

# R. Kyle Bocinsky, PhD, RPA

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## Contact Information

Montana Climate Office  
University of Montana  
Missoula, MT 59812

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## Research Interests

*human dimensions of climate change • computational social science • paleo-environments  
complex systems • plant and animal domestication • Indigenous ecologies • reproducibility*

## Education

**Washington State University**, Pullman, Washington  
PhD, Anthropology, December 2014  
Dissertation title: *Landscape-based Null Models for Archaeological Inference*  
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*  
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

**University of Montana**, Missoula, Montana  
Jan 2021–Present Director of Climate Extension, Montana Climate Office  
Aug 2020–Dec 2020 Research Affiliate, Montana Climate Office  
Jan 2018–Jul 2020 Research Associate, Montana Climate Office  
  
**Crow Canyon Archaeological Center**, Cortez, Colorado  
Jan 2021–Present Research Associate  
Aug 2018–Dec 2020 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  
  
**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–Dec 2020 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

## Grants, Honors, & Awards

**Presidential Recognition Award**  
2014 Society for American Archaeology  
Awarded to the SAA Bylaws Committee (on which Bocinsky served) for their thorough and thoughtful work updating the SAA Bylaws, the foundation of the Association's governing documents.

**Co-PD, Native Climate: Strengthening the role of Climate Hubs in Indian Country**

2022–2027 United States Department of Agriculture, National Institute of Food and Agriculture, *Extension, Education & USDA Climate Hubs Partnership* (2022-68015-36357).  
\$1,500,000 awarded to DRI/UM

**PD, TCU Missouri River Watershed Consortium** (with Nueta Hidatsa Sahnish College, New Town, North Dakota)

2021–2023 United States Department of Agriculture, National Institute of Food and Agriculture, *Tribal Colleges Research Grants Program* (2021-38424-34953).  
\$220,000 awarded to NHSC/UM

**Co-PD, All Climate is Local: 'Multiple ways of knowing' to enhance resilience of tribal agroecosystems to droughts, floods, and rising temperatures**

2021–2023 United States Department of Agriculture, National Institute of Food and Agriculture (2021-67019-33420).  
\$49,998 awarded to DRI

**Co-PD, COVID-19 Rapid Response Toolkit for Tribal Extension Agents**

2020–2023 United States Department of Agriculture, National Institute of Food and Agriculture (2020-68008-32762).  
\$300,000 awarded to DRI/CCAC

**Co-PD, Teaching Native Waters: Place-based Community of Practice for STEM Teachers Serving Native American Students**

2020–2022 United States Department of Agriculture, National Institute of Food and Agriculture, *Women and Minorities in Science, Technology, Engineering, and Mathematics* (WAMS) program (2020-38503-31952).  
\$99,998 awarded to DRI

**Project Manager, The Maize Database Project**

2019–2022 History Colorado — State Historical Fund (2019-M2-001).  
\$34,912 awarded to CCAC

**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-PI, Developing and Deploying SKOPE—**

**A resource for Synthesizing Knowledge of Past Environments**

2016–2021 National Science Foundation special competition, *Resource Implementations for Data Intensive Research in the Social Behavioral and Economic Sciences* (SMA-1637171).  
\$254,189 awarded to WSU/CCAC, \$1,339,658 total

**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

**Cordell Prize**

2015 Pecos Conference, Mancos, Colorado  
Awarded for the best extemporaneous talk presented by an archaeologist 35 years of age or younger

### 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

### NSF Graduate Research Fellowship

2010–2015 National Science Foundation (DGE-1347973)

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

### 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

Hoylman, Zachary Harwood, **R. Kyle Bocinsky**, and Kelsey G. Jencso

(In press) Drought assessment has been outpaced by climate change: Empirical arguments for a paradigm shift. *Nature Communications*.

Bird, Darcy, Lux Miranda, Marc Vander Linden, Erick Robinson, **R. Kyle Bocinsky**, Christopher Nicholson, José Capriles, Judson Finley, Eugenia Gayo, Adolfo Gil, Jade d'Alpoim Guedes, Julie Hoggarth, Andrea Kay, Emma Loftus, Umberto Lombardo, Madeline Mackie, Dr Alessio Palmisano, Dr Steinar Solheim, Robert Kelly, and Jacob Freeman

2022 p3k14c, a synthetic global database of archaeological radiocarbon dates. *Scientific Data* 9: 27.

