

R. Kyle Bocinsky, PhD, RPA

Contact Information

111 High Park Way
Missoula, MT 59803

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Research Interests

Computational social science; human dimensions of climate change; paleo-environments; complex systems; plant and animal domestication; southwestern US prehistory; reproducibility

Education

Washington State University, Pullman, Washington

PhD, Anthropology, December 2014

Dissertation title: *Landscape-based Null Models for Archaeological Inference* [pdf]

Committee: Timothy Kohler (chair), Jade d'Alpoim Guedes, Andrew Duff, and Colin Grier

MA, Anthropology, May 2011

Thesis title: *Is a Bird in Hand Really Worth Two in the Bush? Models of Domestication on the Colorado Plateau* [pdf]

Committee: Timothy Kohler (chair), Andrew Duff, Donna Glowacki, and Brian Kemp

University of Notre Dame, Notre Dame, Indiana

Glynn Family Honors Program, 2004–2008

BA, Anthropology, May 2008

Thesis title: *Rodent Stable Carbon-isotope Ratios as a Measure of Maize Production*

Advisor: Mark Schurr

Appointments

Crow Canyon Archaeological Center, Cortez, Colorado

Aug 2018–Present Director of the Research Institute
William D. Lipe Chair in Research

Jan 2017–July 2018 Research Associate

Jan 2016–Dec 2016 Director of Sponsored Projects

University of Montana, Missoula, Montana

Jan 2018–Present Research Associate, Montana Climate Office,
W.A. Franke College of Forestry and Conservation

Desert Research Institute, Reno, Nevada

June 2017–Present Hourly Assistant Research Professor,
Division of Earth and Ecosystem Sciences

Washington State University, Pullman, Washington

Jan 2016–Present Adjunct Research Faculty, Department of Anthropology

Jan 2015–Dec 2015 Post-doctoral Researcher, Department of Anthropology

Aug 2014–Dec 2014 Teaching Assistant, Department of Anthropology

Aug 2009–Jul 2014 Research Fellow, Department of Anthropology

Aug 2008–Jul 2009 Research Assistant, Department of Anthropology

Honors, Awards, & Research Grants

Co-PD, Improving the Efficacy of Climate Information for Water Use Decisions: Developing, Testing, and Institutionalizing New Tools for Producers

2018–2021 United States Department of Agriculture, National Institute of Food and Agriculture, Agriculture and Food Research Initiative program area special competition, *Water for Agriculture: Understanding Decisions and Behaviors Connected with Agriculture and Post-harvest Processing Industry Water Use* (2017-67027-26313).

\$462,539 awarded to UM

Co-PD, Native Waters on Arid Lands: Enhancing Climate Resiliency & Agriculture on American Indian Land

2015–2020 United States Department of Agriculture, National Institute of Food and Agriculture, Agriculture and Food Research Initiative program area special competition, *Water for Agriculture* (2015-69007-23190).

\$2,516,844 awarded to the University of Nevada, Reno

Co-PI, Developing and Deploying SKOPE—

A resource for Synthesizing Knowledge of Past Environments

2016–2020 National Science Foundation special competition, *Resource Implementations for Data Intensive Research in the Social Behavioral and Economic Sciences* (SMA-1347973).

Part of a collaborative research grant between Washington State University, Arizona State University, and the University of Illinois at Urbana-Champaign

\$254,189 awarded to WSU/CCAC, \$1,339,658 total

Cordell Prize

2015 Pecos Conference

Awarded for the best extemporaneous talk presented by an archaeologist 35 years of age or younger

NSF Graduate Research Fellowship

2010–2015 National Science Foundation (DGE-1347973)

\$92,000 stipend and \$32,000 cost-of-education allowance over three years

Graduate Achievement Award in the Social Sciences at the Doctoral Level

2014 College of Arts and Sciences, Washington State University

Awarded to a doctoral student for outstanding academic performance, achievements in research, scholarly, and/or creative activity, and contributions or service to the social sciences, the college and the institution during their advanced degree studies at Washington State University

R.E. Taylor Student Poster Award

2013 Society for Archaeological Science

Award for the best student research poster presented at the Society for American Archaeology meetings displaying innovative contributions to archaeological research through the use of scientific methods

IGERT Program in Evolutionary Modeling Traineeship

2009–2011 National Science Foundation (DGE-0549425)

\$60,000 stipend and \$20,000 cost-of-education allowance over two years

Elaine Burgess Graduate Fellowship in Anthropology

2011 Department of Anthropology, Washington State University, \$1,000

Nicholas Michael Scoales Scholarship in Archaeology

2009 Department of Anthropology, Washington State University, \$1,000

The Rev. Raymond W. Murray, C.S.C. Award in Anthropology

2008 Department of Anthropology, University of Notre Dame

Awarded to the top graduating senior for exemplary work in anthropology

Peer-reviewed Articles

d'Alpoim Guedes, Jade, and R. Kyle Bocinsky

In press. Climate change stimulated agricultural innovation and exchange across Asia. *Science Advances*.

