

## Julia A. Baldwin

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### CONTACT INFORMATION

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University of Montana  
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### EDUCATION

**Massachusetts Institute of Technology**, Cambridge, Massachusetts  
Ph.D., Geology, 2003

**University of North Carolina**, Chapel Hill, North Carolina  
B.S. with Highest Honors and Distinction, Geology, 1996

### RESEARCH AND PROFESSIONAL EXPERIENCE

**University of Montana**, Missoula, Montana  
*Associate Dean, College of Humanities and Sciences* August 2018 - present  
*Associate Professor, Department of Geosciences* October 2012 - present  
*Assistant Professor, Department of Geosciences* August 2005 - September 2012

**University of Maryland**, College Park, Maryland  
*Post-doctoral Research Associate* September 2003 - August 2005

**Massachusetts Institute of Technology**, Cambridge, Massachusetts  
*Research Assistant* September 1997 - August 2003

**Kentucky Geological Survey**, Lexington, Kentucky  
*Geologist, Coal and Minerals Section* October 1996 - August 1997

### HONORS AND AWARDS

- Sabbatical Award, 2013-14
- Mineralogical Society of America Distinguished Lecturer, 2012-2013
- Helen and Winston Cox Educational Excellence Award, 2008
- Merit Award for outstanding faculty performance, 2008, 2009, 2011, 2013, 2016
- National Science Foundation Graduate Research Fellowship, 1998-2001
- Mineralogical Society of America Research Grant in Petrology, 2000
- Sigma Xi Research Grant, 1996
- UNC Undergraduate Research Award, 1996
- UNC Undergraduate Science Opportunity Fellowship, 1995
- Department of Energy Science and Engineering Research Semester Intern, 1995

### COURSES TAUGHT

- Geo 120 - Environmental Geology (University of Maryland), 3 credits (2004, 2005)
- Geo 225/226 - Earth Materials, 4 credits (2005, 2007, 2009-2013, 2015-2018)
- Geo 100N - General Geology, 2 credits (2006, 2008)
- Geo 101N - General Geology Lab, 1 credit (supervised TAs for 13 sections of the lab) (2008)
- Geo 305/306 Igneous and Metamorphic Petrology, 4 credits (2006-2008, 2010-2012, 2014, 2016, 2018)
- Geo 522 - Metamorphic Terrane Analysis, 3 credits (2007, 2010)
- Geo 495 - Introduction to the Geosciences for K-8 Teachers, 3 credits (Summer 2007, 2010)
- Geo 582 - Miocene Tectonics of the Western U.S., 3 credits (2008)
- Geo 491 - Geosciences Colloquium, 1 credit, coordinated speaker seminar (2009)
- Geo 580 - Topics in Mineralogy and Petrology, 3 credits (2010, 2013)
- Geo 595 - Geosciences Instruction and Professional Learning Communities for K-8 Teachers, 3 credits (2010, 2011)
- Geo 429 - Field Geology, 6 credits (Summer 2011, 2012, 2013)

- Geo 499 - Optical Mineralogy, 3 credits (2012)
- Geo 101N - Intro to Physical Geology Honors, 3 credits (2017)
- Geo 102N - Intro to Physical Geology Honors Lab, 1 credit (2017)
- Independent Study (Geo 392/492), Internship (Geo 498), Undergrad Thesis (Geo 499), Graduate Thesis (Geo 599), Advanced Problems (Geo 597), (1-3 credits; 2005-2018)