<https://doi.org/10.1038/s41597-022-01118-7>

Price, Michael Holton, José M. Capriles, Julie A. Hoggarth, **R. Kyle Bocinsky**, Claire E. Ebert, and James Holland Jones

2021 End-to-end Bayesian analysis for summarizing sets of radiocarbon dates. *Journal of Archaeological Science* 135: 105473.

<https://doi.org/10.1016/j.jas.2021.105473>

Alam, Ornob, Rafal M. Gutaker, Cheng-chieh Wu, Karen A. Hicks, **R. Kyle Bocinsky**, Cristina Cobo Castillo, Stephen Acabado, Dorian Fuller, Jade A. d'Alpoim Guedes, Yue-ie Hsing, and Michael D. Purugganan

2021 Genome analysis traces regional dispersal of rice in Taiwan and Southeast Asia. *Molecular Biology and Evolution*: msab209.

<https://doi.org/10.1093/molbev/msab209>

- Scheffer, Marten, Egbert H. van Nes, Darcy Bird, **R. Kyle Bocinsky**, and Timothy A. Kohler  
2021 Loss of resilience preceded transformations of pre-Hispanic Pueblo societies. *Proceedings of the National Academy of Sciences* 118(18): e2024397118.  
<https://doi.org/10.1073/pnas.2024397118>
- Smith, Ada P., Laurie Yung, Adam Snitker, **R. Kyle Bocinsky**, Elizabeth Covelli Metcalf, and Kelsey Jencso  
2021 Scalar mismatches and underlying factors for underutilization of climate information: Perspectives from farmers and ranchers. *Frontiers in Climate* 3: 29 pages.  
<https://doi.org/10.3389/fclim.2021.663071>
- Robinson, Erick, **R. Kyle Bocinsky**, Darcy Bird, Jacob Freeman, and Robert L. Kelly  
2020 Dendrochronological dates confirm a Late Prehistoric population decline in the American Southwest derived from radiocarbon dates. *Philosophical Transactions of the Royal Society B* 376: 20190718.  
<https://doi.org/10.1098/rstb.2019.0718>
- Strawhacker, Colleen, Grant Snitker, Matthew A. Peeples, Ann P. Kinzig, Keith W. Kintigh, **R. Kyle Bocinsky**, Brad Butterfield, Jacob Freeman, Sarah Oas, Margaret C. Nelson, Jonathan A. Sandor, Katherine A. Spielmann  
2020 A landscape perspective on climate-driven risks to food security: Exploring the relationship between climate and social transformations in the Prehispanic U.S. Southwest. *American Antiquity* 85(3): 427–451.  
<https://doi.org/10.1017/aaq.2020.35>
- Gutaker, Rafal M., Simon C. Groen, Emily S. Bellis, Jae Y. Choi, Inês S. Pires, **R. Kyle Bocinsky**, Emma R. Slayton, Olivia Wilkins, Cristina C. Castillo, Sónia Negrão, M. Margarida Oliveira, Dorian Q. Fuller, Jade A. d'Alpoim Guedes, Jesse R. Lasky, and Michael D. Purugganan  
2020 Genomic history and ecology of the geographic spread of rice. *Nature Plants* 6: 492–502.  
<https://doi.org/10.1038/s41477-020-0659-6>
- Grimstead, Deanna N., Matthew C. Pailes, and **R. Kyle Bocinsky**  
2019 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* 26(1): 25–51.  
<https://doi.org/10.1007/s10816-017-9359-6>
- Kohler, Timothy A., Philip I. Buckland, Keith W. Kintigh, **R. Kyle Bocinsky**, Adam Brin, Andrew Gillreath-Brown, Bertram Ludäscher, Timothy M. McPhillips, Rachel Opitz, and Jeffrey Terstriep  
2018 Paleodata for and from archaeology. *Past Global Changes Magazine* 26(2): 68–69.  
<https://doi.org/10.22498/pages.26.2.68>
- d'Alpoim Guedes, Jade, and **R. Kyle Bocinsky**  
2018 Climate change stimulated agricultural innovation and exchange across Asia. *Science Advances* 4(10): eaar4491.  
<https://doi.org/10.1126/sciadv.aar4491>
- d'Alpoim Guedes, Jade and **R. Kyle Bocinsky**  
2017 A reply to Bellezza. *Current Anthropology* 58(4): 539–539.  
<https://doi.org/10.1086/692996>
- Bocinsky, R. Kyle** and Mark D. Varien  
2017 Calibrating Maize Paleoproduction Models using Experimental Data. *Ethnobiology* 37(2): 282–307.  
<https://doi.org/10.2993/0278-0771-37.2.282>

