Anne-Marie Parkinson

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EDUCATION

Master of Environmental Science and Management (Expected 2021)
Bren School of Environmental Science & Management – University of California, Santa Barbara
Specialization: Conservation Planning | **Focus**: Data Science
Fellowship: Forest and Sustainability Fellow (Awarded $25,000)

Bachelor of Science in Environmental Studies (June 2017)
University of California, Santa Barbara
Emphasis: Wildlife, Ecosystems and Habitat Restoration

ENVIRONMENTAL RESEARCH EXPERIENCE

Research Associate, UCSB Earth Research Institute, Santa Barbara, CA (12/18–current)

- Developed a research experiment by collaborating with 4 professors and an USFS ecologist to determine the best environmental conditions for restoration of an endemic conifer (*Psuedotsuga macrocarpa*)
- Planted approximately 2,000 conifer saplings using an experimental design in Los Padres National Forest (LPNF) with a 4-person field team in order to improve restoration success
- Extracted over 20 environmental and topographic variables for 2,200 conifer stands using ArcGIS to understand how topography and climate impact fire mortality of *P. macrocarpa*
- Created a model in R using random forest machine learning to predict conifer mortality based on the extracted variables to determine which variables contribute to fire-induced mortality
- Manage team of 5 undergraduate students who collect data using Google Earth, ArcGIS, and R

Project Manager, UCSB Geography Department, Santa Barbara, CA (5/18–2/19)

- Interviewed, trained, and led a 3-person field crew to conduct vegetation surveys of chaparral, conifers, and oaks in remote areas of LPNF for a project funded by National Fish and Wildlife Foundation (NFWF)
- Modified the data collection protocol from CSU Pomona to increase efficiency and significantly improve the accuracy of the data collected on species abundance
- Conducted ground truthing to examine if oak skeletons post-fire cause remote sensors to underestimate actual vegetation regrowth and collected additional ground truthing data to compare accuracy of different remote sensing techniques at monitoring post-fire recovery; results were summarized in co-workers thesis
- Wrote 15-page project summary combining extensive literature review with data analyzed from R and maps created in ArcGIS, which was then communicated in a 10-minute presentation to 85 representatives from NFWF and USFS at a research symposium

PUBLICATIONS

- Monitoring Post-Fire Recovery of Chaparral and Conifer Species Using Field Surveys & Landsat Time Series
- Assessment of type conversion and conifer regeneration in stands with high burn severity 10 years after a large, mixed-severity wildfire in southern California (in prep.)
- Use of shade fractions to detect fire-induced type conversion and monitor conifer regrowth compared to traditional remote sensing techniques (in prep.)

AFFILIATIONS & LEADERSHIP

Co-Chair and Undergraduate Representative, The Green Initiative Fund (10/15–6/17)
Newsletter Chair & Scholarship Chair, Gamma Phi Beta, Delta Psi Chapter (9/13–6/16)

SKILLS & QUALIFICATIONS

Computer: ArcGIS, QGIS, ENVI/remote sensing, R, Proficient in Word, Excel, and PowerPoint
Qualifications: Advanced data analysis and statistics, Botany, Dichotomous keys, Writing scientific papers, Literature review,
Certifications: SCUBA, Open Water and Advanced certification (2013-current)
Travel: Australia, New Zealand, southeast Asia, western Europe (1/18-4/18)