Grimstead, Deanna N., Matthew C. Pailes, and R. Kyle Bocinsky

2017 Refining potential source regions via combined maize niche modeling and isotopes: A case study from Chaco Canyon, NM, USA. *Journal of Archaeological Method and Theory*. On-

- line first, 27 pages. DOI: 10.1007/s10816-017-9359-6. [html]
- d'Alpoim Guedes, Jade and **R. Kyle Bocinsky**
2017 A reply to Bellezza. *Current Anthropology* 58(4):539–539. [html]
- Bocinsky, R. Kyle** and Mark D. Varien
2017 Calibrating Maize Paleoproduction Models using Experimental Data. *Ethnobiology* 37(2):282–307.
- Gillreath-Brown, Andrew and **R. Kyle Bocinsky**
2017 A Dialogue Between Empirical and Model-Based Agricultural Studies in Archaeology. *Ethnobiology* 37(2):167–171.
- Crabtree, Stefani A., **R. Kyle Bocinsky**, Paul L. Hooper, Susan C. Ryan, and Timothy A. Kohler
2017 How to make a polity (in the central Mesa Verde region). *American Antiquity* 82(1):71–95.
- d'Alpoim Guedes, Jade, Stefani A. Crabtree, **R. Kyle Bocinsky**, and Timothy A. Kohler
2016 21st century approaches to ancient problems: Climate and society. *Proceedings of the National Academy of Sciences* 113(51):14483–14491. [html]
- d'Alpoim Guedes, Jade, Sturt Manning, and **R. Kyle Bocinsky**
2016 A 5,500-year model of changing crop niches on the Tibetan Plateau. *Current Anthropology* 57(4):6 pages. [pdf]
- Van Dyke, Ruth M., **R. Kyle Bocinsky**, Tucker Robinson, and Thomas C. Windes
2016 Great houses, shrines, and high places: Intervisibility in the Chacoan World. *American Antiquity* 81(2):205–230. [pdf]
- Bocinsky, R. Kyle**, Johnathan Rush, Keith W. Kintigh, and Timothy A. Kohler
2016 Exploration and exploitation in the macrohistory of the pre-Hispanic Pueblo Southwest. *Science Advances* 2(4):e1501532. [html]
- Schwindt, Dylan M., **R. Kyle Bocinsky**, Scott G. Ortman, Donna M. Glowacki, Mark D. Varien, and Timothy A. Kohler
2016 The social consequences of climate change in the Central Mesa Verde region. *American Antiquity* 81(1):74–96. [pdf]
- Lipe, William D., **R. Kyle Bocinsky**, Brian S. Chisholm, Robin Lyle, David M. Dove, RG Matson, Elizabeth Jarvis, Kathleen Judd, and Brian M. Kemp
2016 Cultural and genetic contexts for early turkey domestication in the northern Southwest. *American Antiquity* 81(1):97–113. [pdf]
- d'Alpoim Guedes, Jade, Guiyun Jin, and **R. Kyle Bocinsky**
2015 The impact of climate on the spread of rice to North-eastern China: A new look at the data from Shandong Province. *PLoS ONE*. 30 June 2015. DOI: 10.1371/journal.pone.0130430. [html]
- d'Alpoim Guedes, Jade, **R. Kyle Bocinsky**, and Ethan E. Butler
2015 Comment on "Agriculture facilitated permanent occupation of the Tibetan Plateau after 3600 B.P." *Science* 348:872. [pdf]
- McPhillips, Timothy, Tianhong Song, Tyler Kolisni, Steve Aulenbach, Khalid Belhajjame, **R. Kyle Bocinsky**, et al.
2015 YesWorkflow: A User-Oriented, Language-Independent Tool for Recovering Workflow Information from Scripts. *International Journal of Digital Curation* 10(1):298–313. doi:10.2218/ijdc.v10i1.370.

Bocinsky, R. Kyle and Timothy A. Kohler
2014 A 2,000-year reconstruction of the rain-fed maize agricultural niche in the US Southwest. *Nature Communications* 5:5618. DOI: 10.1038/ncomms6618. [pdf]

Bocinsky, R. Kyle
2014 Extrinsic site defensibility and landscape-based archaeological inference: An example from the Northwest Coast. *Journal of Anthropological Archaeology* 35:164–176. [pdf]

Cockburn, Denton, Stefani A. Crabtree, Ziad Kobti, Timothy A. Kohler, and **R. Kyle Bocinsky**
2013 Simulating Social and Economic Specialization in Small-scale Agricultural Societies. *Journal of Artificial Societies and Social Simulation* 16(4):4. [html]

Kohler, Timothy A., **R. Kyle Bocinsky**, Denton Cockburn, Mark D. Varien, Stefani A. Crabtree, Kenneth E. Kolm, Schaun M. Smith, and Scott G. Ortman
2012 Modelling Prehispanic Pueblo Societies in their Ecosystems. *Ecological Modelling* 241:30–41. [pdf]

Kohler, Timothy A., Denton Cockburn, Paul L. Hooper, **R. Kyle Bocinsky** and Ziad Kobti
2012 The coevolution of group size and leadership: An agent-based public goods model for Prehispanic Pueblo societies. *Advances in Complex Systems* 15(1–2):29 pages. [pdf]

Book Contributions *peer-reviewed

*Kohler, Timothy A., Stefani A. Crabtree, **R. Kyle Bocinsky**, and Paul L. Hooper
2018 Sociopolitical Evolution in Midrange Societies: The Prehispanic Pueblo Case. In *The Emergence of Premodern States: New Perspectives on the Development of Complex Societies*, edited by Jeremy A. Sabloff and Paula L.W. Sabloff, pp. 133–186. SFI Press, Santa Fe, New Mexico. [pdf]

Kohler, Timothy A. and **R. Kyle Bocinsky**
2017 Crises as opportunities for culture change. In *Crisis to Collapse: The Archaeology of Social Breakdown*, edited by Tim Cunningham and Jan Driessen, pp. 263–273. Presses Universitaires de Louvain, Louvain, France.

***Bocinsky, R. Kyle** and Timothy A. Kohler
2016 Complexity, rigidity, and resilience in the Ancient Puebloan Southwest. In *Viewing the Future in the Past: Historical Ecology Applications to Environmental Issues*, edited by H. Thomas Foster, II, Lisa Paciulli, and David Goldstein. pp. 86–105. University of South Carolina Press, Columbia, South Carolina.