- Gillreath-Brown, Andrew and **R. Kyle Bocinsky**  
 2017 A Dialogue Between Empirical and Model-Based Agricultural Studies in Archaeology. *Ethnobiology* 37(2): 167–171.  
<https://doi.org/10.2993/0278-0771-37.2.167>
- 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.  
<https://doi.org/10.1017/aaq.2016.18>
- d'Alpoim Guedes, Jade, Stefani A. Crabtree, **R. Kyle Bocinsky**, and Timothy A. Kohler  
 2016 21<sup>st</sup> century approaches to ancient problems: Climate and society. *Proceedings of the National Academy of Sciences* 113(51): 14483–14491.  
<https://doi.org/10.1073/pnas.1616188113>
- 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.  
<https://doi.org/10.1086/687255>
- 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.  
<https://doi.org/10.7183/0002-7316.81.2.205>
- 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.  
<https://doi.org/10.1126/sciadv.1501532>
- 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.  
<https://doi.org/10.7183/0002-7316.81.1.74>
- 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.  
<https://doi.org/10.7183/0002-7316.81.1.97>
- 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.  
<https://doi.org/10.1371/journal.pone.0130430>
- 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.  
<https://doi.org/10.1126/science.aaa4819>
- 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.  
<https://doi.org/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.  
<https://doi.org/10.1038/ncomms6618>.

**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.  
<https://doi.org/10.1016/j.jaa.2014.05.003>

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.  
<https://doi.org/10.18564/jasss.2308>

Kohler, Timothy A., **R. Kyle Bocinsky**, Denton Cockburn, Mark D. Varien, Stefani A. Crabtree, Kenneth E. Kolm, Shaun M. Smith, and Scott G. Ortman  
 2012 Modelling Prehispanic Pueblo Societies in their Ecosystems. *Ecological Modelling* 241: 30–41.  
<https://doi.org/10.1016/j.ecolmodel.2012.01.002>

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.  
<https://doi.org/10.1142/S0219525911003256>.

**Book Contributions**  
 \* peer-reviewed

\* Schachner, Gregson, Joel Nicholas, R. J. Sinensky, and **R. Kyle Bocinsky**  
 2021 The sustainability of Hopi agriculture. In *Becoming Hopi: A History*, edited by Wesley Bernardini, Stewart Koyiyumptewa, Gregson Schachner, and Leigh Kuwanwisiwma, pp. 113–132. University of Arizona Press, Tucson.  
<https://uapress.arizona.edu/book/becoming-hopi>  
**Winner of the 2022 Society for American Archaeology Scholarly Book Award.**

\* Van Dyke, Ruth M., Timothy De Smet, and **R. Kyle Bocinsky**  
 2021 Viewscapes and Soundscapes. In *The Greater Chaco Landscape: Ancestors, Scholarship, and Advocacy*, edited by Ruth Van Dyke and Carrie Heitman, Chapter 11. University Press of Colorado, Boulder.  
<http://read.upcolorado.com/projects/the-greater-chaco-landscape>  
**Winner of the 2022 Society for American Archaeology Popular Book Award.**

\* Kohler, Timothy A., Laura J. Ellyson and **R. Kyle Bocinsky**  
 2020 Beyond One-Shot Hypotheses: Explaining Three Increasingly Large Collapses in the Northern Pueblo Southwest. In *Going forward by Looking Back: Archaeological Perspectives on Socio-Ecological Crisis, Response and Collapse*, edited by Felix Reide and Payson Sheets, pp. 304–332. Berghahn Books, New York.  
<https://www.berghahnbooks.com/title/RiedeGoing>

Ermigiotti, Paul, Mark Varien, Erin Bohm, **Kyle Bocinsky**, the Hopi Cultural Preservation Office, and the Hopi Cultural Resources Advisory Task Team  
 2018 *The Pueblo Farming Project: A collaboration between Hopi farmers and the Crow Canyon Archaeological Center*. Crow Canyon Archaeological Center, Cortez, Colorado.  
<https://pfp.crowcanyon.org>