#### FUNDING HISTORY

- U.S.G.S. EDMAP, 2017-2018, “Establishing the Precambrian basement architecture of the central Ruby Range by geologic mapping of the Mine Gulch quadrangle, Madison County, MT”, \$17,500
- Student Instructional Equipment Fees, 2014-15, Purchased petrographic microscopes, crystallography software, rocks saws and a grinder/polisher for teaching mineralogy and petrology, \$30,861
- National Science Foundation, EAR-Petrology & Geochemistry #1427145, 2014-18, “Collaborative Research: The Building of a Continent: The Archean to Proterozoic Growth and Modification of Western Laurentia”, PI, \$146,115 UM portion (WSU portion \$200,982)
- Keck Geology Consortium Undergraduate Research Project, Tectonics of the Ruby Range, MT, \$50,000 (co-funded by NSF; awarded and administered through Amherst College)
- Student Instructional Equipment Fees, 2013-14, Purchased thin sections, digital cameras, and computer hardware for teaching petrology, \$12,139
- Student Instructional Equipment Fees, 2012-13, Purchased petrographic microscopes for teaching mineralogy, \$17,946
- National Science Foundation, EAR-OIA #112717, 2011-2014, “MRI: Acquisition of an SEM-EDS-CL for interdisciplinary research and training in materials imaging and chemical analysis”, PI, \$420,698 (NSF \$295,424, UM \$125,274)
- Student Instructional Equipment Fees, 2011-12, Purchased petrographic microscopes for teaching mineralogy, \$16,600
- NSF EPSCoR Undergraduate Research Grant, 2010-2011, “U-Pb geochronology of the Bass Creek anorthosite and associated rocks near Florence, Montana : Implications for the evolution of the Bitterroot Range”, \$1,500
- U.S.G.S. EDMAP, 2011-2012, “Documenting the eastern boundary of Eocene extension in the Clearwater complex, northern Idaho, by geologic mapping of selected portions of the Bathtub Mountain, Peggy Peak, Mallard Peak, and Pole Mountain quadrangles”, \$9,395
- Faculty Instructional Development Grant, Spring 2011, “Support for pedagogical workshop: Teaching Mineralogy, Petrology, and Geochemistry in the 21st Century”, \$1,128
- Student Instructional Equipment Fees, 2010-2011, Purchased petrographic microscopes for teaching mineralogy, \$16,500
- National Science Foundation, EAR-Tectonics #1019669, 2010-2013, “Metamorphic Core Complexes in Context: Incorporating Gravitational Collapse into the Orogenic Cycle”, PI, \$362,031
- National Science Foundation, DUE-Math and Science Partnership Program #0634587, 2006-2013, “Big Sky Science Partnership”, co-PI (UM lead PI from 2009-13), Total award \$5.78M
- Student Instructional Equipment Fees, 2009-2010, Purchased petrographic microscope for teaching mineralogy, \$5,500
- Faculty Instructional Development Grant, Spring 2008, “Support for pedagogical workshop: Teaching Introductory Geosciences in the 21st Century”, \$880
- University Grants Program, 2008-2009, “Carbonation of Serpentinites as a Natural Analog for Carbon Sequestration”, \$3,500
- PACE Mentoring Grant for travel to Melbourne, Australia, 2008, \$6,000
- Faculty Instructional Development Grant, Spring 2007, “Support for pedagogical workshop: Teaching about the Early Earth”, \$944
- Student Instructional Equipment Fees, 2007-2008, Purchased petrographic microscope for teaching mineralogy, \$5,000
- University Grants Program, 2007-2008, “Flow of the Lower Continental Crust in the Snowbird Tectonic Zone, Canada”, \$1,650
- NSF EPSCoR Undergraduate Research Grant, 2006-2007, “Metamorphism in the Skalkaho region of the southern Sapphire Range, Montana”, \$1,200
- Student Instructional Equipment Fees, 2006-2007, Purchased petrographic microscope with dig-

- ital camera for teaching mineralogy, \$12,000
- University Grants Program, 2006, “Building the North American continent: Investigating the nature of tectonic boundaries in the Tobacco Root Mountains, southwest Montana”, \$2,000
- U.S.G.S. EDMAP, 2006-2007, “Investigating interactions between magmatism and metamorphism in the Bitterroot core complex and adjacent plutons by mapping selected portions of the Carlton Lake, Dick Creek, and West Fork Butte USGS 7.5’ Quadrangles”, \$10,700
- Mineralogical Society of America Research Grant in Petrology, 2000, \$3,500

