

MADELEINE (MADS) O'BRIEN

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EDUCATION

Yale University, School of the Environment (formerly Forestry & Environmental Studies) New Haven, CT

Candidate for *Master of Environmental Science*, 2020

- **Focus:** Mapping environmental change, mobile and low-cost monitoring, citizen science, natural disasters
- **Selected Coursework:** Multivariate Statistics, Photogrammetry with Drones, Geospatial Software Design, Humanitarian Aid, Qualitative Research Methods
- **Master's Thesis:** "UAV deployment for fine-scale CO₂ flux estimation in a mid-size city"
- **Leadership:** Student Affairs Committee (student government elected representative)

Wesleyan University

Middletown, CT

B.A. in Earth & Environmental Science; B.A. in Science in Society, 2016

- **Capstone Team Project:** "Comparing satellite imagery with nutrient geochemistry in a Hawaiian ohia forest"
- **Honors:** Dean's List 2013-2016, Phi Beta Kappa

RELEVANT EXPERIENCE

Yale Peabody Museum of Natural History

New Haven, CT

Graduate Student Programs Assistant

January 2019 – Present

- Moderate Peabody Science Café events every 2-3 months, a panel discussion with subject experts and members of the public at a local New Haven bar
- Curate themed photo displays of Peabody specimens for 3-month-long installations in local businesses, and co-write educational placards

Stanford Geospatial Center at Stanford University

Palo Alto, CA

GIS Assistant

October 2017 – June 2018

- Consulted 1-on-1 with Stanford affiliates to troubleshoot technical problems, find suitable data, or develop analysis workflows for geospatial projects
- Created 32 digital index maps displaying geographic extents of paper maps held by Stanford's library, making the materials and metadata more accessible to scholars
- Authored a 3-hour "Geologic Mapping with ArcGIS" tutorial for future earth science students
- Supported research in diverse departments such as geophysics, history, and civil engineering

United States Geological Survey, Volcano Science Center

Menlo Park, CA

Field Assistant / Research Assistant

June 2016 – October 2017

- Used supervised classification to quantify vegetation in historic aerial images of a volcanic degassing zone, and tracked relationships between gas emissions, seismicity, and deforestation over 50 years
- Collected water and gas samples in Yellowstone NP, Lassen Volcanic NP, and Long Valley caldera, and learned to make safety judgment calls working in dangerous volcanic areas
- Conducted magnetic field and gravity measurements in Nevada and Idaho on a volunteer basis, assisting with initial postprocessing of the data

PRESENTATIONS & PUBLICATIONS

- McCann, B. T., Davis, J. M., Osborne, D., Durham, C., **O'Brien, M.**, & Raymond, N. A. (2020). Quantifying climate change relevant humanitarian programming and spending across five highly disaster vulnerable countries. *Disasters*. In press.
- American Geophysical Union Fall Meeting, poster presentations (2019 & 2016)

SKILLS

ArcGIS 10.x; Python and R programming; ENVI 5.0; Statistical analysis; Image classification and interpretation; GPS for field data collection; MS Office; UAV pilot license (FAA, exp. 6/2021); prior CPR/AED/First Aid cert.

Revised Aug. 2020