

BRYAN P. MURRAY

EDUCATION

University of California, Santa Barbara

PhD, Geological Sciences 2014

- Dissertation: *Crustal extension and magmatism during the mid-Cenozoic ignimbrite flare-up in the Guazapares Mining District and Cerocahui basin regions, northern Sierra Madre Occidental, western Chihuahua, Mexico*

University of California, Los Angeles

MS, Geology 2007

- Thesis: *Sedimentology, provenance, and basin development of the synorogenic Peñas and Aranjuez Formations, northern Altiplano, Bolivia*

University of California, Los Angeles

BS, Geology-Paleobiology 2003

ACADEMIC TEACHING EXPERIENCE

California State Polytechnic University, Pomona, Pomona, CA

Assistant Professor 9/2015 – present

- Courses taught:
 - GSC 423/423L: Sedimentary Geology (lecture/lab)
 - GSC 145L: Megascopic Petrography
 - GSC 112/151L: Earth, Time, & Life (lecture/lab)
 - GSC 491L: Field Module to Calico Mountains, CA
 - GSC 255L: Field Methods
 - GSC 499/499L: Tectonics of Sedimentary Basins (lecture/lab)

Mt. San Antonio College, Walnut, CA

Earth Science Lecturer 8/2014 – 12/2015

- Courses taught:
 - Geology 8: Earth Science
 - Oceanography 10: Introduction to Oceanography

Santa Monica College, Santa Monica, CA

Geology Instructor 1/2015 – 7/2015

- Courses taught:
 - Geology 1: Introduction to Physical Geology
 - Geology 4: Physical Geology with lab

Antelope Valley College, Lancaster, CA

Earth Sciences Instructor 8/2013 – 6/2014

- Courses taught:
 - Geology 101: Physical Geology
 - Geology 101L: Physical Geology lab
 - Geology 102: Historical Geology
 - Earth Science 101: Introduction to Earth Science

UC Santa Barbara Department of Earth Science, Santa Barbara, CA

Teaching Associate 3/2011 – 6/2011

- Course taught:
 - Earth Science 2: Principles of Physical Geology

UC Santa Barbara Department of Earth Science, Santa Barbara, CA

Teaching Assistant 1/2008 – 6/2013

- Courses taught:
 - Sedimentary Petrology
 - Sedimentology & Stratigraphy
 - Physical Geology
 - Field Geology Methods
 - History of Life
 - Dinosaurs
 - Historical Geology
 - Oceanography
 - Geological Catastrophes

UCLA Department of Earth & Space Sciences, Los Angeles, CA

Teaching Assistant 9/2005 – 6/2007

- Courses taught:
 - Sedimentary Petrology
 - Introductory Geology
 - Dinosaurs
 - Paleontology

U.S. Peace Corps, Jamaica, West Indies

Peace Corps Volunteer – Environmental Education 7/2003 – 7/2004

- Physical Geography Lecturer for Knox Community College Environmental Science Department
- Assisted an environmental NGO (C-CAM) with creating and implementing a management plan for a newly established protected area (Portland Bight Protected Area)
- Conducted fieldwork including beach profiling to monitor erosion, biological & ecological assessments of cave systems, and evaluating coral reef ecosystems using Reef Check methodology

PROFESSIONAL GEOLOGY & FIELD EXPERIENCE

Fieldwork in Iceland, UCSB Geology Summer Field 2014

- Two weeks of fieldwork including geologic mapping of active and Tertiary-age rift-volcanic systems and
- Assisted with mapping fresh tsunami deposits immediately following a sidewall collapse of Askja caldera

Fieldwork in the Calico Mountains, central Mojave Desert, California 2012

- Five weeks of fieldwork including geologic mapping, measuring stratigraphy, volcanology/sedimentology studies

PhD fieldwork in the Témoris-Cerocahui region, Sierra Madre Occidental, Mexico 2008-2010

- 17 weeks of fieldwork including geologic mapping, measuring stratigraphy, and volcanology studies
- Collaborated with local mining geologists from Paramount Gold & Silver

Hess Corporation, Houston, TX

Geoscience Intern Summer 2009

- Conducted research as a member of the Unconventional Resources and New Global Basins Research Group
- Research included evaluation of hydrocarbon potential for Quaternary-Tertiary basins in eastern Nevada, US

