

# Cody C. Routson

School of Earth Sciences and Environmental Sustainability, Northern Arizona University, 625 South Knoles Drive, BOX 4099, Flagstaff AZ 86011.

[Cody.Routson@nau.edu](mailto:Cody.Routson@nau.edu) (928)-899-5086

## Education

- 2014      University of Arizona, Tucson, AZ. Ph.D. Paleoclimatology and Geoscience. Minor: Global Change.  
Advisors: Jonathan Overpeck and Connie Woodhouse  
Title: *The Context for Megadrought: Multiproxy Paleoenvironmental Perspectives from the South San Juan Mountains, Colorado*
- 2006      Prescott College, Prescott, AZ. B.A. Environmental Studies. Minor: Arts and Letters
- 2004      Yavapai College, Prescott, AZ. Transfer: Science, Math, and Spanish

## Appointments

- 2016-Present Assistant Research Professor. Northern Arizona University
- 2014-2016    Postdoctoral Research Scholar. Northern Arizona University

## Publications

Routson, C. C., Woodhouse, C. A., Overpeck, J. T., Betancourt, J. L., & McKay, N. P. (2016). Teleconnected ocean forcing of Western North American droughts and pluvials during the last millennium. *Quaternary Science Reviews*, 146, 238-250

Routson, C. C., J. T. Overpeck, C. A. Woodhouse, and W. F. Kenney (2016). Three Millennia of Southwestern North American Dustiness and Future Implications, *PLOS ONE*, 11(2), e0149573, doi:10.1371/journal.pone.0149573

PAGES2k Consortium (Routson one of 114 contributing authors). (submitted) A global multiproxy database for temperature reconstructions of the Common Era. *Manuscript in review at Nature Scientific Data*

Kaufman, D.S., Axford, Y.L., Henderson, A.C.G., McKay, N.P., Oswald, W.W., Saenger, C., Anderson, R.S., Bailey, H.L., Clegg, B., Gajewski, K., Hu, F.S., Jones, M.C., Massa, C., Routson, C.C., Werner, A., Wooller, M.J., Yu, Z., 2016. Holocene climate changes in eastern Beringia (NW North America) – A systematic review of multi-proxy evidence. *Quaternary Science Reviews*, Special Issue: PAST Gateways (Palaeo-Arctic Spatial and Temporal Gateways) 147, 312–339. doi:10.1016/j.quascirev.2015.10.021

Briner, J.P., McKay, N.P., Axford, Y., Bennike, O., Bradley, R.S., de Vernal, A., Fisher, D., Francus, P., Fréchette, B., Gajewski, K., Jennings, A., Kaufman, D.S., Miller, G., Routson, C.C., Wagner, B., 2016. Holocene climate change in Arctic Canada and Greenland. *Quaternary Science Reviews*, Special Issue: PAST Gateways (Palaeo-Arctic Spatial and Temporal Gateways) 147, 340–364. doi:10.1016/j.quascirev.2016.02.010

Routson, K. J., Routson, C. C., Sheppard, P. (2012). Dendrochronology reveals planting dates of historic apple trees in the southwestern United States. *Journal of the American Pomological Society*, 66(1), 9-15

Routson, C. C., Woodhouse, C. A., Overpeck J. T. (2011). Second century megadrought in the Rio Grande headwaters, Colorado: How unusual was medieval drought? *Geophysical Research Letters*, 38, L22703, doi:10.1029/2011GL050015

## Presentations

Pederson, G.T., Anchukaitis K., St. George, S., McKay, N., Routson, C.C., PAGES NAM2K Group., 2016. Progress towards a tree-ring based North American 2k summer temperature reconstruction. *AmeriDendro Talk*

Routson, C.C., 2015. The Megadrought Environment: Using bio- and geochemical indicators to assess temperature and dust feedbacks during extreme droughts in the southwest U.S. over the past 2000 years. *Northern Arizona University, Chemistry department colloquium talk*

Routson, C.C., Fortin, D., 2015. Stories in the Mud. *Northern Arizona University, SESES department colloquium talk*

Routson, C.C., 2013. The Context for Megadrought: Multiproxy Paleoenvironmental Perspectives from the South San Juan Mountains, Colorado. *University of Arizona, public dissertation defense talk*

Addison, J. A., Hayes, S., Sliwinski, M. G., Routson, C.C., Foster, A. 2013. Iron geochemistry of the Medieval Climate Anomaly varve sequence in Deep Inley, Alaska, using core-scanning XRF, synchrotron  $\mu$ -XRF, and  $\mu$ -XANES spectroscopy. *AGU abstract and poster*

Routson, C.C., Overpeck, J.T. Woodhouse, C. A. 2013. 3000 years of Southwest Dustiness. *University of Arizona, Geodaze talk*

Routson, C.C., Overpeck, J.T. Woodhouse, C. A. 2012. A Climate of Dust: 2500 years of Southwest Dustiness. *AGU abstract and talk*