**DIRECTION OF STUDENT RESEARCH      Graduate Dissertations approved as Primary Advisor**

Connie Brown, M.S. 2008, The construction of a plutonic complex in a continental arc setting: The Skookum Butte Stock, western Montana

Erin Haney, M.S. 2008, Pressure-Temperature evolution of metapelites within the Anaconda metamorphic core complex, southwestern Montana

Victor Guevara, M.S. 2012, Structural, thermochronological, and stratigraphic constraints on the evolution of the Clearwater metamorphic core complex, Idaho

Whitney Bausch, M.S. 2013, Petrology, geochemistry, and age of extension in the Lost Trail Pass dike swarm, southwest Montana

David Reioux, M.S. 2014, Metamorphic evolution of Precambrian rocks in the southern Highland Mountains, Montana, and implications for Proterozoic tectonics

Martin (Drew) Cramer, M.S. 2014, Proterozoic tectonometamorphic evolution of the Ruby Range, SW Montana, USA: Insights from phase equilibria modeling and in situ monazite petrochronology

Liane Stevens, Ph.D. 2015, Pressure-temperature-time constraints on metamorphism, anatexis, magmatism, and exhumation in the Priest River complex, northern Idaho, and comparison with geodynamic models

**Graduate Dissertations approved as Committee Member**

- Emily Geraghty Ward, Ph.D. 2007 (defense committee member)
- Johnny Maclean, Ph.D. 2007 (chair of written and oral comps, defense committee member)
- Julian McCune, M.S. 2008 (committee member)
- Michelle Kotler, Ph.D. 2009 (chair of written comps, oral comps member)
- Barry Reno, Ph.D. 2009, University of Maryland (external member for comps)
- Doc Richardson, Ph.D. 2009 (committee chair of written comps, orals)
- Lewis Kogan, M.S. 2010 (committee member)
- Warren Roe, M.S. 2010 (committee member)
- Matthew DePaoli, Ph.D. 2011, University of Sydney (external reader)
- Joel Cubley, Ph.D. 2012, University of Calgary (external member)
- Zackary Wall, M.S. 2012 (committee member)
- Stephanie LaSalle, Ph.D., 2013, Memorial University (external member)
- Mitchell Fyock, M.S. Geography 2013 (committee member)
- Laura Evilsizer, M.S. Anthropology 2016 (committee member)

**Science Reader for capstone project for M.S. in Science Education (at MSU):**

- Mary Maier, M.S.S.E., 2010
- Paige Price, M.S.S.E., 2010
- Catherine Schuck, M.S.S.E., 2010

**Advisor for Undergraduate Senior Thesis Research**

John Dye, B.S., 2007  
Joel DesOrmeau, B.S., 2011  
Carly Osborne, B.S., 2013  
Elise Fitzpatrick, B.S., 2013  
Jennifer Meidenger, B.S., 2013  
Brennus Voarino, B.S. International Field Geosciences, 2014  
Brianna Berg, B.S., 2015  
Co-supervised six undergraduate theses as part of 2014-15 Keck Geology Consortium Project  
Siobhan Burke, B.S. International Field Geosciences, 2016  
Megan Dolan, B.S. International Field Geosciences, 2017  
Sean O'Callaghan, B.S. International Field Geosciences, 2017  
Kim Bolhuis, B.S., 2018

#### **Other Graduate Committees - Committee Member or Chair**

Nora Dwyer, M.S. expected 2018 (chair)  
Sara Stotter, M.S. expected 2018 (chair)  
Brianna Crenshaw, M.S., expected 2020 (chair)  
Kara Johannesen, M.S. Anthropology, expected 2018 (committee member)  
Ellen Knappe, Ph.D., expected 2018 (comprehensive exam committee member)