Mission Geoscience, Inc., Irvine, CA

Senior Staff Geologist Summer 2006

- Conducted geotechnical surveys, including seismometer installation and maintenance

SECOR International, Inc., Redlands, CA

Staff Geologist 8/2004 – 9/2005

- Conducted Phase I and II Environmental Site Assessments: catalogued and analyzed soil samples for hydrocarbon contamination on Chevron gasoline station sites using EPA standard testing methods

MS fieldwork in the Altiplano, central Andes, La Paz, Bolivia 2006

- Seven weeks of fieldwork including geologic mapping, measuring stratigraphy, and sedimentology studies

BS fieldwork in the Bristol Range, eastern Nevada for UCLA Geology Summer Field 2002

- Six weeks of fieldwork including geologic mapping, stratigraphy, cross-sections and report on field area

PUBLICATIONS & ABSTRACTS

Murray, B.P., 2016, The Pickhandle and Jackhammer formations in the northern Calico Mountains, CA: Evidence of synextensional deposition and volcanism in the central Mojave metamorphic core complex: *Geological Society of America Abstracts with Programs*, Vol. 48, No. 7, doi: 10.1130/abs/2016AM-284572

Murray, B.P., and Busby, C.J., 2016, Synextensional magmatism controlling the localization of epithermal mineralization in the Guazapares Mining District, northern Sierra Madre Occidental, Mexico: *Geological Society of America Abstracts with Programs*, Vol. 48, No. 7, doi: 10.1130/abs/2016AM-287401

Murray, B.P., and Busby, C.J., 2016, Late Oligocene magmatism and extensional basin development during the mid-Cenozoic ignimbrite flare-up in the northern Sierra Madre Occidental silicic large igneous province, Chihuahua, Mexico: *Geological Society of America Abstracts with Programs*, Vol. 48, No. 4, doi: 10.1130/abs/2016CD-274724

Murray, B.P., and Busby, C.J., 2015, Epithermal mineralization controlled by synextensional magmatism in the Guazapares Mining District of the Sierra Madre Occidental silicic large igneous province, Mexico: *Journal of South American Earth Sciences*, Vol. 58, p. 54-71

Busby, C.J., and **Murray, B.P.**, 2014, Synvolcanic crustal extension and mineralization during the mid-Cenozoic ignimbrite flare-up in the northern Sierra Madre Occidental: *Asociación de Ingenieros de Minas Metalurgistas y Geólogos De México symposium*, Durango, Mexico, August 27–30

Murray, B.P., Busby, C.J., and Verde Ramírez, M.A., 2014, Extension and magmatism in the Cerocahui basin, northern Sierra Madre Occidental, western Chihuahua, Mexico: *International Geology Review*, p. 1-25 doi: 10.1080/00206814.2014.941022

Murray, B.P., Busby, C.J., Ferrari, L., and Solari, L., 2013, Synvolcanic crustal extension during the mid-Cenozoic ignimbrite flare-up in the northern Sierra Madre Occidental, Mexico: Evidence from the Guazapares Mining District region, western Chihuahua: *Geosphere*, Vol. 9, No. 5, p. 1201-1235

Murray, B.P., 2013, Evidence of synextensional deposition of the Pickhandle and Jackhammer formations in the northern Calico Mountains, central Mojave Desert, California: *Geological Society of America Abstracts with Programs*, Vol. 45, No. 6, p. 16

Murray, B.P., Busby, C.J., Ferrari, L., and Solari, L., 2010, Tectonic controls on late Oligocene volcanism in the Guazapares Mining District, northwestern Sierra Madre Occidental, Mexico: *Geological Society of America Abstracts with Programs*, Vol. 42, No. 5, p. 344

Murray, B.P., Horton, B.K., Matos, R., and Heizler, M.T., 2010, Oligocene-Miocene basin evolution in the northern Altiplano, Bolivia: Implications for evolution of the central Andean backthrust belt and high plateau: *Geological Society of America Bulletin* Vol. 122, No. 9/10, p. 1443-1462

Busby, C.J., **Murray, B.P.**, and Ferrari, L., 2009, Tectonic controls on volcanic styles of a supervolcano field: the Temoris – Cerocahui region of the Copper Canyon, northern Sierra Madre Occidental (Mexico): *Geological Society of America Abstracts with Programs*, Vol. 41, No. 7, p. 56