***Bocinsky, R. Kyle**, Jason A. Cowan, Timothy A. Kohler and C. David Johnson
2012 Hunting results: How hunting changes the VEP world, and how the VEP world changes hunting. In *Emergence and Collapse of Early Villages: Models of Central Mesa Verde Archaeology*, edited by T.A. Kohler, and M.D. Varien, pp. 145–152. University of California Press, Berkeley. [pdf]

*Kohler, Timothy A., **R. Kyle Bocinsky**, Stefani A. Crabtree and Ben Ford
2012 Supply, Demand, Return Rates, and Resource Depression: Hunting in the Village Eco-dynamics World. In *Emergence and Collapse of Early Villages: Models of Central Mesa Verde Archaeology*, edited by T.A. Kohler, and M.D. Varien, pp. 129–144. University of California Press, Berkeley. [pdf]

*Cowan, Jason A., Timothy A. Kohler, C. David Johnson, Kevin Cooper and **R. Kyle Bocinsky**
2012 Exercising the Model: Settlement Efficiency and Changes in Locational Practice. In *Emergence and Collapse of Early Villages: Models of Central Mesa Verde Archaeology*, edited by T.A. Kohler, and M.D. Varien, pp. 153–164. University of California Press, Berkeley. [pdf]

Technical Reports

Glowacki, Donna M., **R. Kyle Bocinsky**, Kelsey M. Reese, and Katherine A. Portman
2017 The Mesa Verde Community Center Survey: Summer 2017. Manuscript submitted to Mesa Verde National Park, on file with Crow Canyon Archaeological Center and the University

of Notre Dame.

Glowacki, Donna M., with contributions by Elise Alonzi, **R. Kyle Bocinsky**, and Kelsey Reese
2012 The Mesa Verde Community Center Survey: Final Report. Manuscript submitted to the National Science Foundation and Mesa Verde National Park, on file with Crow Canyon Archaeological Center and Washington State University in compliance with deliverable for NSF Grant DEB-0816400. [pdf]

Glowacki, Donna M. and **R. Kyle Bocinsky**
2011 The Mesa Verde Community Center Survey: 2011 Progress Report. Manuscript submitted to the National Science Foundation and Mesa Verde National Park, on file with Crow Canyon Archaeological Center and Washington State University in compliance with deliverable for NSF Grant DEB-0816400. [pdf]

Reed, Charles A., **R. Kyle Bocinsky** and Donna M. Glowacki
2009 Mesa Verde National Park Community Center Survey: Report and Synthesis. Manuscript submitted to the National Science Foundation and Mesa Verde National Park, on file with Crow Canyon Archaeological Center and Washington State University in compliance with deliverable for NSF Grant DEB-0816400.

Other Publications

Kohler, T. A., Buckland, P. I., Kintigh, K. W., **Bocinsky, R. Kyle**, Brin, A., Gillreath-Brown, A., Ludäscher, B., McPhillips, T. M., and Opitz, R.

In press. Paleodata for and from Archaeology. *Past Global Changes Magazine*.

Bocinsky, R. Kyle

In press. Climate at the Center Place. *Archaeology Southwest*.

Bocinsky, R. Kyle

2018 Skipping stones off improbable histories. *The SAA Archaeological Record* 18(2):17–19. [pdf]

Bocinsky, R. Kyle

2014 Drain your dammed DEMs! Here's how. *Society for Archaeological Sciences Bulletin* 37(1):1–5. [pdf]

Working Papers

Bocinsky, R. Kyle and Timothy A. Kohler

2012 A preliminary reconstruction of seasonal growing degree days for North America, AD 1–1979. [pdf]

Software

Bocinsky, R. Kyle

2018 *FedData: Functions to Automate Downloading Geospatial Data Available from Several Federated Data Sources*. R package version 2.5.4. [http].

Bocinsky, R. Kyle

2017 *paleocar: Paleoclimate Reconstruction from Tree Rings using Correlation Adjusted correlation*. R package version 3.3.0. [http]

Research & Field Experience

Crow Canyon Archaeological Center, Cortez, Colorado

2016–Present Researcher, The Pueblo Farming Project

Data analysis of eight years of experimental maize gardening with Hopi farmers; funded by Colorado SHF grant 15-02-025

Summer 2012 Field Intern, Basketmaker Communities Project

Helped with excavation and education at the Dillard Site, a Basketmaker III community

Directed by: Shanna Diederichs

Location: Montezuma County, Colorado

Excavation days: 45

Summer 2011 Visiting Researcher
Developed a heuristic model of hunting (*heuristic foraging theory*) and began generating revised paleoproduction estimates for the VEPII study areas

Washington State University, Pullman, Washington
2015–Present Post-doctoral Researcher, then Co-PI, *Synthesizing Knowledge of Past Environments*

Cyber-infrastructure design and development, and paleoenvironmental modeling; funded by NSF grants BCC-1439603 and SMA-1347973

Summer 2014 Field Technician, The Largo Gap Archaeological Project
Survey of the community around Largo Gap great house, New Mexico
Directed by: Kristin Safi
Location: Catron County, New Mexico
Survey days: 20

2008–2009 Research Assistant, Timothy A. Kohler
Agent based modeling with the Village Ecodynamics Project; documented and debugged code, developed domestication module, and expanded study areas

Santa Fe Institute, Santa Fe, New Mexico

Summer 2013 Visiting Researcher
Developed a new module for the VEPII simulation linking the coevolution of leadership and group size with a model of group conflict under resource pressure; Sponsored by the John Templeton Foundation grant *The Principles of Complexity*