#### **Student grants**

Connie Brown - 2007 Geological Society of America Research Grant, \$1,000

Erin Haney - 2006 Geological Society of America Research Grant, \$1,500; 2006 Tobacco Root Geological Society Grant, \$500

Joel DesOrmeau - 2008 Davidson Honors College Watkins Scholar, \$2,000; AAPG research grant, \$500

Carly Osborne - 2010 Davidson Honors College Watkins Scholar, \$2,977; NSF REU Yellowstone participant

David Reioux- 2010 Geological Society of America Research Grant, \$3,400; Tobacco Root Geological Society, \$500; Charles Vitaliano Research Grant (Indiana University), \$2,000; Wyoming Geological Society, \$500; Colorado Scientific Society, \$526

Liane Stevens - 2010 Tobacco Root Geological Society, \$500; 2013 Geological Society of America Research Grant, \$1,875

Victor Guevara - 2011 Geological Society of America Research Grant, \$4,000; Tobacco Root Geological Society, \$500; Colorado Scientific Society, \$1000; Belt Association, \$400

Matt Ruskey - 2011 AAPG research grant, \$500

Whitney Bausch - 2012 Geological Society of America Research Grant, \$1500; Wyoming Geological Society, \$1,000

Martin Cramer - 2013 Tobacco Root Geological Society, \$1,000; Colorado Scientific Society, \$1,000; Wyoming Geological Society, \$1,000

Brianna Berg - 2014 Davidson Honors College/Montana Space Grant Consortium Research Award, \$1,000

Nora Dwyer - 2016 Tobacco Root Geological Society, \$1,000; Geological Society of America Re-

search Grant, \$1,775; Belt Association, \$1,000

Sara Stotter - 2017 Indiana University Vitaliano Grant, \$2,000; 2017 Wyoming Geological Society David J. Love Field Geology Fellowship, \$1,000; 2017 Geological Society of America Research Grant, \$1,775

#### INVITED TALKS

- Whitman College (Visiting Educator), May 2015
- Washington State University/University of Idaho, January 2015
- Texas A&M, April 2014
- Montana Tech/Montana Bureau of Mines and Geology, October 2013
- Montana State University, February 2013
- University of Arkansas at Fayetteville, February 2013
- Wellesley College, February 2013
- Massachusetts Institute of Technology, February 2013
- Humboldt State University, November 2012
- University of California - Davis, November 2012
- University of Nevada - Reno, November 2012
- University of Montana, November 2012
- McGill University, October 2012
- University of Maine - Orono, October 2012
- Memorial University, October 2012
- University of Montana, October 2010
- University of North Dakota, October 2007
- North Dakota State University, October 2007
- Boise State University, April 2006
- Montana State University, March 2006
- Washington State University, March 2006
- University of Montana Chemistry Department, February 2006
- University of Montana Women in Science Seminar, November 2005
- Montana Tech, October 2005
- Geological Society of Washington, May 2004
- University of Montana, April 2004
- University of Brasflia, June 2003
- Federal University of Rio de Janeiro, June 2003
- University of Maryland, December 2002

#### PROFESSIONAL DEVELOPMENT WORKSHOPS

- Teaching Mineralogy, Petrology, and Geochemistry in the 21st Century, August 2011, University of Minnesota
- Theriak-Domino Phase Equilibria Modeling Software, May 2010, University of Calgary
- Teaching Introductory Geoscience in the 21st Century, July 2008, Carleton College
- Teaching about the Early Earth, April 2007, University of Massachusetts  
Developed strategies and methods for integrating the latest research on early Earth into the undergraduate curriculum. Developed key questions and web teaching activities related to teaching about the evolution of Earth's early atmosphere, life, and rocks:  
(<http://serc.carleton.edu/NAGTWorkshops/earlyearth/activities/17846.html>)
- Teaching Phase Equilibria Working Group, March 2007, Montana State University  
Invited participant (10 member working group). Developed web-based teaching materials for mineralogy and petrology curricula ([http://serc.carleton.edu/research\\_education/equilibria/index.html](http://serc.carleton.edu/research_education/equilibria/index.html))
- EarthScope in the Northern Rockies, September 16–18, 2005, Montana State University, Workshop included an overview of the EarthScope program and its facilities and small-group discussion and writing sessions to identify new research and educational initiatives.
- On the Cutting Edge Early Career Faculty Workshop, College of William and Mary, June 2005.