Routson, C.C., Woodhouse, C.A., Overpeck, J.T. 2012. Second century megadrought in the Rio Grande headwaters: how unusual was medieval drought? *University of Arizona, Laboratory of Tree Ring Research colloquium*

Routson, C.C., Woodhouse, C.A., Overpeck, J.T. 2012. Periods of unusual aridity in the Southwest United States. *University of Arizona, Earth Week Plenary Session talk*

Routson, C.C., Woodhouse, C.A., Overpeck, J.T. 2012. Second century megadrought in the Rio Grande headwaters: how unusual was medieval drought? *Southwest Climate Workshop, Los Alamos National Laboratory, Jemez Spings NM, talk*

Routson, C.C. 2011. The Perfect Ocean for Megadrought. *University of Arizona Graduate student research blitz talk*

Routson, C.C., McKay, N.P., Woodhouse, C.A., Overpeck, J.T. 2011.  
The Perfect Ocean For Megadrought. *AGU abstract and poster*

Routson, C.C., Woodhouse, C.A., Overpeck, J.T., Meko, D.M.,  
Betancourt, J., 2010, Characterizing 2,000 years of high elevation  
climate variability in the South San Juan Mountains, Colorado.  
*Abstract and talk, Mountain Climate Research Conference, Blue  
River, OR*

Routson, C.C. 2010. Second Century Drought. *University of Arizona, Geoscience department brownbag talk*

Routson, C.C. 2009 "Fingerprinting Medieval Climate" *Geodaze talk*

## Research Grants

2016	<i>The Dust Drought Nexus</i> . Private donor. 2016-21 Co-PI.
\$200,000	

2016	<i>Synthesis of Holocene proxy climate records from western North America, 2016-19; NSF Paleo Perspectives on Climate Change. Co-PI.</i>	\$481,822
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## Select Scholarships and Awards

2014	Bisgrove Postdoctoral Scholar Award
\$200,000	

2013	Best Geodaze Climate Talk Award	\$250
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2011	Galileo Circle Scholar Award	\$1000
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2011	Bristlecone Award	\$1000
2010	Keith Katzer Scholarship Fund	\$1500
2009-2012	NSF Graduate Research Fellowship	
	\$90,000	
2009	Wilson Thompson Scholarship Fund	\$1400
2009	Colorado Scientific Society Memorial Research Fund	\$500
2007-2009	Science Foundation of Arizona, Graduate Fellowship	
	\$60,000	
2008	Bert S. Buttler Scholarship Fund	\$1500

#### Teaching

2015-2016	Mentor, assisting Dr. McKay in mentoring two of his graduate students focusing on Southwestern paleoclimate research projects, NAU
2016	Guest Lecturer, <i>Methods in data analysis</i> , NAU
2013	Teaching Assistant, <i>Life on Earth</i> (GEOS 170C), University of Arizona
2013	Guest Panelist/Lecture: <i>A Geologic Perspective</i> (GEOS 170A1)
2012	Teaching Assistant, <i>Oceanography</i> (GEOS 212), University of Arizona
2012	Mentor, NASA space grant program, University of Arizona
2011-2012	Mentor, SAGUARO undergraduate program, University of Arizona
2011	Guest Lecturer: <i>Geography of World Regions</i> (GEOG 251)

#### Media Coverage

2011	Colorado Public Radio, Tucson Public Radio, UA News, LA Times, and Arizona Daily Star
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#### Work Experience

- 2002-2014 Biological consulting including rare plants surveys, rare plants monitoring, tortoise surveys, and rangeland surveys.
- 2006-2007 Pierce Farms. Skilled labor, construction, and maintenance work
- 1996-2005 Routson Company Inc. Carpenter, stonemason, concrete work, crew manager. Prescott AZ.
- 2005 Commercial King and Sockeye Salmon fishing, Bristol Bay, AK
- 2004 Landscaping, Fort Wainwright, Fairbanks Alaska

#### Volunteer

- 2015 Northern Arizona University Undergraduate Symposium Poster Judge.
- 2010-2011 Invited Blogger: *Second Century Southwest Megadrought* and: *Megadrought: Is the Past a Key to Our Future?* Southwest Climate Change Network
- 2009 Sonora Mexico Desert Tortoise Project
- 2008 Arizona Gem and Mineral Show, geologic exhibit for children
- 2002, 2007 Assisted Gary Paul Nabhan with social and environmental initiatives for the Seri Indians, Desemboque and Punta Chueca, Mexico

#### Lab Experience

Experience with EDAX micro-X-ray fluorescence analyzers, Mastersizer grain size analyzers, the Stanford Linear Accelerator, biomarker (GDGT/TEX86) extraction and analysis, pretreating and combusting radiocarbon samples, pretreating and picking chironomid samples, resin imbedding sediments, loss on ignition, and methods of dendrochronology

## Analytical Skills

Matlab, Dendrochronology Program Library, Chemstation, Adobe, Office, spatiotemporal data analysis methods, time series analysis