Summer 2011 Trainee, Graduate Workshop in Computational Social Science
SFI workshop on computational and statistical techniques for modeling social processes
Directed by: John H. Miller and Scott E. Page

Mesa Verde National Park, Mesa Verde, Colorado

Summers 2009, 2011, 2012 & 2017 Field Technician, The Mesa Verde Community Center Survey
Visited and documented large aggregated villages in MVNP and surrounding area
Directed by: Donna M. Glowacki
Location: Montezuma County, Colorado
Monitoring days: 100 (estimated)

Field Museum of Natural History, Chicago, Illinois

Summer 2008 Collections Intern
Facilitated access to collections for visiting researchers, analyzed ceramics, and constructed protective housing for ceramics
Directed by: Scott Demel and Helen Robbins

University of Notre Dame, Notre Dame, Indiana

2007–2008 Research Assistant, Mark A. Schurr
Stable carbon- and nitrogen-isotope analysis of faunal and human remains

Podium & Poster

Glowacki, Donna and **R. Kyle Bocinsky**

2018 The Great Houses of the Mesa Verde Cuesta. In symposium, *Mesa Verde Ancestral Pueblo Villages: Recent Research*. Society for American Archaeology, 83rd Annual Meeting, Washington, DC.

Gillreath-Brown, Andrew, **R. Kyle Bocinsky**, Simon Goring and Tim A. Kohler

2018 Paleotemperature Reconstructions of the Upland United States Southwest for the Last 2,000 Years. In general session, *Environmental Archaeology*. Society for American Archaeology, 83rd Annual Meeting, Washington, DC.

d'Alpoim Guedes, Jade, and **R. Kyle Bocinsky**

2017 Climate Change, Agricultural Innovation and Exchange across Asia. American Geophysical Union, Fall Meeting 2017, New Orleans, Louisiana.

Bocinsky, R. Kyle

2017 "Constraint and Freedom" in the Era of Big Data. In Frison Institute Symposium, *The Future of "Big Data" in Archaeology*. Society for American Archaeology, 82nd Annual Meeting, Vancouver, British Columbia, Canada.

Lipe, William, Laura Ellyson, **R. Kyle Bocinsky**, Robin Lyle and R.G. Matson

2017 Costly Gobbling: Raising Turkeys in the Central Mesa Verde Area. In general session, *The Archaeology of Foodways*. Society for American Archaeology, 82nd Annual Meeting, Vancouver, British Columbia, Canada.

d'Alpoim Guedes and **R. Kyle Bocinsky**

2017 Modeling the Spread of Crops across Eurasia. In Fryxell Award Symposium, *Papers in Honor of Naomi F. Miller*. Society for American Archaeology, 82nd Annual Meeting, Vancouver, British Columbia, Canada.

Varien, Mark. D and **R. Kyle Bocinsky**

2016 The Pueblo Farming Project: Investigating the Agrarian Ecology of the Mesa Verde Region. In symposium, *First Farmers, First Farms: Landscape Ecology of the Early Neolithic*. Society of Ethnobiology, 39th Annual Conference, Tucson, Arizona.

Bocinsky, R. Kyle and Adam Brin

2016 SKOPE: Bringing Continent-scale, Local Paleoenvironmental Data to Researchers and the Public. In symposium, *What Do We Mean by "Digital Curation?"* Society for American Archaeology, 81st Annual Meeting, Orlando, Florida.

d'Alpoim Guedes, Jade, Sturt Manning, and **R. Kyle Bocinsky**

2016 5500 Years of Changing Crop Niches on the Tibetan Plateau. In symposium, *Guava Cat Archaeology: Papers in Memory of Prof. Pochan Chen*. Society for American Archaeology, 81st Annual Meeting, Orlando, Florida.

Ellyson, Laura, Timothy Kohler, and **R. Kyle Bocinsky**

2016 Evaluation of the Village Ecodynamics Hunting and Domestication Models. In general session, *Southwestern Archaeology*. Society for American Archaeology, 81st Annual Meeting, Orlando, Florida.

Van Dyke, Ruth M., **R. Kyle Bocinsky**, Tucker Robinson, and Thomas C. Windes

2016 Great houses, shrines, and high places: Intervisibility across the Chacoan World. 2016 Navajo Nation Archaeology Meeting, Shiprock, New Mexico. 4 March 2016.

Bocinsky, R. Kyle, Jade d'Alpoim Guedes, Karen Adams, Rob Quinlan, Mark Caudell, and Timothy A. Kohler

2016 Can Pueblo Corn Save Ethiopian Farms? Deploying 1,400 Years of Agricultural Knowledge in Service of the Future. In symposium, *Engaged Archaeology through Transnational, Interdisciplinary, and Indigenous Collaborations*. 15th Biennial Southwest Symposium, Tucson, Arizona.

Schwindt, Dylan M., **R. Kyle Bocinsky**, Scott G. Ortman, Donna M. Glowacki, Mark D. Varien, and Timothy A. Kohler

2016 Interactions among society, climate, production, and population: A case study from the central Mesa Verde region with contemporary implications. In symposium, *Engaged Archaeology through Transnational, Interdisciplinary, and Indigenous Collaborations*. 15th Biennial Southwest Symposium, Tucson, Arizona.

