Short-term Sedentism at Gila River Farm Site, NM

Insight into Cliff Phase Salado Settlement Patterns

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Introduction

During the 2021 field season, as a part of the Archaeology Southwest field school, construction data from the Gila River Farm site outside Cliff New Mexico was compiled in order to visually map the sites construction. This was achieved by mapping patterns of bonded and abutted walls along with footing stone (cimiento stones) placement and quality. Patterns of accretional and rapid growth at Gila River Farm support the larger short-term sedentism model used to interpret Salado migration and settlement patterns during the Cliff phase Salado period.

Settlement around the upper Gila was characterized by frequent migration between river valleys and short-term occupation of adobe pueblos. Frequent migration is thought to have been a preventative measure for flora, fauna, and soil nutrients to recover between periods of occupation. This study supports the short-term sedentism model by highlighting the accretional and rapid growth of the Gila River Farm site. Furthermore, Salado life-ways in association with construction patterns allow comparative modeling to demonstrate shifts in subsistence and construction during the Salado periods.

Background Information

The Salado Phenomenon:

The Salado period (1300 - 1450+ CE), is a late precontact culture that has become a recent focus in Southwest Archaeology. The term Salado is used to understand a phase in Southwestern culture history. Salado, while it includes ethnic markers, is instead defined as a united ideology between groups.

After the abandonment of the northern Ancestral Pueblo region, during the late 1200s and early 1300s (figure 1), Kayenta peoples migrated south and began to settle and construct villages with local Hohokam and Mogollon populations. Kayenta groups brought new styles of pottery with them and through cultural intermingling new definable Salado ceramic types emerged. These are known as Salado Polychrome and Roosevelt Redware.

The Gila River Farm site (LA 39315), represents a large Cliff phase Salado village of adobe room blocks. The site includes many archaeological markers of the Salado period as well as providing insight into many aspects of peoples' lifeways and spatial patterning indicative of the period. While direct dating of the site has yet to be achieved, the site is significant because surface collections indicate the site was occupied during both early and late Salado periods.

Figure 1: Feature 455, north facing interior wall includes cimiento stones (base of wall) and adobe

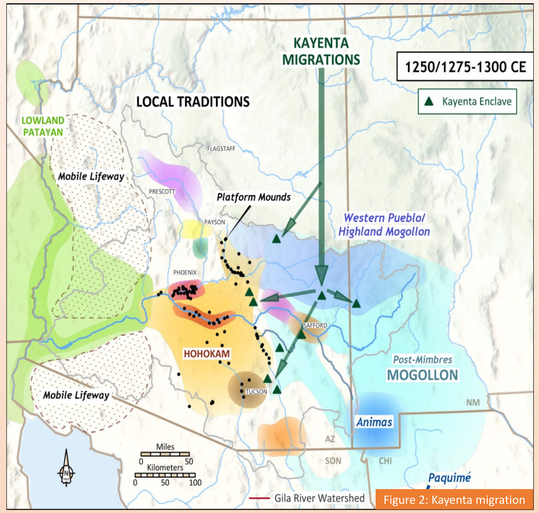

Figure 2: Kayenta migration

Nutrient Cycles and Resource Replenishment

Soil nutrient cycle:
- Average soil replenishment cycle after salination: 75 – 100 years
- Dependent variables
  - Climate
  - Vegetation
  - Parent Material
  - Organism
- Mitigations: Decreased intensity and duration of farming

Faunal resource replenishment of popular game:
- Mule deer:
  - Life span: 9 - 11 years
  - Sexual maturity: 1.5 years
  - Gestation period: 200 days
  - Population recovery: From 60% loss, 6 years
- Jackrabbit:
  - Life span: 2 - 5 years
  - Gestation period: 41– 47 days

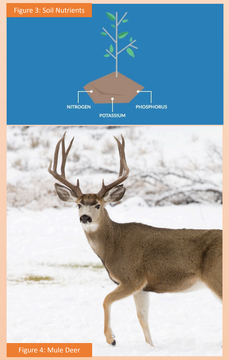

Figure 3: Soil Nutrients

Figure 4: Mule Deer

Comparative Lifeways Patterns

Kayenta Architecture, Settlement, and Subsistence patterns Pre-Migration:

