

DEVON ANNE ORME

Curriculum Vitae

Montana State University
Department of Earth Sciences
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EDUCATION

- Ph.D. Geosciences, University of Arizona (2015)
Certificate in College Teaching, University of Arizona (2014)
M.S. Geosciences, University of Arizona (2011)
B.S. Earth and Planetary Science, *Highest Honors*, University of California Santa Cruz (2009)

APPOINTMENTS

Assistant Professor	Montana State University	2017-Present
Assistant Professor	University of Nevada, Las Vegas	2017
Postdoctoral Scholar	Stanford University	2015-2016
Graduate Research Associate	University of Arizona	2011-2015
Teaching Assistant	University of Arizona	2009-2014
Teaching Assistant	University of California, Santa Cruz	2006-2009

RESEARCH EXPERIENCE

2015-2016 Postdoctoral Scholar, Geological and Environmental Sciences, Stanford University

Mentor: Stephan Graham

Project: Assessing controls on forearc basin subsidence

2011-2015 Ph.D. Geosciences, University of Arizona

Advising Committee: Barbara Carrapa, Peter G. DeCelles, Paul Kapp, Peter W. Reiners and George Gehrels

Dissertation: Basin evolution and exhumation of the Xigaze Forearc and Indus-Yarlung Suture zone, Tibet

2009-2011 M.S. Geosciences, University of Arizona

Advising Committee: Peter W. Reiners, George Gehrels and Jay Quade

Thesis: Effects of External Parent Nuclides on Apatite Helium Dates

2005-2009 B.S. Earth and Planetary Science, University of California Santa Cruz

Advisor: Jeremy K. Hourigan

Thesis: Eocene to late Miocene exhumation of the Southern Coast Ranges, California: Insight from apatite and zircon low-temperature thermochronometry

PUBLICATIONS

- (9) Orme, D.A., Guenther, W., Laskowski, A., Reiners, P.W., (2016) Long-term tectonothermal history of Laramide basement from zircon-He age-eU correlations, *Earth and Planetary Science Letters*, 453, 119-130.
- (8) Orme, D.A. and Laskowski, A.K., (2016) Basin Analysis of the Albian-Santonian Xigaze forearc, south-central Tibet, *Journal of Sedimentary Research*, doi:10.2110/jsr.2016.59.
- (7) Carrapa, B., Robert, X., DeCelles, P.G., Orme, D.A., Thomson, S., Schoenbohm, L., (2016) Asymmetrical exhumation of the Mount Everest region: Implications for the tectono-topographic evolution of the Himalaya, *Geology*, 44, 611-614.

- (6) Leary, R., **Orme, D.A.**, Laskowski, A.K., DeCelles, P.G., Kapp, P., Carrapa, B., Dettinger, M., (2016) Along-strike diachroneity in the deposition of the Kailas Formation in central southern Tibet: Implications for Indian slab dynamics, *Geosphere*, 12(4), 1-26.
- (5) **Orme, D.A.**, Reiners, P.W., Hourigan, J.K., Carrapa, B., (2015) Effects of inherited cores and magmatic overgrowths on zircon (U-Th)/He ages from Greater Himalayan sequence rocks, Mt. Everest region, Tibet, *Geochemistry, Geophysics, Geosystems*, 16(8), 2499-2507.
- (4) Huang, W., van Hinsbergen, D.J.J., Maffione, M., **Orme, D.A.**, Dupont-Nivet, G., Guilmette, C., Ding, L., Guo, Z., Kapp, P., (2015) The Lower Cretaceous Xigaze ophiolites formed in the Gangdese forearc: evidence from paleomagnetism, sediment provenance, and stratigraphy, *Earth and Planetary Science Letters*, 415, 142-153.
- (3) **Orme, D.A.**, Carrapa, B., and Kapp, P.K., (2015) Sedimentology, Provenance and Geochronology of the western Xigaze Forearc, Southern Tibet, *Basin Research*, 27(4), 287-411.
- (2) Carrapa, B., **Orme, D.A.**, Kapp, P., DeCelles, P.G., Cosca, M., Waldrip, R., (2014) Rapid Miocene Burial and Exhumation of the Indus-Yarlung Suture Zone in Tibet, *Geology*, 42(5), 443-446.
- (1) Murray, K.E., **Orme, D.A.**, Reiners, P.W., (2014) Effects of U-Th-Rich Grain-Boundary Precipitates on Apatite Helium Dates, *Chemical Geology*, 390, 135-151.