- 21<sup>st</sup> Century Women in Science and Engineering Workshop, sponsored by NSF and GWIS, Washington, D.C., April 2004.
- Where are the Women Geoscience Professors Workshop, sponsored by the Association for Women Geoscientists and the NSF ADVANCE Program, Washington, D.C., September 2003.
- Preparing for an Academic Career in the Geosciences: A Workshop for Graduate Students and Post-doctoral Fellows, NAGT/NSF, Stanford University, August 2003.
- THERMOCALC: Calculating metamorphic phase equilibria, R. Powell, Virginia Tech, May 2001.

## SERVICE

### *Professional Service*

- NSF Tectonics panel review member, April 2018, Washington, D.C.
- Mineralogical Society of America Research Grants Committee, 2017-present
- Geological Society of America Publications Committee Chair, 2017-2018
- Geological Society of America Publications Committee Member-at-Large, 2015-2017
- Field trip leader, May 2016, Metamorphic history of the Belt Supergroup and underlying Paleoproterozoic basement rocks in the western part of the Clearwater complex, Idaho, Rocky Mountain GSA, Moscow, Idaho.
- Session Chair, Rocky Mountain GSA, Moscow, Idaho, May 18, 2016, Constraints on the formation, assembly, and evolution of Precambrian Rocks in the Rockies
- Mineralogical Society of America Lecture Program Committee, 2015-2017 (Chair 2016, 2017)
- Mineralogical Society of America Committee on Committees, 2014-15
- NSF Tectonics panel review member, October 2014, Washington, D.C.
- Co-chair Recent Advances in Structure, Tectonics, and Metamorphism of the northern Rockies session, Rocky Mountain and Cordilleran Joint Meeting, Geological Society of America, May 19-21, 2014
- Mineralogical Society of America Distinguished Lecturer, 2012-13
- NSF Tectonics panel review member, October 2012, Washington, D.C.
- Co-convener, Goldschmidt 2012 Annual Meeting, Montreal, Quebec, Evolution and differentiation of the continental crust: A celebration of the contributions by Michael Brown, with Christine Siddoway (Colorado College) and Richard White (University of Mainz)
- NSF Tectonics panel review member, April 2012, Washington, D.C.
- NSF Tectonics panel review member, April 2011, Washington, D.C.
- Geological Society of America Graduate Student Research Grant Committee, 2009-2012  
Reviewed approximately 50 grant proposals per year and made funding decisions on the allocation of over \$600,000 in grant funding per year
- NSF Petrology and Geochemistry panel review member, March 2008, Washington, D.C.
- Lithos editorial board member, 2008-2011
- Teaching Phase Equilibria working group, 2007, Invited participant (10 member working group).  
Developed web-based teaching materials for mineralogy and petrology curricula: [http://serc.carleton.edu/research\\_education/equilibria/index.html](http://serc.carleton.edu/research_education/equilibria/index.html)
- Guest co-editor, Lithos Special Issue: Compositional Variation in Metamorphic Accessory Phases: A Multi-Faceted Petrogenetic Recorder, with Joe Pyle (RPI)
- Co-convener, Spring 2004 AGU meeting, Compositional Variation in Metamorphic Accessory Phases: A Multi-Faceted Petrogenetic Recorder, with Joe Pyle (RPI)
- Reviewer for manuscripts, proposals, and textbooks:  
Austrian Research Council, Murdock Charitable Trust, NSF Earthscope, Tectonics, Petrology and Geochemistry, Instrumentation & Facilities, and Education & Human Resources, NSERC Canada, Canadian Journal of Earth Sciences, Chemical Geology, Contributions to Mineralogy and Petrology, Earth and Planetary Science Letters, European Journal of Mineralogy, G-Cubed, Geochimica Cosmochimica Acta, Geological Society of America Special Papers, Geology, GSA Bulletin, Geosphere, Gondwana Research, Journal of Metamorphic Geology, Journal of Petrology, Lithos, Lithosphere, Mineralogical Magazine, Precambrian Research, Tectonics, Textbooks: Exploring Earth by Steve Reynolds, Essential Earth by Grotzinger and Jordan, Zumberge Laboratory Manual for Physical Geology

