

CfAS SYNTHETIC WORKSHOP AWARDS

Following a competitive grant process, CfAS is pleased to announce that two awards were made in March 2018 for collaborative synthetic workshops. Each of these projects addresses a substantive problem requiring a deep-time perspective. Multiple products will result including intellectual results that will benefit the discipline and products that will inform the public and shape policy. CfAS is providing funds for multiple face-to-face meetings of the project working groups, facilitating the working groups' collaborative efforts over a two year period. A description of the two projects is presented below.

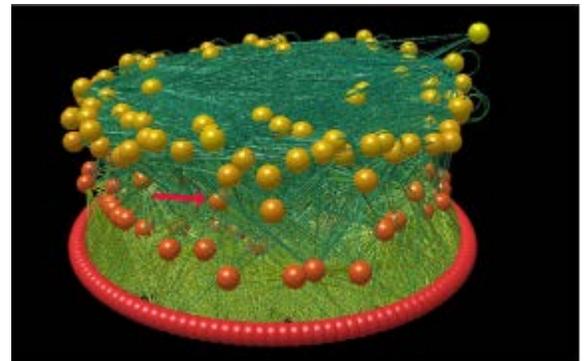
The ArchaeoEcology Project: How Human Interactions with Biodiversity Shape Socio-Ecological Dynamics and Sustainability

Organizer: **Stefani Crabtree**, Pennsylvania State University

Proposed Working Group Members: **Andy Dugmore**, University of Edinburgh; **Jennifer Dunne**, Santa Fe Institute; **Jacob Earnshaw**, Central Coast Archaeology and Rhizome Cultural Heritage Research and Consulting Ltd; **Jennifer Kahn**, College of William and Mary, Bishop Museum, and Smithsonian Museum of Natural History; **Iain McKechnie**, University of Victoria and Hakai Institute; **Tom Ryan**, City University of New York; and **Spencer Wood**, Center for Creative Conservation, University of Washington

How do the ways that humans interact with the plants and animals around them affect the long-term chances of their society's survival? While posed in many different ways, this question lies at the heart of the public debate about how our actions are affecting biodiversity and transforming our relationships with ecosystems across the planet. While most scientific inquiry into this question focuses on the here and now, the ArchaeoEcology Project, in contrast, takes a different tack. It combines the deep-time perspective of archaeology with data from the allied disciplines of ethnography, ecology, climate science, and geology, to answer the question: "How do human interactions with biodiversity shape socio-ecological dynamics and sustainability?"

Using data from the American Southwest, the Pacific Northwest, the South Pacific, the North Atlantic, northern Europe, and Western Australia, the project will document the many ways that humans interact with other species (e.g., using them for food, shelter, clothing, tools, etc.). It will then synthesize the various data sets into models termed "human-centered interaction networks" that will be used to better understand the role of culture, ecology, and environment in the long-term evolution of socio-ecological systems. Only in this way can a full picture emerge of how humans affect biodiversity and how changes in biodiversity affect the resilience and sustainability of human societies. Armed with this knowledge, the project will provide our peers, policy makers, and the public with information about how best humans can interact with ecosystems to survive and flourish.

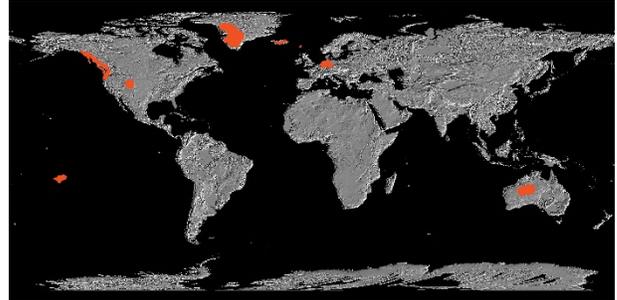


This graph depicts one type of human-centered interaction network, a food web, for the ecosystem of the Ancestral Pueblo people. Here every ball indicates a species, while every green line indicates a feeding link. The red arrow points to Ancestral Pueblo people. By examining this type of human-centered interaction network, here focusing on food, we can better understand how the choices by humans can lead to sustainable feeding strategies.

“When one tugs at a single thing in nature, he finds it attached to the rest of the world.”

– *John Muir*

Just as it studies biodiversity, the ArchaeoEcology project embodies scientific diversity. Team members are based at, or affiliated with, a variety of institutions in the U.S., Canada, and the U.K., including universities, independent research institutes, museums, and a CRM consulting organization. Multiple academic career stages are represented, including graduate student, postdoc, and assistant to full professor. Several areas of expertise are represented, including archaeology, anthropology, ecology, conservation, geosciences, and informatics. Three of eight participants are women, including the organizer.



Case studies used in the ArchaeoEcology Project

People, Fire, and Pines in the Border Lakes Region of North America

Organizer: Evan Larson, University of Wisconsin-Platteville

Proposed Working Group Members: **Jessica Atatise**, enrolled member of the Lac La Croix First Nation; **Brian Jackson**, Biologist, Quetico Provincial Park; **Lane Johnson**, Research Forester, University of Minnesota Cloquet Forestry; **Lee Johnson**, Heritage Program Manager and Archaeologist, Superior National Forest; **Robin W. Kimmerer**, Distinguished Teaching Professor, Director of the Center for Native Peoples and the Environment, SUNY College of Environmental Science and Forestry, and enrolled member of the Citizen Potawatomi Nation; **Kurt Kipfmüller**, Associate Professor of Geography and Director of the Center for Dendrochronology, University of Minnesota; and **Jeff Savage**, Director, the Fond du Lac Cultural Center and Museum and enrolled member of the Fond du Lac Band of Lake Superior Chippewa



Charred and dead trunks of once-open grown pines burned in the severe fires of the early 2000s after a century without fire. This foreshadows a different forest emerging from the ashes and a departure from historic-period forests that developed in close relationship with human land use.