CONFERENCE PROCEEDINGS

- Orme, D.A.**, Guenther, W.R., Laskowski, A.K., Reiners, P.W., Zircon (U-Th)/He age-eU correlations reveal long-term thermal history of Laurentian basement, Structural Geology and Tectonics Forum 2016, Sonoma, CA, August 2016. *Talk*.
- Orme, D.A.**, Using detrital geochronologic and thermochronologic “Double-Dating” to constrain depositional age, provenance and exhumation signals in ancient forearc basins”, American Geophysical Union, Fall Meeting 2014, Abstract #EP12B-02. *Talk*.
- Orme, D.A.**, Carrapa, B., DeCelles, P.G., Evolution of sedimentary basins along the Indus-Yarlung Suture Zone, southern Tibet: Implications for the timing of the initial stages of the India-Asia Collision, GSA Annual Meeting, Vancouver, October 2014, *Invited Talk*.
- Orme, D.A.**, Carrapa, B., Laskowski, A., Early Cretaceous depositional environments, provenance, and subsidence history of the basal Xigaze Forearc basin, southern, Tibet, GSA Annual Meeting, Vancouver, October 2014. *Talk*.
- Orme, D.A.** and Carrapa, B., Rapid Miocene exhumation of the Indus-Yarlung Suture Zone, Tibet: Evidence from the Xigaze Forearc and Kailas Formation, 14th International Conference on Thermochronology, France, September 2014. *Poster*.
- Orme, D.A.**, Carrapa, B., Reiners, P.W., Hourigan, P.K., Multi-thermochronologic dating of leucogranites from the south Tibetan detachment system at Rongbuk Valley, Mt. Everest, Tibet, GeoDaze 2014, University of Arizona, *Best Tectonics/Geochemistry Talk*, Tucson, AZ, April 2014. *Talk*.
- Orme, D.A.**, Carrapa, B., DeCelles, Evolution of sedimentary basins along the Indus-Yarlung Suture Zone, southern Tibet: Insight from sedimentology and geo-thermochronology, GSA Penrose: Linkages and Feedbacks in Orogenic Processes—A conference honoring the career of Robert D. Hatcher Jr., Asheville, NC, April 2014. *Talk*.

Orme, D.A., Carrapa, B., Kapp, P.K., Gehrels, G., Reiners, P.W., Basin Evolution of the Cretaceous-Early Eocene Xigaze Forearc, southern Tibet, American Geophysical Union, Fall Meeting 2013, Abstract #T11A-2417. *Poster. Outstanding Student Paper Award.*

Orme, D.A., Carrapa, B., Abbey, A., Kapp, P.K., Ding, L., Basin Evolution and Exhumation of the Xigaze Forearc, Southern Tibet: Insight from Sedimentology, Stratigraphy and Geo-Thermochronology, American Geophysical Union, Fall Meeting 2012, Abstract #T51E-2641. *Poster. Outstanding Student Paper Award.*

Orme, D.A., and Carrapa, B., Basin Evolution and Exhumation of the Xigaze Forearc, southern Tibet: Insight from field stratigraphy and thermochronology. Geological Society of America Penrose Conference: Deformation, Fluid Flow, and Mass Transfer in the of Convergent Margins, Italy, March 2012. *Poster.*

Orme, D.A. and Reiners, P.W., Effects of External Parent Nuclides on Apatite Helium Dates: Sources and Solutions. 12th International Conference on Thermochronology, Scotland, August 2010. *Best Student Poster Presentation Award. Poster.*

GRANTS, HONORS AND AWARDS

- GeoDaze Symposium, University of Arizona, Best Overall Talk, 2015
- Department of Geosciences, University of Arizona, Service Award, 2015
- American Association for Petroleum Geologists (AAPG) Student Research Grant, 2014
- Society for Sedimentary Geology (SEPM) Student Research Grant, 2014
- American Geophysical Union Outstanding Student Paper Award, 2013, 2012
- Geological Society of America Student Research Grant, 2012
- Association for Women Geoscientists, Takken Student Research Travel Award 2012
- Arizona Geological Society, Student Poster Award 2012
- Geosciences Galileo Circle Scholar, University of Arizona, 2010, 2012, 2013
- Peter J. Coney Field Award, Department of Geosciences, University of Arizona, 2011
- ConocoPhillips Scholarship, Department of Geosciences, University of Arizona, 2011
- 12th International Conference on Thermochronology, Best Student Poster, 2010
- GeoDaze Symposium, University of Arizona, Tectonics/Geochemistry Session Best Talk, 2010, 2014
- Graduate Student and Professional Council (GPSC), Travel Grant, University of Arizona 2010
- National Association of Geoscience Teachers (NAGT) Field Scholarship, 2008

TEACHING

University of Arizona

- Graduate Teaching Associate (2011- 2014): Sedimentology and Stratigraphy, Historical Geology, Geologic Perspective, Summer Field School
- BASIS High School, Tucson Arizona, Summer Session Earth Science Teacher (2013)
- Graduate Teaching Assistant (2009-2011): Geologic Perspective and Summer Field School
- Department of Geosciences Science Academy Day, Activity Leader (Grades 6-12th), 2009-2012
- Department of Geosciences, SAGUARO Program, Advisor for undergraduate research, 2010-2011

University of California, Santa Cruz

- Teaching Assistant: Summer Field Camp, Oceanography, California Geology, 2006-2009
- California Teaching Internship (6th Grade Earth Sciences, Mission Hill Prep, Santa Cruz, CA), 2007

FIELD EXPERIENCE

Southern Tibet: Sedimentologic, stratigraphic, sequence stratigraphic, and structural analyses and sample collection. 3 Field Seasons, 17 weeks.