Bocinsky, R. Kyle

2015 What is the Pecos System, Anyway? 2015 Pecos Conference, Mancos, Colorado. Winner of the 2015 Cordell Prize.

Bocinsky, R. Kyle, Keith Kintigh, Timothy Kohler, Bertram Ludäscher, Ann Kinzig, Carla Van West, Margaret Nelson, Adam Brin, Sarah Oas, Johnathan Rush, Timothy McPhillips, and Yang Cao

2015 Toward Effective Cyber-Infrastructure Support of Socio-Environmental Research. In symposium, *The Robustness and Vulnerability of Food Production and Social Change: An Evaluation of Interdisciplinary Concepts Using Archaeological Data, Models, and Ethnographic Observations*. Society for American Archaeology, 80th Annual Meeting, San Francisco, California.

Van Dyke, Ruth, **R. Kyle Bocinsky**, and Tucker Robinson

2015 Friends in High Places: Windes, Shrines, and Lines of Sight. In symposium, *It's About Time: Contributions in Honor of Thomas C. Windes*. Society for American Archaeology, 80th Annual Meeting, San Francisco, California.

Kohler, Timothy A., Stefani A. Crabtree, and **R. Kyle Bocinsky**

2015 The Effects of Temporal Coarse-Graining on Inferred Networks of Human Movement. In symposium, *The Short and Long of It: Combining Timescales*. Society for American Archaeology, 80th Annual Meeting, San Francisco, California.

Crabtree, Stefani A., **R. Kyle Bocinsky**, and Timothy A. Kohler

2015 Alliances, Coalitions, Hierarchies and Conflict in the Ancestral Pueblo World. In symposium, *Simulating Social Complexity to Understand the Archaeological Past*. Society for American Archaeology, 80th Annual Meeting, San Francisco, California.

McPhillips, Timothy, Tianhong Song, Tyler Kolisnik, Steve Aulenbach, Khalid Belhajjame, **R. Kyle Bocinsky**, Yang Cao, Fernando Chiriga, Saumen Dey, Juliana Freire, Deborah Huntzinger, Christopher Jones, David Koop, Paolo Missier, Mark Schildhauer, Christopher Schwalm, Yaxing Wei, James Cheney, Mark Bieda, and Bertram Ludäscher

2015 YesWorkflow: A User-Oriented, Language-Independent Tool for Recovering Workflow Information from Scripts. 10th International Digital Curation Conference, London.

Crabtree, Stefani A., **R. Kyle Bocinsky**, and Timothy A. Kohler

2014 Modeling Emergence of Complex Groups on Realistic Landscapes. In symposium, *Principles of Complexity: Life, Scale, and Civilization III*. Santa Fe Institute, Santa Fe, New Mexico. August.

Bocinsky, R. Kyle, Kurt F. Anschultz, Jesse Clark, and Timothy A. Kohler

2014 A General Spatial Reconstruction of Potential Maize Paleoproductivity, AD 600–2000. In symposium, *Coupled Regions, Coupled Systems: Dynamics of Prehispanic Farming Societies in the Northern San Juan and the Northern Rio Grande*. Society for American Archaeology, 79th Annual Meeting, Austin, Texas.

Kohler, Timothy A., Kelsey M. Reese, Stefani A. Crabtree, **R. Kyle Bocinsky**, and Brian M. Kemp

2014 Prolegomenon: VEP II, Almost in Retrospect. In symposium, *Coupled Regions, Coupled Systems: Dynamics of Prehispanic Farming Societies in the Northern San Juan and the Northern Rio Grande*. Society for American Archaeology, 79th Annual Meeting, Austin, Texas.

Crabtree, Stefani A., Timothy A. Kohler and **R. Kyle Bocinsky**

2014 The Development of Social Groups, Leadership and Inequality in the Central Mesa Verde. In symposium, *Coupled Regions, Coupled Systems: Dynamics of Prehispanic Farming Societies in the Northern San Juan and the Northern Rio Grande*. Society for American Archaeology, 79th Annual Meeting, Austin, Texas.

Conway, Meagan and **R. Kyle Bocinsky**

2014 Household and Community Scales of Post-Famine Demographic Change in Western Ireland. In symposium, *The Archaeology of the Irish Famine: Exploring Lasting Effects on Local, Regional, and Transatlantic Scales*. Society for American Archaeology, 79th Annual Meeting,

Austin, Texas.

Bocinsky, R. Kyle

2013 Pueblo II and the Turkey Taboo: Changing Attitudes Towards Domesticated Turkeys in the Puebloan Southwest. In symposium, *Food: It's What's for Dinner*. American Anthropological Association, 2013 Annual Meeting, Chicago, Illinois.

Kohler, Timothy A., **R. Kyle Bocinsky**, Stefani A. Crabtree, Andrew Hlynka, Lokesh Patil, Paul Lovell Hooper and Ziad Kobti

2013 Leadership, Territoriality and Conflict in an Agentized Pueblo World. In symposium, *Complex-systems Approaches to Long-term Change*. American Anthropological Association, 2013 Annual Meeting, Chicago, Illinois.

Bocinsky, R. Kyle

2013 "Free nights and weekends" in the AD 1000s? Prehistoric visual communication systems and the influence of infrastructure on modern social network formation. In lecture series, *Reckless Ideas*. Santa Fe Institute, Santa Fe, New Mexico. August 23, 2013.

Bocinsky, R. Kyle

2013 The Data Are the Context: A Student's Perspective on the Colorado Contexts, Old and New. In symposium, *Updating the 1999 Colorado Prehistoric Contexts: How a Digital Research Context for Southwestern Colorado Could Be Organized and Assembled*. Colorado Council of Professional Archaeologists, 35th Annual Conference, Denver, Colorado.

Bocinsky, R. Kyle

2013 The Defensive Coast. In general session, *Landscapes and Spatial Analysis: Global Case Studies*. Society for American Archaeology, 78th Annual Meeting, Honolulu, Hawaii. Winner of the 2013 R.E. Taylor Student Poster Award from the Society for Archaeological Sciences.