*University Service*

- Director, Geosciences Scanning Electron Microscope Lab, 2012-present
- Toelle-Bekken Award Committee, 2016, 2017
- Faculty Evaluation Committee, 2015-2017
- Search Committee, Geophysics, 2015
- Departmental Head Undergraduate Advisor, 2014-2018
- Search Committee, EBL Lab Manager, 2014
- Departmental Undergraduate Advisor, 2005-2010, 2012-13
- Invited Speaker at College of Arts & Sciences Evening of Thanks, May 2013
- Presented at College of Arts & Sciences Advisory Board Meeting, Sept. 2012
- Faculty Evaluation Committee, 2010-2013
- Intermountain Junior Science Symposium Reader, 2009
- Helen and Winston Cox Award selection committee, 2009
- Chair, Department Curriculum Committee, 2007-2009
- Department Curriculum Committee, 2010
- Faculty Advisor, Geology Club, 2007-2008
- Search Committee, Near Surface Processes, 2006

*K-12 and Public Outreach*

- Instructor at Camp Washington for 6th grade middle school students, Spring 2018
- Invited speaker for Rattlesnake Elementary (Rocks & Minerals), Spring 2018
- Developed mineral display for Mansfield Library on Minerals & Human Health, Spring 2018
- Invited speaker for Clark Fork School after school program (Rocks & Minerals), Spring 2014
- MCPS Gifted Ed Workshop, Spring 2009, 2010, 2012, 2013, 2014
- Big Sky Science Partnership (BSSP) Higher-Ed Science Faculty Partner and co-PI, Feb. 2007 - Sept. 2013  
NSF-funded 5-year Math & Science Partnership program. The BSSP partners K-8 teachers, tribal communities, and higher education faculty to improve elementary and secondary science education in Montana <http://www.umt.edu/bssp/>.
- Served as sciences reader for M.S.S.E. (Montana State University) capstone projects for three K-12 teachers, June 2010
- Invited speaker for Rattlesnake Elementary (Rocks & Minerals), Spring 2012
- Invited speaker for the Children's Center, Missoula (Rocks & Minerals), Spring 2012
- Invited speaker for Clark Fork School preschool (Rocks & Minerals), Fall 2009
- Invited speaker for 8th grade science class at C.S. Porter Middle School, January 2008
- Invited speaker for 4th and 5th grade class at Rattlesnake Elementary School, November 2007
- Led geology field trip for teacher and students from Big Sky High School, Fall 2006
- Geosciences presentation to 8th graders, Hamilton Middle School, Spring 2006
- Careers in Geosciences presentation to 11th and 12th graders, Big Sky High School, Spring 2006

PEER REVIEWED  
PUBLICATIONS

Dumond, G., Williams, M.L., Baldwin, J.A., and Jercinovic, M.J., 2017, Backarc origin for Neoproterozoic ultrahigh-temperature metamorphism, eclogitization, and orogenic root growth, *Geology*, **45**, 943-946.

Stevens, L.M., Bendick, R., and Baldwin, J.A., 2017, Synconvergent exhumation of metamorphic core complexes in the northern North American Cordillera, *Geology*, **45**, 495-498.