- \* 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.  
<https://www.sfipress.org/books/emergence-of-premodern-states>
- \* 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.  
<https://pul.uclouvain.be/book/?GCOI=29303100293170>
- \* **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.  
<https://uscpress.com/Viewing-the-Future-in-the-Past>
- \* **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.  
<https://www.ucpress.edu/ebook/9780520951990/emergence-and-collapse-of-early-villages>
- \* 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.  
<https://www.ucpress.edu/ebook/9780520951990/emergence-and-collapse-of-early-villages>
- \* 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.  
<https://www.ucpress.edu/ebook/9780520951990/emergence-and-collapse-of-early-villages>

## Technical Reports

- Bocinsky, R. Kyle**  
2020 Defining Accurate Floating Coordinate Reference Systems for Legacy Crow Canyon Projects. Crow Canyon Archaeological Center, Cortez, Colorado.  
<https://crowcanyon.github.io/localgrid/articles/floating-grid-trigonometry.html>
- 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.

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.

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

**Bocinsky, R. Kyle**

2020 Review of *The Archaic Southwest: Foragers in an Arid Land*, edited by Bradley J. Vierra. *Journal of California and Great Basin Anthropology* 40(2): 244–245.  
[http://malkimuseum.org/wp-content/uploads/2017/02/jcgb\\_40-2\\_toc.pdf](http://malkimuseum.org/wp-content/uploads/2017/02/jcgb_40-2_toc.pdf)

**Bocinsky, R. Kyle**

2018 Climate at the Center Place. *Archaeology Southwest* 32(2–3): 32–33.  
<https://www.archaeologysouthwest.org/product/asw32-3/>

**Bocinsky, R. Kyle**

2018 Skipping stones off improbable histories. *The SAA Archaeological Record* 18(2): 17–19.  
<http://onlinedigeditions.com/publication/?m=16146&i=486133&p=19>

Marwick, B., et al.

2018 Open science in archaeology. *The SAA Archaeological Record* 17(4): 8–14.  
<http://onlinedigeditions.com/publication/?m=16146&i=440506&p=10>

**Bocinsky, R. Kyle**

2014 Drain your dammed DEMs! Here's how. *Society for Archaeological Sciences Bulletin* 37(1): 1–5.  
<https://socarchsci.org/bulletin/SAS3701.pdf>

## Software

\* peer-reviewed  
c on CRAN

\*c Bevan, Andrew, Enrico Crema, **R. Kyle Bocinsky**, Martin Hinz, Philip Riris, and Fabio Silva

2020 *rcarbon: Calibration and Analysis of Radiocarbon Dates*. R package version 1.4.1  
<https://github.com/ahb108/rcarbon>.

\*c **Bocinsky, R. Kyle**

2020 *FedData: Functions to Automate Downloading Geospatial Data Available from Several Federated Data Sources*. R package version 3.0.0  
<https://github.com/bocinsky/FedData>.

**Bocinsky, R. Kyle**

2020 *thredds: Access to THREDDS Servers*. R package version 0.0.1  
<https://github.com/bocinsky/thredds>.

**Bocinsky, R. Kyle**, Dylan Beaudette, and Scott Chamberlain

2020 *mcor: The core Montana Climate Office R package*. R package version 0.2.0  
<https://github.com/mt-climate-office/mcor>.

\* Price, Michael Holton and **R. Kyle Bocinsky**

2020 *baydem: Bayesian Tools for Reconstructing Past and Present Demography*. R package version 0.1.0  
<https://github.com/eehh-stanford/baydem>.



**Bocinsky, R. Kyle**

2019 *demdrainer: Drain Your Dammed DEMs*. R package version 0.1.0  
<https://github.com/bocinsky/demdrainer>.

**Bocinsky, R. Kyle**

2019 *tdar: R Bindings to the Digital Archaeological Record (tDAR) API*. R package version 0.1.0  
<https://github.com/bocinsky/tdar>.

**Bocinsky, R. Kyle**

2019 *treecats: Tree-like Factors in R*. R package version 0.1.0  
<https://github.com/bocinsky/treecats>.

**\* Bocinsky, R. Kyle**

2017 *paleocar: Paleoclimate Reconstruction from Tree Rings using Correlation Adjusted correlation*. R package version 3.3.0.  
<https://github.com/bocinsky/paleocar>

**Podium &  
Poster**

Bird, Darcy, Andrew Gillreath-Brown, **R. Kyle Bocinsky**, and Tim Kohler

2022 Climate, Maize, and Demography: A Case Study from the Southwestern United States. In symposium, *Climatic Influences on Diet, Demography, and Conflict*. Society for American Archaeology, 87<sup>th</sup> Annual Meeting, Chicago, Illinois.

