

# Kenneth A. Marchus

Earth Research Institute and  
Department of Ecology, Evolution, and Marine Biology,  
University of California Santa Barbara,  
Santa Barbara, CA 93106

E-mail: [Kenneth.marchus@lifesci.ucsb.edu](mailto:Kenneth.marchus@lifesci.ucsb.edu)

## **Education**

2013-Present M.A., Evolution, Ecology and Marine Biology, University of California, Santa Barbara

2009 B.A., Geography with Emphasis: Geographic Information Systems, University of California, Santa Barbara

2007 A.A., Liberal Studies, Santa Barbara City College

## **Honors**

Winter 2014 TA Fellowship, Department of Molecular, Cellular and Developmental Biology and Evolution, Ecology and Marine Biology, University of California, Santa Barbara

Fall 2013 TA Fellowship, Department of Molecular, Cellular and Developmental Biology, University of California, Santa Barbara

2007 The Dean's List, Santa Barbara City College

## **Professional Experience**

- Teaching Assistant for MCDB 1aL – Intro Bio Lab, Fall 2013
- Lab Manager and Lab Technician, Schimel Lab, University of California, Santa Barbara, Earth Research Institute and The Department of Evolution, Ecology and Marine Biology, 2011 – Current <https://labs.eemb.ucsb.edu/schimel/josh/index.html>
- GIS Consultant, Self-employed, 2012 – Current
- Soil Lab Technician, GIS Analyst and Fieldwork, University of California, Santa Barbara Geography Dept., 2011 – 2011
- GIS Analyst, Royal Consulting, 2011 – 2012
- GIS and remote sensing specialist, GeoDigital International Corp  
2009 – 2010
- Intern for the Maps and Imagery Library, University of California, Santa Barbara  
2009 – 2009
- Research Assistant, University of California, Santa Barbara, Still Lab  
2008 – 2009
- Native plant nursery field technician, Santa Barbara Natives, 2007 – 2010
- Physical Geology and Geography Tutor, Santa Barbara City College  
2006 – 2007
- Carpentry and General Construction, Takaichi Crowell Construction  
2002 – 2007

***Publications***

In progress

***Service & Outreach***

Biology Mentorship Association (BIOME)

Volunteer with seismic research: deployed portable seismometers, monitored equipment and gathered data (Earth Research Institute).

S-cool Garden Volunteer, talk and composting demo for two elementary school classes

Coast Geologic Society Monthly Seminar Series, 2005 – 2007

Tutor in Physical Geology and Geography for SBCC, 2006 – 2007

***Additional Educational Activities***

Marine Geospatial Ecology Tools Seminar and Workshop, 2012

West Coast Chapter of International Society of Arboriculture Seminar, 2011

***Certifications & Training***

Certified Arborist No. WE-9533A

Environmental Health & Safety Training: General Safety Responsibilities and

Resources, Lab Safety for Chemical Users, Autoclave Safety, Radiation Safety, Hazardous Waste Refresher

***Research Interests***

Biogeochemistry

Remote sensing of the environment

Geographic information systems

Ecological restoration

***Methods Experience***

Soil collection, processing, nutrient extraction, bulk density, particle size, cation exchange capacity, exchangeable bases, gravimetric water content, water holding capacity, infiltration rates, and pH measurements

Microbial biomass determination using the chloroform extraction technique

Dissolved organic phosphorous

Total phosphorous, nitrogen and carbon

Total microbial P, N and C

Enzymes assays, hydrolytic and oxidative

Carbohydrate extractions

Incubation and CO<sub>2</sub> respiration

Plant identification using aerial imagery

Orthorectification of aerial imagery

## **Kenneth A. Marchus**

Map making and modeling using ArcGIS  
LIDAR point cloud classification using Microstation

### ***Instrument Experience***

Shimadzu, TOC-V CSN, Total Organic Carbon and Nitrogen Analyzer  
Lachat QuikChem 8500 (NO<sub>3</sub>, NH<sub>4</sub>, PO<sub>4</sub>)  
Tecan, Infinite M200 Pro, plate reader for enzyme assays and phosphorous analysis  
Perkin Elmer, 1420 Multilabel Counter – Victor<sup>3</sup> plate reader for phosphorous analysis  
Fison, NA 1500 Series 2, Elemental Analyzer, Total Carbon & Nitrogen  
Shimadzu, Gas Chromatograph  
HP 6890/5973 GC-MS  
LI-COR, LI-820 CO<sub>2</sub> Gas Analyzer  
Reigel, LIDAR  
Garmin, GPS

### ***Field Experience***

Field Geology: Eastern Sierras, Death Valley, Colorado Plateau and Canadian Rockies  
Site planning and coordinating using remote sensing and GIS  
Fire truck operation and crew volunteer for the Rancho Visitadores  
Fire truck operation at the Sedgwick Reserve  
Research plot set up, monitoring and maintenance  
Soil pit digging, auguring, classification and collection of samples  
Extensive hiking, biking, boating, camping and backpacking  
Field work in remote and harsh locations in Thule, Greenland and Santa Barbara, CA