Reese, Kelsey M., **R. Kyle Bocinsky**, Donna M. Glowacki, Scott G. Ortman and Timothy A. Kohler

2013 What Are Communities, Really? In symposium, *New Directions in Modeling Dynamics for Coupled Social-Natural Systems*. Society for American Archaeology, 78th Annual Meeting, Honolulu, Hawaii.

Bocinsky, R. Kyle

2013 Why Landscapes Matter: Inferring Defensiveness around the Salish Sea. In symposium, *Why Salish Sea Archaeology Matters: Current Perspectives from Washington State University*. 66th Annual Northwest Anthropological Conference, Portland, Oregon.

Bocinsky, R. Kyle

2012 Simulating Archaeological Landscapes using the RePAST Agent Based Modeling Framework. In invited colloquium, Institute of Archaeology and Museology, Faculty of Arts, Masaryk University, Brno, Czech Republic.

Bocinsky, R. Kyle and Timothy A. Kohler

2012 Suboptimal Foraging Theory (It's the Best). In symposium, *Socionatural Systems in the Northern U.S. Southwest: A Village Ecodynamics Project II Progress Report*. Society for American Archaeology, 77th Annual Meeting, Memphis, Tennessee.

Kohler, Timothy A. and **R. Kyle Bocinsky**

2012 Highly Variable Temperatures in the Northern Hemisphere over the Last Two Millennia: Reconstructions and Possible Effects on Native American Agricultural Systems. In symposium, *What Role did Changing Temperatures Play in the Success of North American Farming Societies in the Last Prehispanic Millennium?* Society for American Archaeology, 77th Annual Meeting, Memphis, Tennessee.

Newbold, Bradley, **R. Kyle Bocinsky**, William D. Lipe, Phil R. Geib and Brian M. Kemp

2012 Revising Early Turkey Domestication in the Southwest. In general session, *Archaeology of the Ancestral Puebloans and Paquime*. Society for American Archaeology, 77th Annual

Meeting, Memphis, Tennessee.

Reese, Kelsey M., **R. Kyle Bocinsky**, Kay E. Barnett, Stefani A. Crabtree and Elise Alonzi
2012 Large, Aggregated Villages in Little Soda Canyon. In general session, *Southwest*. Society for American Archaeology, 77th Annual Meeting, Memphis, Tennessee.

Bocinsky, R. Kyle and Timothy A. Kohler
2011 Toward [Re]Constructing An Archaeological Legacy of Hunting On the Colorado Plateau. In Evolutionary Anthropology Society invited symposium, *Lasting Legacies and Changing Tides in Human Behavioral Ecology*. American Anthropological Association, 2011 Annual Meeting, Montreal, Quebec, Canada.

Bocinsky, R. Kyle, Brian Chisholm and Brian M. Kemp
2011 Basketmaker III Turkey Use: Multiple Lines of Evidence. In symposium, *The Cedar Mesa Project Turns 40: New Results from a Long-Lived Study in SE Utah*. Society for American Archaeology, 76th Annual Meeting, Sacramento, California.

Newbold, Bradley, **R. Kyle Bocinsky**, Brian M. Kemp and Phil R. Geib
2011 Ancient Domestic Turkeys at Atlatl Rock Cave. In general session, *Animal Domesticates in the Americas*. Society for American Archaeology, 76th Annual Meeting, Sacramento, California.

Crabtree, Stefani A., Ziad Kobti, Timothy A. Kohler and **R. Kyle Bocinsky**
2011 Archaeology Time Machine: Witnessing Social Interactions on the Pueblo Landscape through Agent-based Simulation. In symposium, *Mapping and Technological Experiments in Archaeology*. Society for American Archaeology, 76th Annual Meeting, Sacramento, California.

Kohler, Timothy A., **R. Kyle Bocinsky**, Stefani A. Crabtree and Denton Cockburn
2011 The Village Ecodynamics Project: Modeling the Deep Pueblo Past. In symposium, *Modeling Across Millennia: Interdisciplinary Paths to Ancient Socionatural Systems*. 177th AAAS Annual Meeting, Washington, D.C.

Barron, Doug, **R. Kyle Bocinsky**, Dan Grunspan, Bradley Newbold, Darryl Trumbo and Bryan Roosien
2011 Mapping the Memetics Meme: Toward a better understanding of the transmission and evolution of scientific concepts. In IGERT Program in Evolutionary Modeling seminar, Washington State University, Pullman, Washington.

Barron, Doug, **R. Kyle Bocinsky**, Dan Grunspan, Bradley Newbold, Darryl Trumbo and Bryan Roosien
2010 GroupAge: An agent-based framework for exploring the interaction of social learning, mate choice, and group dynamics. In IGERT Program in Evolutionary Modeling seminar, Washington State University, Pullman, Washington.

Bocinsky, R. Kyle, Breanne M. Nott and Brian M. Kemp
2010 Plop! Jump-starting the brown revolution in archaeology. In symposium, *The Village Ecodynamics Project II*. Society for American Archaeology, 75th Annual Meeting, St. Louis, Missouri.

Glowacki, Donna M., Charles A. Reed, **R. Kyle Bocinsky**, Shanna Diederichs and Julie Bell
2010 Making sense of the actual: Settlement trends in the southwestern Colorado VEP study areas. In symposium, *The Village Ecodynamics Project II*. Society for American Archaeology, 75th Annual Meeting, St. Louis, Missouri.