Kohler, Tim, Andrew Gillreath-Brown, **R. Kyle Bocinsky**, and Darcy Bird

2022 From Unconstrained to Density-dependent Growth: 900 years of Pueblo pre/history. In symposium, *Demography in Archaeology beyond Boom and Bust? Critical Examination of Phases of Under- and Overpopulation*. European Association of Archaeologists, 27<sup>th</sup> Annual Meeting, Kiel, Germany.

Bird, Darcy, **R. Kyle Bocinsky**, and Tim Kohler

2021 Maize, Construction, and Population Changes: One Way to Identify Sunk Cost Behaviors in Central Mesa Verde. In symposium, *People, Climate, and Proxies in Holocene Western North America*. Society for American Archaeology, 86<sup>th</sup> Annual Meeting, online.

Erick Robinson, Jacob Freeman, Robert L. Kelly, and **R. Kyle Bocinsky**

2019 The Role of Edge Effects in Late Holocene Archaeological Radiocarbon Time Series. In symposium, *Global Perspectives on Climate-Human Population Dynamics During the Late Holocene*. Society for American Archaeology, 84<sup>th</sup> Annual Meeting, Albuquerque, New Mexico.

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

2019 The Impact of Temperature on the Transition to Maize Agriculture in the Northern Upland United States Southwest. In symposium, *Global Perspectives on Climate-Human Population Dynamics During the Late Holocene*. Society for American Archaeology, 84<sup>th</sup> Annual Meeting, Albuquerque, New Mexico.

Glowacki, Donna, Mark Varien, Grant Coffey and **R. Kyle Bocinsky**

2019 Mesa Verde Centers and Regional Analyses: Good Stuff!. In symposium, *Attention to Detail: A Pragmatic Career of Research, Mentoring, and Service, Papers in Honor of Keith Kintigh*. Society for American Archaeology, 84<sup>th</sup> Annual Meeting, Albuquerque, New Mexico.

Coffey, Grant, Mark Varien and **R. Kyle Bocinsky**

2019 Basketmaker III in the Central Mesa Verde Region: Transitions, Social Dynamics, and Population Growth. In symposium, *Adopting the Pueblo Fettle: The Breadth and Depth of the Basketmaker III Cultural Horizon*. Society for American Archaeology, 84<sup>th</sup> Annual Meeting, Albuquerque, New Mexico.

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

2019 The Climates of Pueblo Emergence. In symposium, *Adopting the Pueblo Fettle: The Breadth and Depth of the Basketmaker III Cultural Horizon*. Society for American Archaeology, 84<sup>th</sup> Annual Meeting, Albuquerque, New Mexico.

**Bocinsky, R. Kyle**

2018 Directing the arrow by chasing its tail: Climate, adaptation, and future (agri)cultural systems in the West. In plenary symposium, *Arrow of Time: Anthropological Disciplines of the Future*. 36<sup>th</sup> Great Basin Anthropological Conference, Salt Lake City, Utah.

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, 83<sup>rd</sup> 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, 83<sup>rd</sup> 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, 82<sup>nd</sup> 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, 82<sup>nd</sup> 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, 82<sup>nd</sup> Annual Meeting, Vancouver, British Columbia, Canada.

Varién, 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, 39<sup>th</sup> 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, 81<sup>st</sup> 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, 81<sup>st</sup> 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, 81<sup>st</sup> 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*. 15<sup>th</sup> 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*. 15<sup>th</sup> 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, 80<sup>th</sup> 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, 80<sup>th</sup> 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, 80<sup>th</sup> 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, 80<sup>th</sup> 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. 10<sup>th</sup> 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, 79<sup>th</sup> 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, 79<sup>th</sup> 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, 79<sup>th</sup> 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, 79<sup>th</sup> 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, 78<sup>th</sup> 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, 78<sup>th</sup> 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*. 66<sup>th</sup> 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, 77<sup>th</sup> 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, 77<sup>th</sup> 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 Pueblos and Paquime*. Society for American Archaeology, 77<sup>th</sup> 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, 77<sup>th</sup> 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, 76<sup>th</sup> 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, 76<sup>th</sup> 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, 76<sup>th</sup> 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*. 177<sup>th</sup> 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, 75<sup>th</sup> 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, 75<sup>th</sup> 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, 75<sup>th</sup> 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, 74<sup>th</sup> 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, 73<sup>rd</sup> Annual Meeting, Vancouver, British Columbia, Canada.