Northeast China: Sedimentologic and structural analysis and sample collection. 1 field season, 2 weeks.
California Coast Ranges: Structural mapping and thermochronologic sample collection. 2+ months.
Eastern California: Sedimentologic, structural and glacial instruction. 2+ months.
Western United States (Utah, Wyoming, Nevada): Sedimentologic and structural instruction. 1+ month.
Patagonia (Argentina): Sedimentologic, stratigraphic, and structural analyses. 4 weeks.

PROFESSIONAL ACTIVITIES

Member

Geological Society of America (GSA)
American Geophysical Union (AGU)
Society for Sedimentary Geology (SEPM)
American Association for Petroleum Geologists (AAPG)
Association for Women Geoscientists (AWG)

Journal Reviewer

Earth and Planetary Science Letters; International Geology Review; Geology; Geological Society of America Bulletin; Geology Society of America Special Volumes; Gondwana Research; Geochemistry, Geophysics, Geosystems; Journal of Geophysical Research; Nature Scientific Reports; Tectonics.

Industry Short Courses

Exxon Mobil Field School, Sequence Stratigraphy, Guadalupe Mountains (March 2013)
Exxon Mobil course on Geology and Geophysics Applied in Industry (April 2009)
ConocoPhillips course on Structural Interpretation Fundamentals (March 2010)

SERVICE, OUTREACH AND WORK EXPERIENCE

University of Arizona

- Organizer, Department of Geosciences End of the Year Picnic, 2015
- Panel Member, Office of Instructional Assessment, Academic Interviews, 2015
- Guest Speaker, Department of Geosciences, Graduate student seminar and Orogenic Systems, 2015
- Guest Speaker, Department of Geosciences, Undergraduate SESS Club, February 2013, April 2014
- Associate Graduate Council for the College of Science, Geosciences Representative, 2010-2014, President, 2011-2012; Vice President 2010-2011
- Department of Geosciences, Leader, Field Geology Session, Teacher Symposium, September 2012
- Department of Geosciences, 38th Annual GeoDaze Symposium, Field Trip Coordinator, April 2010
Co-chair, 39th Annual GeoDaze Symposium, 2010-2011; Slideshow speaker 2013-2014
- Department of Geosciences Science Academy Day, Activity Leader (Grades 6-12th), 2009-2012
- Department of Geosciences, SAGUARO Program, Advisor for undergraduate research, 2010-2011
- Department of Geosciences, Sigma-Gamma-Epsilon (SGE) President, 2009-2011
- Department of Geosciences, Incoming Graduate Student Retreat, Organizer/Trip Leader, 2010
- Graduate Associate, University of Arizona Fission Track Laboratory, 2011-Present
- Graduate Assistant, University of Arizona Radiogenic Helium Dating Laboratory, 2009-2011

Tucson, Arizona Community

- Geology Guest Speaker:
 - Hollinger Elementary, March 2015
 - Tucson Country Day School, April 2013, 2014
 - Palo Freire Elementary, February 2013
 - Lawrence Intermediate School, February 2013
 - BASIS High School, January 2013
- Science Fair Judge, St. Michaels Day School, February 2013, 2014, 2015

Los Angeles, California Community

- Louisville High School: Commencement Speaker, 2016; Career Day Speaker, 2016

Active Collaborators (Past 2 years):

Barbara Carrapa (University of Arizona), Fulong Cai (Institute of Tibetan Plateau Research), Peter G. DeCelles (University of Arizona), Majie Fan (University of Texas at Arlington), Stephan A. Graham (Stanford University), William R. Guenther (University of Illinois at Urbana Champaign), Jeremy Hourigan (University of California Santa Cruz), Wentao Huang (Utrecht University), Paul Kapp (University of Arizona), Lin Li (University of Texas at Arlington), Ding Lin (Institute of Tibetan Plateau Research), Kendra E. Murray (University of Arizona), Peter W. Reiners (University of Arizona), Delores Robinson (University of Alabama), Douwe van Hinsbergen (Utrecht University).

Graduate Students Supervised:

Gourab Bhattacharya	Ph.D. Candidate	University of Alabama	Committee member, present
Audrey Warren	Ph.D. student	University of Nevada, Las Vegas	Committee member, present
Shaimaa Abd El Haleem	Ph.D. student	University of Nevada, Las Vegas	Committee member, present
Susan Hertfelder	Ph.D. student	University of Nevada, Las Vegas	Committee member, present

Undergraduate Students Supervised: Courtney King, B.S. 2011, Mariah Christina Armenta, B.S. 2015 (primary supervisor Barbara Carrapa), Simon Stickroth, B.S., 2013 (primary supervisor Barbara Carrapa), Patrick Boyd, B.S. 2014 (primary supervisor Peter W. Reiners)