Reed, Charles A., Ryan Lash and **R. Kyle Bocinsky**
2010 An Ancestral Puebloan Community in Morefield Canyon, Mesa Verde National Park. In general session, *What's New in Southwestern Archaeology?* Society for American Archaeology, 75th Annual Meeting, St. Louis, Missouri.

Bocinsky, R. Kyle

2009 In the land of plenty: Agent-based approaches to modeling subsistence in the Puebloan Southwest. In South Carolina Institute of Archaeology and Anthropology seminar, *From Field to Table: Historical Ecology of Regional Subsistence Strategies*. University of South Carolina, Columbia, South Carolina.

Bocinsky, R. Kyle

2009 Village Evolving: New directions in VEP research. In NSF Office of Polar Programs: Arctic Social Sciences sponsored conference, *Global Long Term Human Ecodynamics*. Eagle Hill, Maine.

Bocinsky, R. Kyle

2009 Understanding and modeling turkey use in the American Southwest: A preliminary simulation module for RePAST. In general session, *General New World and Methods*. Society for American Archaeology, 74th Annual Meeting, Atlanta, Georgia.

Bocinsky, R. Kyle, Terrence Martin and Mark A. Schurr

2008 Rodent Stable Carbon-isotope Ratios as a Measure of Maize Production. In general session, *Methods and Advances in Zooarchaeology*. Society for American Archaeology, 73rd Annual Meeting, Vancouver, British Columbia, Canada.

**Forum &
Discussion**

Discussant, *SKOPE: How we are making paleoenvironmental data useful and accessible*

2018 Society for American Archaeology, 83rd Annual Meeting, Washington, DC.

Discussant, *Aztec at the Crossroads and in the Crosshairs: 101 Years of Research in One Convenient Symposium*

2017 Society for American Archaeology, 82nd Annual Meeting, Vancouver, British Columbia, Canada.

Discussant, *How to do Archaeological Science using R*

2017 Society for American Archaeology, 82nd Annual Meeting, Vancouver, British Columbia, Canada.

Discussant, *Error, Sensitivity Analysis, and Uncertainty in Archaeological Computational Modeling*

2014 Moderated by Marieka Brouwer Burg. Society for American Archaeology, 79th Annual Meeting, Austin, Texas.

**Workshops &
Academic
Service**

Montana Climate Office

2018 Mentor, Carly Kuske, Montana Drought & Climate project intern

2018 Mentor, Colin Brust, Montana Space Grant Consortium intern

Conceptualizing a Geospatial Software Institute (GSI)

2018 Participant, Workshop 2: Geospatial Use Cases and Core Technical Capabilities, Cyber-GIS Center for Advanced Digital and Spatial Studies, Chicago, Illinois

Forum, *Traditional Knowledge & Ecology—Building Agri-Cultural Resilience through Traditional Values*

2017 Organizer, Third Annual Native Waters on Arid Lands Tribal Summit, Reno, Nevada

Whole Tale: Computing environments for reproducibility

2017 Participant, Prov-a-Thon and architecture workshop, Santa Ana Pueblo, New Mexico

2017 Mentor for Pratik Shrivastava, Whole Tale Summer Internship, Chicago, Illinois

Crow Canyon Research Seminar, *Connecting Mesa Verde and the Rio Grande through the Study of Pueblo Foodways*

2017 Co-organizer, New Mexico History Museum, Santa Fe, New Mexico. 22 April 2017.

Edited Section, *First Farmers, First Farms: Landscape Ecology of the Early Neolithic*

2017 Guest editor, *Journal of Ethnobiology*

Forum, *Traditional Knowledge & Ecology*

2016 Discussant, Second Annual Native Waters on Arid Lands Tribal Summit, Las Vegas, Nevada

Forum, *Archaeologies of Inclusion: Towards a Politics of Engagement*

2016 Organizer, Society for American Archaeology, 81st Annual Meeting, Orlando, Florida

Forum, *Out in the Field: Queer Experiences and Challenges in Archaeology*

2015 Organizer, Society for American Archaeology, 80th Annual Meeting, San Francisco, California

Symposium, *What Role did Changing Temperatures Play in the Success of North American Farming Societies in the Last Prehispanic Millennium?*

2012 Chair, Society for American Archaeology, 77th Annual Meeting, Memphis, Tennessee

National Science Foundation IGERT.org Trainee Advisory Board

2011–2012 Board member, The National Science Foundation and TERC

Exploratory Meeting for the Creation of an LGBT Archaeologists Interest Group

2010 Organizer, Society for American Archaeology, 75th Annual Meeting, St. Louis, Missouri

Symposium, *The Village Ecodynamics Project II*

2010 Co-organizer, Society for American Archaeology, 75th Annual Meeting, St. Louis, Missouri

Anthropology Graduate Organization, Department of Anthropology, Washington State University

2013 Co-organizer, Interdisciplinary Research in Anthropology and the Sciences Conference

2011 Chair, Banquet Committee

2009 Chair, Lipe Scholar Committee

2008–2009 President

Outreach & Press

Experimental Farming: The Pueblo Farming Project and Beyond

Public lecture. In Crow Canyon Research Seminar: *Connecting Mesa Verde and the Rio Grande through the Study of Pueblo Foodways*, New Mexico History Museum, Santa Fe, NM. 22 April 2017.

Origins: The Journey of Humankind

Featured expert. The National Geographic Channel. Featured in Season 1, Episode 6: *Building the Future*. Aired April 17, 2017. [html].

Farming Corn in the Past, Present, and Future

Public lecture. In Smithsonian Associates Weekend Program: *Vanished! Behind the Mystery of Mesa Verde*, S. Dillon Ripley Center, Washington, DC. 21 May 2016.