Murray, B.P., Busby, C.J., and Sims, D.B., 2009, Tectonic setting of the ignimbrite flare-up and epithermal mineralization in the northern Sierra Madre Occidental (Mexico): preliminary evidence from the Guazapares Mining District, western Chihuahua: *Geological Society of America Abstracts with Programs*, Vol. 41, No. 5, p. 31

Murray, B.P., Busby, C.J., and Sims, D.B., 2009, Extensional setting of the Sierra Madre Occidental silicic large igneous province: Precursor to lithospheric rupture, NSF MARGINS Rupturing Continental Lithosphere: Synthesis and New Perspectives, Charleston, SC, April 30 – May 3

Murray, B.P., and Horton, B.K., 2007, Sedimentology and provenance of the synorogenic Peñas and Aranjuez formations, central Andes, Bolivia: Implications for the timing of Eastern Cordillera denudation and initial basin development in the northern Altiplano: Geological Society of America *Abstracts with Programs*, Vol. 39, No. 6, p. 310

Murray, B.P., Horton, B.K., Gillis, R.J., and Matos, R., 2006, Sedimentology and timing of initial basin development in the northern Altiplano recorded by the synorogenic Peñas and Aranjuez Formations, central Andes, Bolivia: Geological Society of America *Abstracts with Programs*, Vol. 38, No. 7, p. 368

AWARDS & HONORS

- Invited speaker, Mt. San Antonio College Earth Sciences department seminar, 2016
- Citizen Scientist of the Decade Award, Reef Check Foundation, 2015
- Invited field trip leader, Heal the Bay, 2015
- Invited speaker, Navitat Canopy Adventures Wrightwood, CA, 2013
- Invited speaker, UCLA Tectonics seminar, 2011
- Field-based geology research participant, Western Michigan University Geology Department, 2010
- Richard V. Fisher Scholarship for Volcanology, UCSB Department of Earth Science, 2009
- Leal Mertes Memorial Scholarship, UCSB Department of Geography, 2009
- Geological Society of America Research Grant, 2008
- Doctoral Scholar Fellowship, UCSB, 2007
- Preston Cloud Memorial Award, UCSB Department of Earth Science, 2007
- Jackson Award, Geological Society of America Research Grant, 2006
- UCLA Office of Instructional Development Mini-grant, 2006
- Eugene B. Waggoner Scholarship, UCLA Department of Earth & Space Sciences, 2002

COMMUNITY INVOLVEMENT & VOLUNTEER WORK

Reef Check Foundation

Volunteer Research Diver 2003 – Present

- Complete underwater transect surveys on marine fish, invertebrate, and algae species as part of the Reef Check scientific protocol and enter data as a research team diver in California and Jamaica

Heal the Bay

Science & Policy Volunteer 2010 – Present

- Attend state agency hearings, events, and meetings, volunteer at outreach events, beach clean-up volunteer

SKILLS, MEMBERSHIPS & CERTIFICATIONS

- **Professional Memberships:** Geological Society of America: Cordilleran Section, Sedimentary Geology Division, Structural Geology & Tectonics Division; American Geophysical Union
- **Software:** Proficient with ArcGIS, PC and Mac operating systems, Microsoft Suite (Word, Excel, PowerPoint, Access, Publisher), Adobe Suite (Illustrator, Photoshop); experience with ENVI, Petrel
- **Certifications:** American Academy of Underwater Sciences (AAUS) Research SCUBA Diver Certified; PADI Advanced SCUBA Certified; NAUI and PADI Specialty Diver: Reef Check California EcoDiver Certified; First Aid & CPR Certified, Diving First Aid for Professional Divers Certified; OSHA 40-Hour HAZWOPER certification
- **Languages:** Basic conversational Spanish; basic Jamaican Patois
- **International Experience:** Extensive travel and/or volunteer work within Mexico, Peru, Bolivia, Jamaica, Canada, Australia, New Zealand, South Africa, Malawi, Tanzania, Kenya, Zambia, Namibia, Botswana, and Swaziland
- **Activities:** Active SCUBA diver, surfer, hiker, sailor, and backpacker