## Forums, Workshops, & Symposia

2019 Participant, *Healthy Forests, Healthy Watersheds*, Workshop, Laboratory of Tree Ring Research, University of Arizona, Tucson, AZ. November 13–15, 2019.

2019 Organizer, *Plenary Workshop – Native Waters on Arid Lands: Using wisdom from the past to guide the future of traditional practices, farming, ranching, forestry, and natural resource management*. Workshop, Fifth Annual Native Waters on Arid Lands Tribal Summit, Reno, Nevada.

2018 Organizer, *Building Research Capacity at Tribal Colleges and Universities and in Tribal Communities*. Forum, Fourth Annual Native Waters on Arid Lands Tribal Summit, Reno, Nevada.

2018 Discussant, *SKOPE: How we are making paleoenvironmental data useful and accessible*.

Forum, Society for American Archaeology, 83<sup>rd</sup> Annual Meeting, Washington, DC.

2018 Participant, *Conceptualizing a Geospatial Software Institute (GSI)*. Workshop 2: Geospatial Use Cases and Core Technical Capabilities, CyberGIS Center for Advanced Digital and Spatial Studies, Chicago, Illinois.

2017 Guest editor, *First Farmers, First Farms: Landscape Ecology of the Early Neolithic*. Edited Section, Journal of Ethnobiology.

2017 Organizer, *Traditional Knowledge & Ecology—Building Agri-Cultural Resilience through Traditional Values*. Forum, Third Annual Native Waters on Arid Lands Tribal Summit, Reno, Nevada.

2017 Co-organizer, *Connecting Mesa Verde and the Rio Grande through the Study of Pueblo Foodways*. Forum, New Mexico History Museum, Santa Fe, New Mexico. 22 April 2017.

2017 Discussant, *Aztec at the Crossroads and in the Crosshairs: 101 Years of Research in One Convenient Symposium*. Forum, Society for American Archaeology, 82<sup>nd</sup> Annual Meeting, Vancouver, British Columbia, Canada.

2017 Discussant, *How to do Archaeological Science using R*. Forum, Society for American Archaeology, 82<sup>nd</sup> Annual Meeting, Vancouver, British Columbia, Canada.

2017 Participant, *Whole Tale: Computing environments for reproducibility*. Prov-a-Thon and architecture workshop, Santa Ana Pueblo, New Mexico.

2016 Discussant, *Traditional Knowledge & Ecology*. Forum, Second Annual Native Waters on Arid Lands Tribal Summit, Las Vegas, Nevada.

2016 Organizer, *Archaeologies of Inclusion: Towards a Politics of Engagement*. Forum, Society for American Archaeology, 81<sup>st</sup> Annual Meeting, Orlando, Florida.

2015 Organizer, *Out in the Field: Queer Experiences and Challenges in Archaeology*. Forum, Society for American Archaeology, 80<sup>th</sup> Annual Meeting, San Francisco, California.

2014 Discussant, *Error, Sensitivity Analysis, and Uncertainty in Archaeological Computational Modeling*. Forum, Moderated by Marieka Brouwer Burg. Society for American Archaeology, 79<sup>th</sup> Annual Meeting, Austin, Texas.

2012 Chair, *What Role did Changing Temperatures Play in the Success of North American Farming Societies in the Last Prehispanic Millennium?* Symposium, Society for American Archaeology, 77<sup>th</sup> Annual Meeting, Memphis, Tennessee.

2011 Participant, *Graduate Workshop in Computational Social Science*. Directed by John Miller and Scott Page. Santa Fe Institute, Santa Fe, New Mexico.

2010 Co-organizer, *The Village Ecodynamics Project II*. Symposium, Society for American Archaeology, 75<sup>th</sup> Annual Meeting, St. Louis, Missouri.