Wilderness has traditionally been thought of as a place untouched by people. Of course, archaeologists know that such a conception bears little resemblance to the truth. Human activities have been shaping nearly all of the Earth's landscapes for thousands of years. As a result, it does not make sense for management of wilderness areas to use a mythical pristine condition as its goal. But treating humans as an integral part of the environment has enormous implications for wilderness management, particularly with respect to the longstanding relationship between people and fire.

*Wilderness, like the national park system, was an American idea –
Stuart Udall*

First Nation communities that spanned North America prior to the arrival of Europeans had a long-term relationship with fire, using it more as a tool than perceiving fire as an adversary. This relationship changed with the coming of Anglo-American pacification and settlement. The explosive fire regimes of the last century are the unintended consequence of the separation of people and land, the removal of traditional land use practices, and a century of fire suppression all occurring at a time of massive change to the global environment.



An open grove of ancient red pine trees, bearing the mark of passing fires that burned during the 1700s and 1800s. This grove represents a fading legacy of historic land use.

Today, prescribed fire is a key tool in contemporary conservation efforts. Yet, are we using fire effectively to manage wilderness and natural resources? To understand where and when to burn, managers must first understand the drivers of historical fire regimes. Did people fundamentally alter patterns of fire activity in the past through their intentional use of fire? If so, should wilderness managers consider using prescribed fire to maintain the resilience and ecological integrity of protected areas? The project will bring together a team of archaeologists, First Nation community members, land managers, scientists, and those with traditional environmental knowledge to synthesize existing archaeological, ethnographic, and tree-ring data in the context of traditional histories to understand the long-term relationships among people, landscape, and fire in the Border Lakes Region of North America. This is an area where the human influence on historical fire regimes is just now coming to light, and where the role of that influence in preserving biological diversity may be substantial. The results of this synthesis will directly inform revision of the fire management plan of a federal wilderness area and holds the potential to transform the basic understandings of nature and wilderness for a substantial population while laying a foundation for further work to evaluate the dynamic relationships between human communities and their environments.

SEE YOU IN DC!

CfAS will hold a reception on April 14th between 7:00 and 9:00 PM coinciding with the Society for American Archaeology annual meeting. The reception will include an update on CfAS from Board co-Presidents Altschul and Kintigh, introduction of the board of directors, and short presentations from the leaders of the first two synthetic research workshops, Stefani Crabtree and Evan Larson.

The reception will be held at the Arizona State University Barrett & O’Conner Washington Center, 8th floor – Event Pavilion, 1800 I (“Eye”) Street, N.W., Washington, D.C. This is an invitation-only reception. If you plan to attend, please RSVP by April 9, 2018 by contacting Mr. Terry H. Klein at tklein@srifoundation.org or call Mr. Klein at 505-892-5587. We will be serving an extensive menu of hors d’oeuvres during the reception.

If you can’t make it to the reception or if you would just like to chat, please visit us at the SRI booth (No. 203) in the exhibit hall during the meeting.

AND IF YOU CAN'T MAKE IT TO DC, COME TO BARCELONA!

CfAS is sponsoring a session at the European Association of Archaeologists (EAA), entitled “Advancing archaeological synthesis: Using the past to benefit the future.” Papers being presented include:

Archaeological Synthesis: The role of digital repositories and the FAIR principles (Julian Richards)

Synthesis and the contemporary relevance of archaeology (Scott Ortman and John Hanson)

The Challenges and Prospects of Developing Radiocarbon 'Big Data' for the Study of Prehistoric Demography (Robert Kelly)

The Coalition for Archaeological Synthesis: Fostering Collaborative Research in Pursuit of Public Good (Jeffrey Altschul)

21st-century Challenges for Archaeology: Synthesis of information from developer-funded investigation to form new historical narratives (Jan Wills)

Promise and Peril: Archaeological Collections and Synthesis-Building (Teresita Majewski)

Computational Tools Supporting Synthetic Research: Data Integration using tDAR and Delivering Paleoenvironmental Reconstructions with SKOPE (Keith Kintigh, Timothy Kohler, Bertram Ludäscher, Katherine Spielman, and Kyle Bocinsky)

Data Post-Recovery (Sarah Herr)

Open Collaborative Models for Advancing Archaeological Synthesis: Linking Research, Resource Management, and Public Education Approaches (David Anderson, Eric Kansa, Sarah Kansa, Joshua Wells, and Stephen Yerka)

Archaeological Synthesis: A Joint Statement by SAA and EAA (Susan Chandler and Felipe Criado-Boad0)

Archaeological Synthesis for Long-term Interdisciplinary Research on Social Change (Barbara Mills, Sudha Ram, Jeffery Clark, Scott Ortman, and Matthew Peeples)

The Need and Potential for Archaeological Synthesis in US Heritage Resource Management (Michael Heilen)

AND IF YOU CAN'T MAKE IT TO DC OR BARCELONA

Other events we plan to attend include the Pan African Archaeological Association for Prehistory and Related Studies in Rabat, Morocco (September 10-14, 2018) and the International Scientific Committee on Archaeological Heritage Management (ICAHM) in Sicily, Italy (October 25-28, 2018). For other events and programs please visit the CfAS website at www.archsynth.org.



Coalition for Archaeological Synthesis



*Fostering Synthesis in Archaeology to
Advance Science and Benefit Society*

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