

# R. Kyle Bocinsky, PhD

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## Contact Information

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## Research Interests

*Computational archaeology; complexity; GIS; cyber-infrastructures; southwestern US prehistory; paleoenvironments and human dimensions of climate change; plant and animal domestication*

## Education

**Washington State University**, Pullman, Washington

PhD, Anthropology, December 2014

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

Graduate GPA: 3.84

MA, Anthropology, May 2011

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

**University of Notre Dame**, Notre Dame, Indiana

BA, Anthropology, May 2008

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

Overall GPA: 3.414. Major GPA: 3.66

## Employment

**Crow Canyon Archaeological Center**, Cortez, Colorado

January 2016—present Director of Sponsored Projects, Crow Canyon Research Institute

Develops research collaborations between Crow Canyon archaeologists and external researchers; manages a >\$1 million portfolio of grant-funded research projects; conducts cutting-edge interdisciplinary research on ancient agricultural practices, climate change, and global sustainability

Summer 2012 Field Intern, Basketmaker Communities Project

Excavation and education at the Dillard Site, a Basketmaker III community; Gave public talks on Pueblo prehistory to visitors of all ages. Directed by Shanna Diederichs

**Washington State University**, Pullman, Washington

2015 Post-doctoral Researcher, *Synthesized Knowledge of Past Environments*

Worked to bring paleoenvironmental data to scientists and the general public; collaborated on the development of web mapping services; integrated environmental data with cultural data to gauge impacts of climate change on humans. Directed by Timothy A Kohler

Aug 2008–Dec 2014 Research Fellow, Department of Anthropology

Agent based modeling with the Village Ecodynamics Project; documented and debugged code and expanded study areas; coordinated data storage and delivery among 4 institutions and 16 researchers. Directed by Timothy A Kohler

Fall 2014, Spring 2013, Spring 2012 Instructor, Department of Anthropology

Developed and taught three courses at the undergraduate level; 15–90 students

**Mesa Verde National Park**, Colorado

Summers 2009, 2011, 2012 Field Technician, The Mesa Verde Community Center Survey

Visited and documented large aggregated villages in MVNP; developed iPad-based site-recording workflows integrated with mapping tools in AutoCAD and Adobe Illustrator; Drafted survey final report in L<sup>A</sup>T<sub>E</sub>X. Directed by Donna M. Glowacki

**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

**Experience & Achievements**

**Grant Achievements**

- Co-PI on *Developing and Deploying SKOPE—A resource for Synthesizing Knowledge of Past Environments*, funded through a 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
- Secured \$180,000 in competitive masters and doctoral funding from the National Science Foundation and Washington State University resources, plus full tuition waivers from WSU for the duration of graduate school
- Secured \$16,800 in research funding from the National Science Foundation in support of travel and materials
- Collaborated in developing proposals with budgets ranging from \$300,000 to \$1.5 million

**Research Collaborations**

- Extensive experience collaborating with large, interdisciplinary teams of researchers from academic, public, and private sectors
- Managed and coordinated data acquisition, storage, and delivery between team members using Subversion and Git repositories with local and cloud-based storage
- Authored 14 peer-reviewed research articles published in journals including *Science*, *Nature Communications*, *Science Advances*, and *American Antiquity*, four book chapters, three technical reports, and one technical paper

**Software Development**

- Developed two packages in *R*—*FedData* and *PaleoCAR*—for downloading and processing geospatial and climate data from federated data sources
- Packages are being adopted by academic researchers (at Washington State University and Arizona State University) and in the public sector (Natural Resources Conservation Service); *FedData* downloaded over 6,300 times since release
- Lead developer in the *Village Ecodynamics Project*—built agent-based geospatial simulations of ancient Pueblo human-environment interaction using the *RePAST* simulation framework (in the Java computer language)

**Classroom Management**

- Developed curricula and taught three courses at introductory and advanced levels, and managed class sizes ranging between 15 and 90 students
- Emphasized a science-based comparative approach to anthropological research
- Created collaborative assignments designed to enhance leadership, management, and presentation skills among students
- Challenged students to apply anthropological perspectives to real-world problems

## Computer Experience

*Statistical Packages:* R, SAS, Stata

*Languages:* R, Java, Python, Bash, C++, Objective C

*Applications:* ArcGIS, GRASS GIS, QGIS, MS Office, Adobe Illustrator, Final Cut Pro,  $\LaTeX$

*Web Frameworks:* Bootstrap, Jekyll, Liquid, Shiny, GH-Pages

*Agent Based Modeling Frameworks:* RePAST (J, S), Swarm

*Version Control:* Git, Subversion

*Operating Systems:* macOS, Windows, Ubuntu Linux

## References

### Timothy A. Kohler

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### Mark D. Varien

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### Jade d'Alpoim Guedes

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### William D. Lipe

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### Shanna R. Diederichs

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### Ian Kuijt

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### Scott G. Ortman

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### Stefani A. Crabtree

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