutionary Biology, Brown University Providence, Rhode Island

Senior Thesis: Disease and the Timeline of Extinction September 2012 – May 2013
Investigated the timeline of all threats related to a group of disease-threatened species, with a substantial literary history, from the IUCN Red List database. Unraveled the ways in which these threats interact to affect species health and sustainability.

Conservation Medicine Working Group September 2011 – May 2012
The Threat of Disease in Declining Species Populations: Examined and summarized the species with disease listed as a major threat in the IUCN Red List database, with the objective of discovering trends in wildlife disease among already threatened species.

EcoHealthy Pets February 2011 – May 2011
Conducted literary review on the consequences of the exotic pet trade; composed educational sheets for EcoHealthy Pets (formerly PetWatch), a nationwide effort to rank exotic pets created by EcoHealth Alliance (formerly Wildlife Trust).

Rand Laboratory: Undergraduate Researcher October 2011 – May 2013
Dept. of Ecology and Evolutionary Biology, Brown University Providence, Rhode Island

Assisted graduate students and post-doctoral researchers with projects utilizing *Drosophila* as a model to dissect the genetic bases of nuclear-mitochondrial interactions that affect organismal fitness.

UTRA Student Researcher June 2012 – May 2013
The Influence of Dietary Stress on Divergent mtDNA Effects in *Drosophila*: Investigated if dietary stress enhances the main effects of mito-nuclear divergence in *Drosophila*.

- Funded by Karen T. Romer Undergraduate Teaching and Research Award (UTRA)
- Presented as a poster at the Brown Summer Research Symposium

TEACHING & MENTORING

Zoo Guides: Program Coordinator June 2021 – October 2021
Friends of the Rosamond Gifford Zoo Syracuse, New York

Supervised and mentored urban high schoolers employed by the annual Zoo Guides program. Trained high schoolers on workplace skills and environmental education techniques, while also providing trainees with an education on wildlife science and conservation practices. Determined daily assignments and developed new educational materials. Advised mentees on future career opportunities.

1000 Girls, 1000 Futures: Mentor October 2020 – May 2021
New York Academy of Sciences Remote

Mentored high school girls worldwide who were enthusiastic about science, technology, engineering, or math and enrolled in the 1000 Girls, 1000 Futures program. Guided mentees through coursework modules assigned by the program. Coached mentees through the college application process.

CSTEP Program: First Year Instructor July 2019 – May 2020
SUNY College of Environmental Science and Forestry Syracuse, New York

Taught the two-semester course provided to first year students in the Collegiate Science and Technology Entry Program (CSTEP). Developed a syllabus for the course. Coordinated a schedule of guest lectures from different college departments. Developed and facilitated workshops on academic planning and career development. Provided one-on-one mentorship to students outside of course hours.

Teaching Assistant (*Vertebrate Evolution & Diversity*) August 2012 – December 2012
Brown University Providence, Rhode Island

Led weekly section of laboratory course, taught in conjunction with main lecture. Assisted professor with development of coursework and assessment of student work. Course subject material covered vertebrate ecology and interpretation of the natural world during lab activities.

CAMPUS INVOLVEMENT

SUNY College of Environmental Science and Forestry

Inclusion, Diversity, and Equity Committee	October 2019 – Present
<ul style="list-style-type: none">Co-Chair	August 2020 – Present
Graduate Student Dean's Advisory Board	November 2022 – May 2023
Graduate Student Association	August 2019 – May 2022
<ul style="list-style-type: none">President	August 2021 – May 2022
<ul style="list-style-type: none">Board of Trustees Liaison	August 2020 – August 2021
<ul style="list-style-type: none">Treasurer	August 2019 – August 2020
ESF Board of Trustees, Student Trustee	October 2020 – August 2021
College Search Committees	
<ul style="list-style-type: none">President of the College	April 2020 – August 2020
<ul style="list-style-type: none">Director of Student Inclusion Initiatives	October 2019 – November 2019
<ul style="list-style-type: none">Title IX Coordinator	September 2019 – October 2019

COMMUNITY INVOLVEMENT

Rosamond Gifford Zoo: Volunteer <i>Syracuse, New York</i>	September 2019 – Present
Special Olympics New York, Aquatics Program	March 2016 – Present
<ul style="list-style-type: none">Onondaga County Dolphins, CoachAlbany County Admirals, Head Coach	February 2019 – Present March 2016 – November 2017
DeWitt Advisory Conservation Commission: Secretary <i>DeWitt, New York</i>	September 2021 – August 2023
Turtle Time, Inc.: Sea Turtle Beach Monitor <i>Fort Myers Beach, Florida</i>	January 2018 – February 2019

PUBLICATIONS

Twining, J. P., Fuller, A. K., Sun, C. C., Calderón-Acevedo, C. A., Schlesinger, M. D., Berger, M., Kramer, D., Frair, J. L. (2023). Integrating presence-only and detection/non-detection data to estimate distributions and expected abundance of difficult-to-monitor species on a landscape-scale. Manuscript submitted for publication.

Heard, M. J., Smith, K. F., Ripp, K. J., Berger, M., Chen, J., Dittmeier, J., Gotter, M., McGarvey, S. T., Ryan, E. (2013). The Threat of Disease Increases as Species Move Toward Extinction. *Conservation Biology*, 27(6), 1378-1388.

MEMBERSHIPS

American Society of Mammalogists (ASM)
Bat Conservation International (BCI)
North American Society for Bat Research (NASBR)
Society for Conservation Biology (SCB)
The Ecological Society of America (ESA)
The Wildlife Society (TWS)
- New York Chapter

CERTIFICATIONS & VACCINATIONS

Rabies Pre-Exposure	July 2015 - Present
Prescribed Fire for Wildlife	April 2018
Basic Fire Management	February 2018
SSI Advanced Scuba Diver	August 2014
Wilderness First Aid (WFA)	June 2013
Leave No Trace Awareness Workshop	June 2013

SKILLS

Bat-specific fieldwork techniques

bat handling, banding, mist-netting, harp-trapping, species identification, mobile & stationary acoustic surveys, aerial & terrestrial radio telemetry, emergence counts, underground cluster photography & photo processing, 100+ hours underground, environmental swabbing

Bat-specific technology

Song Meter SM3BAT & SM4BAT detectors, AnaBat Roost Loggers, PIT tags, VHF transmitters, GPS loggers

Bat-specific analysis

Kaleidoscope Pro, SonoBat, EchoClass, SCAN'R, callViewer, AnalookW, SPECT'R, manual vetting & program-assisted acoustic analysis

Conservation planning software

FigTree, Marxan, Mesquite, Vortex, Zonae Cogito

Statistical computing

R, RStudio, Microsoft Access, SPSS, PRIMER, STATA

Spatial analysis & remote sensing

ArcGIS Pro, ArcCatalog, ENVI, DeLorme Street Atlas, Google Earth Pro

Design software

Photoshop, Illustrator, InDesign

Laboratory protocols

biological assays, PCR, Drosophila culture, research planning & development, protocol adaptation

Field sampling methods

population sampling, behavioral observations, vegetation transects, camera trapping, water quality