

## SMALL SITE RESEARCH DESIGN

NOTE: This outline, prepared by Dr. E. Charles Adams of the Arizona State Museum, may be utilized as guidance by individual Chapters when developing a plan for studying small sites.

### PURPOSE

Small sites comprise over 90 percent of the archaeological sites in Arizona. These sites are frequently the most impacted by development and are destroyed at a high frequency. Understanding the location and use of small sites is integral to understanding any culture's adaptation to its environment. Yet, small sites receive little research attention and are often not studied in a systematic manner to allow researchers to understand their individual role or integrated role in cultural patterns. This outline is designed to aid the researcher in developing a plan for studying small sites. Additionally, most cultural resource management-generated reports discuss research at small sites, usually involving both survey and excavation.

### PREREQUISITES

Requirements include Prehistory of the Southwest and completion of Field Crew Member I and II, and development of supervisory skills prior to implementing research on small sites.

### OUTLINE

#### A. Definition of terms

1. What is a small site (Wilcox and Pilles 1978)?
2. What are the characteristics that differentiate a small site from other sites?
  - a. Frequently have no structures.
  - b. Occasionally have no features.
  - c. Usually use is short-lived.
  - d. Usually use is seasonal.
3. Small sites are usually part of a larger landscape use.

#### B. Research constraints

1. Construction/contract-oriented research. May be able to gather information on only one site with no other direct research context.
2. Part of a regional survey. Can look at settlement patterns
3. Part of a large, varied research program involving survey and excavation
  - a. Gather subsurface material
  - b. Record information on features and architecture
  - c. Gather environmental information

OUTLINE (continued)

C. The design for research

1. Because these sites are small, one should attempt complete recovery of information - architecture, artifacts, ecofacts
2. Background to research should be done at two levels.
  - a. General area research and data on archaeology, specifically on settlement and small sites.
  - b. Small site research specifically.
  - c. It is absolutely critical that the small site(s) is(are) placed in the context of regional and local archaeology to attempt to understand its role in the settlement system (culture's use of the landscape).
3. Causes of variability should be recognized.
  - a. Time
    - How do the nature and frequency of different small sites change over time?
    - How do their linkages to other sites and especially to large sites vary with time?
  - b. Use: What criteria are used/should be used to differentiate small sites - structures, features, artifact classes?
    - Structures
      - o Determine associated features, both intramural and extramural
      - o Evaluate the artifact assemblage
    - Features
      - o Are there features associated with one another and with structures?
      - o Are there artifact assemblages associated with features, such as fire-cracked rock?
    - Substantial collections should be made of artifacts to allow statistical analysis.
      - o Use flotation to recover micro-artifacts
      - o Compare assemblages in "hot spots" to other areas.
    - Take environmental samples - pollen, flotation, faunal, soil
      - o Within structures on the occupation surface
      - o Within and adjacent to features
      - o In extramural areas
      - o On generalized used surfaces
      - o Soil tests - pH, fraction to evaluate agricultural potential
    - Preservation - site condition affects the remains preserved at a site and in situ at the site.
      - o General conditions in the area should be noted
      - o Site-specific observations - erosion, burial, etc. - must be noted.
      - o Artifacts can also be affected by weathering. Especially surface artifacts can be affected and can influence data recording.

4. Patterns of similarity should be noted, as well as patterns of variability.
    - a. What are the similarities - architectural, landscape, artifactual?
    - b. What are the underlying causes - stable adaptation, supra-organizational structure (social, political, etc.)?
- D. Methodology should flow smoothly out of research constraints and design.
1. Survey - goal is to understand settlement pattern, landscape use, and community structure.
    - a. Is the survey coverage 100 percent or a sample?
      - Collection can be based on gridded landscape approach, eschewing traditional site typologies.
      - Can also be stratified by environmental or cultural variables, e.g. soil zones, plant zones, drainages, etc.
      - Only areas with high artifact density are assigned site numbers.
    - b. Site collection - choose among several options. Whatever the choice, careful mapping of the site is essential. The site should be gridded to facilitate surface collection and feature mapping.
      - Total collection - sites with low artifact densities should have all artifacts and features plotted on a map.
      - Hot spot sampling - only areas of high density are sampled.
      - Structures - intramural and extramural
      - Random or stratified, random sampling.
      - No collection survey - detailed site maps must be prepared. Detailed artifact, etc. inventories must be made and tied to maps.
  2. Excavation - goal is to understand specific elements of the general pattern observed on survey.
    - a. Must determine sampling units
      - Full excavation
      - Feature or structure oriented - intramural and extramural
      - Artifact concentration (hot spot) oriented
      - Random stratified, random, etc.
    - b. Collection of environmental samples
      - Based on research design
      - To determine site use and association with other sites
    - c. Dating
      - Because collection of chronometric samples is difficult, every opportunity should be taken advantage of.
      - Seriation, usually based on ceramics or projectile points.
      - Stratigraphy

OUTLINE (continued)

E. Analysis and report preparation

1. The purpose of analysis is to search for patterns in the data and to map the changing interface of the culture with its environment and with other groups through the entire range of its use of an area based on small site research. This should be determinable through the culture's settlement pattern. This pattern is best determined through:
  - a. Complete surface mapping and documentation - survey.
  - b. Testing a cross-section of this variability.
  - c. Tying it to a regional pattern based in a well-thought-out research design.
2. The report should describe what the role of the small site was in the observed cultural pattern.
  - a. What processes caused these patterns - both those effecting change and those permitting continuity?
  - b. Do the small sites allow inferences about cultural boundaries?
  - c. The small sites should allow inferences about landscape exploitation, how it varies through time, and why.
  - d. Specific site use may be determined.
  - e. Interface of small sites to larger ones and to other small sites should be possible.

REFERENCES AND RECOMMENDED READINGS

Fish, Suzanne K., and Paul R. Fish (editors)

1984 *Prehistoric Agricultural Strategies in the Southwest*. Arizona State University Anthropological Research Papers 33. Tempe.

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1971 *The Distribution of Prehistoric Population Aggregates*. Prescott College Anthropological Report 1. Prescott, Arizona.

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1978 *Limited Activity and Occupation Sites: A Collection of Conference Papers*. Center for Anthropological Studies, Contributions to Anthropological Studies 1. Albuquerque.