Stevens, L.M., Baldwin, J.A., Crowley, J.L., Fisher, C.M., Vervoort, J.D., 2016, Magmatism as a response to exhumation of the Priest River complex, northern Idaho: constraints from zircon U-Pb geochronology and Hf isotopes, *Lithos*, **262**, 285-297.

Baldwin, J.A., Powell, R., White, R.W., and Stipska, P., 2015, Using calculated chemical potential relationships to account for replacement of kyanite by symplectite in high-P granulites, *Journal of*

*Metamorphic Geology*, **33**, 311-330.

Stevens, L.M., Baldwin, J.A., Cottle, J.M., Kylander-Clark, A.R.C., 2015, Phase equilibria modeling and LASS monazite petrochronology: P-T-t constraints on the evolution of the Priest River complex, northern Idaho, *Journal of Metamorphic Geology*, **33**, 385-411.

Covitt, B., Friend, D., Windell, C., and Baldwin, J., 2015, A Scientific Modeling Sequence for Teaching Earth Seasons, *Journal of Geoscience Education*, **63**, 7-17.

Bausch, W.G., Baldwin, J.A., and Foster, D.A., 2013, Synextensional emplacement and cooling of the East Fork dike swarm at Lost Trail Pass, southwest Montana, *Northwest Geology*, **28**, 299-308.

Stipska, P., Powell, R., White, R.W., and Baldwin, J.A., 2010, Using calculated chemical potential relationships to account for coronas around kyanite: an example from the Bohemian Massif, *Journal of Metamorphic Geology*, **42**, 97-116.

Bendick, R., and Baldwin J.A., 2009, Dynamic models for metamorphic core complex formation and scaling: the role of unchannelized collapse of thickened continental crust, *Tectonophysics*, **477**, 93-101.

Baldwin, J.A., and Brown, M., 2008, Age and duration of ultrahigh-temperature metamorphism in the Anápolis-Itaçu Complex, Southern Brasília Belt, central Brazil – constraints from U-Pb geochronology, mineral rare-earth element chemistry and trace element thermometry, *Journal of Metamorphic Geology*, **26**, 213-233.

White, R.W., Powell, R., and Baldwin, J.A., 2008, Calculated phase equilibria involving chemical potentials to investigate the textural evolution of metamorphic rocks, *Journal of Metamorphic Geology*, **26**, 181-198.

Moraes, R., Fuck, R., Brown, M., Piccoli, P., Baldwin, J., Dantas, E.L., Laux, J.H., and Junges, S.L., 2007, Wollastonite-scapolite-clinopyroxene marble of the Anápolis-Itaçu Complex, Goiás: more evidence of ultrahigh-temperature metamorphism, *Revista Brasileira de Geociências*, **37**, 11-17.

Baldwin, J.A., Powell, R., Williams, M.L., and Goncalves, P., 2007, Formation of eclogite and reaction during exhumation to mid-crustal levels, Snowbird tectonic zone, western Canadian Shield, *Journal of Metamorphic Geology*, **25**, 953-974.

Baldwin, J.A., Brown, M., and Schmitz, M.D., 2007, First application of titanium-in-zircon thermometry to ultrahigh-temperature metamorphism, *Geology*, **35**, 295-298.

Mahan, K.H., Williams, M.L., Flowers, R.M., Jercinovic, M.J., Baldwin, J.A., Bowring, S.A., 2006, Geochronological constraints on the Legs Lake shear zone with implications for regional exhumation of lower continental crust, western Churchill Province, Canadian Shield, *Contributions to Mineralogy and Petrology*, **152**, 223-242.

Baldwin, J.A., Bowring, S.A., Williams, M.L., and Mahan, K.M., 2006, Geochronological constraints on the evolution of high-pressure felsic granulites from an integrated electron microprobe and ID-TIMS geochemical study, *Lithos*, **88**, 173-200.