## Academic Service

### Peer-review

*American Antiquity* — 2019, 2016

*Frontiers in Earth Science* — 2021

*Journal of Anthropological Archaeology* — 2019

*Journal of Archaeological Method and Theory* — 2022, 2018, 2016, 2015

*Journal of Archaeological Science* — 2020, 2017, 2016

*Journal of Archaeological Science: Reports* — 2021, 2020, 2015

*Journal of Ethnobiology* — 2015

*KIVA: Journal of Southwestern Anthropology and History* — 2020

*PLoS ONE* — 2018

*Proceedings of the National Academy of Sciences* — 2019

*Proposal review*

*Graduate Women in Science* — 2020

*National Science Foundation* — 2022, 2019

*Society for American Archaeology*

2019–present Member, Bylaws Committee

2019–2022 Chair, Investment Committee

2020, 2021 Member, Program Committee

2010 Organizer, *Exploratory Meeting for the Creation of an LGBT Archaeologists Interest Group*,  
75<sup>th</sup> Annual Meeting, St. Louis, Missouri

*Department of Society and Conservation, University of Montana*

2019–present Committee member, Doctoral — Ada Smith

*Montana Climate Office, University of Montana*

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

2018 Mentor, Baccalaureate — Colin Brust, Montana Space Grant Consortium intern

*Crow Canyon Archaeological Center, Cortez, Colorado*

2019–present Mentor, Post-doctoral — Michelle Turner

*Department of Anthropology, University of Colorado, Boulder*

2019–present Mentor, Doctoral — Kaitlyn Davis

*Department of Anthropology, Washington State University*

2020–present Committee member, Doctoral — Darcy Bird

2018–present Mentor, Doctoral — Andrew Gillreath-Brown

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

2011 Chair, Banquet Committee, Anthropology Graduate Organization

2009 Chair, Lipe Scholar Committee, Anthropology Graduate Organization

2008–2009 President, Anthropology Graduate Organization

*Whole Tale: Computing environments for reproducibility*

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

*National Science Foundation IGERT.org Trainee Advisory Board*

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

**Outreach &  
Press**

*Sustainable Agricultural Systems in the Past, Present, and Future*

**Public lecture.**

- Crow Canyon Webinar Series. 24 January 2020.

- Four Corners Lecture Series, Cortez, Colorado. Invited by the Hisatsinom Chapter of the  
Colorado Archaeological Society. 12 August 2019.

*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,  
Outreach, &  
Training Grants**

*The Crow Canyon Ochre Project: Building Online Communities for Heritage Research and Education*  
2020 Outreach grant, Colorado Humanities CH-CARES program, \$5,250 awarded to CCAC

*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

<b>Additional Training</b>	<p><i>Beyond Archaeology—Realities of Cultural Resource Management</i></p> <p>2013 Participant in seminar presented by the Confederated Tribes of the Colville Reservation History/Archaeology Program. October 4–5, 2013, Pullman, Washington.</p>
<b>Teaching</b>	<p><b>Washington State University</b>, Pullman, Washington</p> <p>Fall 2015 Co-instructor, <i>ANTH 600: Exploratory Data Analysis in R</i>, 3 credits, graduate Using graphical and numeric computational methods to explore different types of data, including survey, experimental, textual, spatial, and network data</p> <p>Fall 2014 Instructor, <i>ANTH 101: General Anthropology</i>, 3 credits, 90 students An introduction to the four fields of anthropology</p> <p>Spring 2013 Instructor, <i>ANTH 490: Themes in Anthropology</i>, 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</p> <p>Spring 2012 Instructor, <i>ANTH 331: The Americas Before Columbus</i>, 3 credits, 40 students A review course covering North and South American prehistory, and emphasizing model-based approaches in archaeology</p>
<b>Computer Expertise</b>	<p><i>Statistical Packages</i>: R, SAS, Stata</p> <p><i>Languages</i>: R, Java, Javascript, Python, C++, Objective C</p> <p><i>Applications</i>: ArcGIS, GRASS GIS, QGIS, LoggerNet, MS Office, <math>\LaTeX</math></p> <p><i>Web Frameworks</i>: FastAPI, Flask, Bootstrap, Jekyll, Liquid, Shiny</p> <p><i>Agent Based Modeling Frameworks</i>: RePAST (J, S), Swarm</p> <p><i>Version Control</i>: Git, Subversion</p> <p><i>Operating Systems</i>: macOS, Windows, Linux</p>
<b>Professional Affiliations</b>	<p><i>Register of Professional Archaeologists</i>, Registrant ID 46729296</p> <p><i>Society for American Archaeology</i></p> <p><i>American Association for the Advancement of Science</i></p>