Legacies on the Landscape: Integrating Ecology and Archaeology on the Agua Fria National Monument, AZ
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Legacies on the Landscape
This project is a collaborative effort between ecologists and archaeologists focused on identifying long-term legacies of prehistoric and modern human impact in a desert grassland environment of the Agua Fria National Monument, north of Phoenix, Arizona. Students and faculty from the Department of Anthropology and the School of Life Sciences at Arizona State University and researchers from the Bureau of Land Management were involved in a pilot study whose outcomes will shape future project activities. Archaeologists and ecologists collaborated on all research design, data collection, and analysis.

Objectives
- Investigate long-term legacies of prehistoric and modern human impact in a desert grassland environment
- Develop research methods appropriate for collection of complementary archaeological and ecological data regarding such impacts

Pueblo La Plata
Pueblo La Plata, a masonry pueblo dating to A.D. 1150-1300, was selected for the pilot study for several reasons. La Plata’s large size (over 100 rooms) suggests a sizeable population. Surrounding agricultural features (rock piles, cleared areas, agave fields, and rock alignments) indicate a human-modified landscape in anticipation of future development of the site for tourism.

Architecture studies
- Wall corners were excavated and details of visible standing, masonry, and decay recorded. Walls were also mapped with a total station.
- Rooms were built in a number of construction episodes. Walls of adjacent rooms are often offset (eg. rooms 1-4) and many major walls are not contiguous. Rooms were added in groups of 4 to 6 at a time.
- The pueblo grew by accretion rather than simultaneous construction, suggesting temporal changes in population and potentially in levels of human environmental impact.

Conclusions
In this sample, several patterns suggest prehistoric human activities left visible legacies on the landscape and today, even in an environment heavily impacted in more recent years by grazing, fire, and other processes. These patterns should be investigated with additional data and replicate study sites.

- Rock cover varies with distance from the pueblo. Rock cover is also correlated with woody plant counts on the La Plata transect.
- Herbaceous species richness and dominant species are similar on both transects. Rare herbaceous species differ between transects, with 5 species found only on the La Plata transect and 10 found only on the “control” transect.
- No significant differences were found in percent cover or woody plant size.

Each data collection point included:
- A set of three 1x1 m squares (arranged perpendicular to the transect line) in which artifact and rock cover samples were recorded, with a trap line (arranged perpendicular to the transect line) along which small mammals were trapped and marked cover was recorded.
- No significant differences were found in percent cover or woody plant size.

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