Pyle, J.M. and Baldwin, J.A., 2006, Compositional variation in accessory phases: A multi-faceted petrogenetic indicator, *Lithos*, **88**, vii-ix. (Preface to Special Issue)

Baldwin, J.A., Powell, R., Brown, M., Moraes, R., and Fuck, R.A., 2005, Mineral equilibria modeling of ultrahigh-temperature metamorphism: an example from the Anápolis-Itaçu Complex, central



Brazil, *Journal of Metamorphic Geology*, **23**, 511–531.

Baldwin, J.A., Bowring, S.A., Williams, M.L., and Williams, I.S., 2004, Eclogites of the Snowbird tectonic zone: petrological and U-Pb geochronological evidence for Paleoproterozoic high-pressure metamorphism in the western Canadian Shield, *Contributions to Mineralogy and Petrology*, **147**, 528–548.

Baldwin, J.A., Bowring, S.A., and Williams, M.L., 2003, Petrological and geochronological constraints on high pressure, high temperature metamorphism in the Snowbird tectonic zone, Canada, *Journal of Metamorphic Geology*, **21**, 81–98.

Baldwin, J.A., Whipple, K.X., and Tucker, G.E., 2003, Implications of the shear stress river incision model for the timescale of postorogenic decay of topography, *Journal of Geophysical Research*, **108**, 2158, doi:10.1029/2001JB000550.

Mahan, K.M., Williams, M.L., and Baldwin, J.A., 2003, Contractional uplift of deep crustal rocks along the Legs Lake shear zone, western Churchill Province, Canadian Shield, *Canadian Journal of Earth Sciences*, **40**, 1085–1110.

Baldwin, J.A., Whitney, D.L., and Hurlow, H.A., 1997, Metamorphic and structural evidence for significant vertical displacement along the Ross Lake fault zone, a major orogen-parallel shear zone in the Cordillera of western North America, *Tectonics*, **16**, 662–681.

FIELD TRIP GUIDE Baldwin, J.A., Lewis, R.L., Vervoort, J.D., and McDonie, C.D., 2016, Metamorphic history of the Belt Supergroup and underlying Paleoproterozoic basement rocks in the western part of the Clearwater complex, Idaho, in Lewis, R.L., and Schmidt, K.L., eds., *Exploring the Geology of the Inland Northwest: Geological Society of America Field Guide 41*, p. 251-264.

Moraes, R., Baldwin, J.A., Fuck, R., and Brown, M., The Ultrahigh-Temperature Granulites of the Barro Alto and Anápolis-Itaçu Complexes, Brasília, Brazil, Granulites and Granulites conference, July 13-17, 2006.

Lewis, R.S., Brewer, R.A., Jansen, A.C., Guevara, V.E., Vervoort, J.D., and Baldwin, J.A., Below the Belt: a road log of Archean and Paleoproterozoic rocks in the eastern Clearwater complex, Idaho, Tobacco Root Geological Society, July 31, 2011.

MAPS & REPORTS Guevara, V.E., Ward-Waller, C.B., and Baldwin, J.A., 2012, Geologic Map of the Surveyors Ridge Area, Clearwater and Shoshone Counties, Idaho, Idaho Geological Survey Technical Report T-12-7, 1:24,000.

Brown, C., Fitzpatrick, C., Baldwin, J.A., 2009, Geologic map of parts of the Carlton Lake, Dick Creek and West Fork Butte 7.5' quadrangles, western Montana, Montana Bureau of Mines and Geology, 14 p., 2 sheet(s), 1:24,000.

CONFERENCE PRESENTATIONS Dwyer, N., Baldwin, J.A., Lewis, R.S., and Vervoort, J.D., 2018, Insights into the Proterozoic to Cretaceous evolution of the Clearwater metamorphic core complex, northern Idaho, through petrologic and geochronologic analysis, Geological Society of America Abstracts with Programs. Vol. 50, No. 5.

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