

MADELEINE (MADS) O'BRIEN

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EDUCATION

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

Master of Environmental Science, 2020

- **Course Highlights:** Ecosystem Measurement, Observing Earth from Space, Geospatial Software Design, Photogrammetry with Drones, Multivariate Statistics, Qualitative Research Methods
- **Positions:** Programs Assistant at Peabody Museum of Natural History; student gov't elected representative

Wesleyan University

Middletown, CT

Bachelor of Arts, Earth and Environmental Science + Science in Society, 2016

- **Senior Group Project:** "Comparing satellite imagery with nutrient geochemistry in a Hawaiian ohia forest"
- **Course Highlights:** Sedimentology/Stratigraphy, Soils, Geobiology, Oceans & Climate, Geology Field Camp
- **Positions:** GIS Tutor at the Quantitative Analysis Center

RELEVANT EXPERIENCE

David Rumsey Map Center at Stanford University

Palo Alto, CA

Reference Assistant

Feb 2018 – June 2018

- Introduced patrons to historical and modern map exhibits and answered their cartography-related questions
- Authored 3-part workshop series teaching novices how to georeference maps from the Rumsey collection and incorporate the results in interactive webmaps

Stanford Geospatial Center at Stanford University

Palo Alto, CA

GIS Assistant

October 2017 – June 2018

- Consulted 1-on-1 with Stanford affiliates to resolve technical problems, find suitable data, or develop analysis workflows for geospatial projects
- Created 32 digital index maps displaying the 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

- Quantified vegetation change in 23 historical aerial photos using supervised image classification
- Compared patterns of die-off to local geochemical data to describe the relationship between volcanic gas flux, seismicity, and deforestation on Mammoth Mountain, CA, over 50 years
- Collected water and gas samples in Yellowstone NP, Lassen Volcanic NP, and Long Valley caldera

PUBLICATIONS & PRESENTATIONS

McCann, B. T., Davis, J., Osborne, D., Durham, C., **O'Brien, M.**, and Raymond, N. A. (2020). "Quantifying climate change relevant humanitarian programming and spending across five highly disaster vulnerable countries." *Disasters*. doi.org/10.1111/disa.12453

Poster presentations (2016 and 2019), American Geophysical Union Fall Meeting, San Francisco, CA

SKILLS

Certifications: Remote Pilot Certificate, small UAS (FAA, exp. 6/2021). Previous Wilderness First Aid cert.

Software: ArcGIS 10.x + Spatial Analyst + Network Analyst | ArcGIS Online | Python + arcpy | R | ENVI 5.4 | Minitab 18 | Novice in: Google Earth Engine and QGIS

Geospatial: Image interpretation & classification (supervised and unsupervised) | Navigation and field data collection with GPS (Trimble, Garmin), ArcGIS Collector, Avenza, and paper maps | Data management & analysis