Exploration and exploitation in the macrohistory of the pre-Hispanic Pueblo Southwest

Popular article

- Do prehistoric Pueblo populist revolutions presage American politics today? Kyle Bocinsky and Tim Kohler, *The Conversation*. 6 April 2016. [html]

Press coverage

- Climate and the Collapse of Ancient Civilizations. Interview on NPR's *Science Friday*. 8 April 2016. [html]
- From drought, seeds of discontent. Staci Matlock, *Santa Fe New Mexican*. 31 March 2016. [html]
- Social collapse in ancient Pueblo civilization linked to climate change. Hannah Osborne, *International Business Times*. 1 April 2016. [html]
- Researchers: Four Corners pueblo culture sensitive to climate. Emery Cowan, *Arizona Daily*

Sun, Flagstaff, Arizona. 10 April 2016. [html]

Can Pueblo Corn Save Ethiopian Farms? Employing 1,400 Years of Agricultural Knowledge in Service of the Future

Public lecture

- Southwest Seminar, Santa Fe, New Mexico. 25 July 2016.
- Arizona Archaeological and Historical Society, Tucson, Arizona. 18 January 2016.
- Four Corners Lecture Series, Cortez, Colorado. Invited by the Hisatsinom Chapter of the Colorado Archaeological Society. 4 August 2015.

FedData: Functions to Automate Downloading Geospatial Data Available from Several Federated Data Sources

Blog coverage

- Using the new R package, FedData, to access federal open datasets (including interactive graphics). ZevRoss. 15 March 2016. [html]

**Travel &
Training Grants**

Toward Cultural Models of the Development of Ancestral Maize Landraces

2014 Travel grant, Graduate & Professional Student Association, Washington State University, \$375

Understanding and modeling turkey use in the American Southwest: A preliminary model for RePAST

2009 Travel grant, Graduate & Professional Student Association, Washington State University, \$390

Archaeological Field School with Brooklyn College, City University of New York

2007 Travel grant, Undergraduate Research Opportunity Program, University of Notre Dame, \$1,000

2007 Travel grant, Glynn Family Honors Program, University of Notre Dame, \$1,500

2007 Learning Beyond the Classroom Grant, University of Notre Dame, \$711

The similarity of treatment needs between the chemically addicted and HIV+ populations: Emphasizing relationships

2007 Travel grant, Undergraduate Research Opportunity Program, University of Notre Dame, \$1,000

2006 Americorps Service Grant, \$1,000

**Additional
Training**

Beyond Archaeology—Realities of Cultural Resource Management

2013 Participant in seminar presented by the Confederated Tribes of the Colville Reservation History/Archaeology Program. October 4–5, 2013, Pullman, Washington.

Teaching

Washington State University, Pullman, Washington

Fall 2015 Co-instructor, *ANTH 600: Exploratory Data Analysis in R*, 3 credits, graduate

Using graphical and numeric computational methods to explore different types of data, including survey, experimental, textual, spatial, and network data

Fall 2014 Instructor, *ANTH 101: General Anthropology*, 3 credits, 90 students

An introduction to the four fields of anthropology

Spring 2013 Instructor, *ANTH 490: Themes in Anthropology*, 3 credits, 15 students

The capstone seminar in the anthropology major at WSU; a review of important themes in anthropological thought and several controversial issues in anthropology

Spring 2012 Instructor, *ANTH 331: The Americas Before Columbus*, 3 credits, 40 students

A review course covering North and South American prehistory, and emphasizing model-based approaches in archaeology

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| Computer Experience | <p><i>Statistical Packages:</i> R, SAS, Stata <i>Languages:</i> R, Java, Python, Bash, C++, Objective C <i>Applications:</i> ArcGIS, GRASS GIS, QGIS, MS Office, Adobe Illustrator, Final Cut Pro, \LaTeX <i>Web Frameworks:</i> Bootstrap, Jekyll, Liquid, Shiny, GH-Pages <i>Agent Based Modeling Frameworks:</i> RePAST (J, S), Swarm <i>Version Control:</i> Git, Subversion <i>Operating Systems:</i> macOS, Windows, Ubuntu Linux</p> |
| Professional Affiliations | <p><i>Register of Professional Archaeologists</i> <i>Society for American Archaeology</i> <i>American Anthropological Association</i> <i>American Association for the Advancement of Science</i></p> |
| References | <p>Timothy A. Kohler Department of Anthropology Washington State University Pullman, WA 99164-4910 phone 509.335.2698 email tako@wsu.edu</p> <p>Maureen McCarthy Tahoe and Great Basin Research Director University of Nevada, Reno 1664 N. Virginia Street Reno, NV 89557 phone 775.784.8023 email mimccarthy@unr.edu</p> <p>Mark D. Varien Crow Canyon Archaeological Center 23390 County Road K Cortez, CO 81321 phone 970.565.8975 email mvarien@crowcanyon.org</p> <p>Jade d'Alpoim Guedes Department of Anthropology & Scripps Institute of Oceanography University of California, San Diego La Jolla, CA 92093 phone 858.534.4145 email jguedes@ucsd.edu</p> <p>William D. Lipe Department of Anthropology Washington State University Pullman, WA 99164-4910 phone 509.335.2100 email lipe@wsu.edu</p> <p>Keith W. Kintigh School of Human Evolution and Social Change Arizona State University Tempe, AZ 85287-2402 phone 480.965.6909 email kintigh@asu.edu</p> <p>Stefani A. Crabtree Department of Anthropology Pennsylvania State University University Park, PA 16802 web https://stefanicrabtree.com/ phone 541.350.0994 email stefanicrabtree@gmail.com</p> |