Pueblos:
- Cliff dwellings with central pueblos in visible locations, with masonry construction
- Room types: Living rooms, unroofed courtyards, kivas, granaries, storage rooms, mealing (grinding) rooms

Settlement and spatial patterning:
- Room clusters to form public plazas
- Spatial patterning (site types): Households, villages, central pueblos

Subsistence patterns:
- Dry farming: Mesa top, rainwater and basin fed
  - Three sisters: Maize, beans, squash
- Hunting/ gathering
  - Pinyon nuts, yucca fruit, ricegrass seeds, amaranth (seeds and leaves), goosefoot (seeds and leaves), deer, elk, bighorn sheep, rabbit

Classic Mimbres Architecture, Settlement, and Subsistence:

Pueblos:
- Pueblos positioned along terraces above river drainages, with cobble walled and masonry construction
- Pueblo use-life: up to 100 years
- Room types: Living rooms (generalized), mealing (grinding) rooms, plazas (former kivas burned beginning in the 900s)
- Site size and spatial patterning: Aggregated rooms into room blocks and collection of many rooms into clustered room blocks

Subsistence patterns:
- Irrigation and floodplain farming, irrigation canals, check dams, low terrace systems
  - Three sisters: Maize, beans, squash
- Hunting/ gathering
  - Pinyon nuts, yucca fruit, ricegrass seeds, walnuts, pigweed, amaranth (seeds and leaves), goosefoot (seeds and leaves), deer, elk, bighorn sheep, rabbit

LA39315 Short-term Sedentism and Reflective Architectural Characteristics:

Salado Settlement and Subsistence Patterns:

Settlement and spatial patterning:
- Large pueblos and lower population density
- Sites consist of multiple room blocks
- Constructed on terraces within river valleys

Subsistence patterns:
- Irrigation and floodplain farming
- Pinyon nuts, walnuts, pigweed, deer, elk, bighorn sheep, rabbit

LA39315 Faunal Remains:

Feature 450:
- Small mammal
- Deer (artiodactyl)
- Burned in association with hearth

Feature 423:
- High frequency of artiodactyl
  - 4 scapula
  - Mandible
  - Misc.

Feature 419:
- Small mammal
- Deer (artiodactyl metatarsals)

Architectural Characteristics of Short-term Sedentism:

Cliff phase Salado pueblos have been estimated to have been occupied for only short periods of time (20 – 50 years). The short-term sedentism model highlights evidence of frequent migration between river valleys in the upper Gila region. Short-term sedentism and frequent migration served as a preventative measure for soil, floral, and faunal resources and nutrients to replenish between periods of occupation. Patterns of frequent migration and short-term sedentism can be identified by key architectural characteristics that highlight the short-term use of pueblos.

Architectural characteristics of short-term sedentism (figures 1, 6, 7, and 8):
- Accretional and rapid growth
  - Bonding and abutting patterns
  - Use of multiple adobe materials
  - Wall alignment continuous with inconsistent bonding
- Infrequent repair and remodeling
- Cimiento stone quality
  - Single and double-coursed alignment
  - Variable quality in stone selection

LA39315 400s Room block Architectural features:

The 400s room block at Gila River Farm (LA39315) exhibits architectural characteristics which indicate short-term sedentism during both the early and late Salado period. Surface collections at the site provide evidence of occupation during each period, while architectural characteristics provide evidence towards to duration of occupation periods.

Architectural characteristics of short-term sedentism at LA39315:
- Frequent abutting of wall segments and corners (figure 6, 8)
- Double-coursed cimiento (figures 6, 7)
- Highly variable cimiento size and quality
- Minimal repair and replastering

Upper Gila Farm LA39315

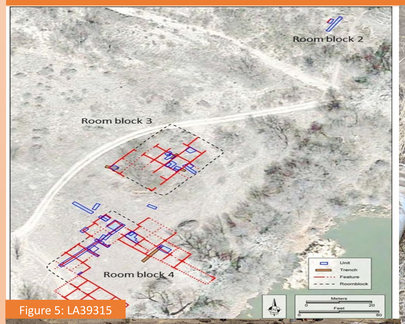

Figure 5: LA39315

Figure 6: Trench #78, two abutted walls

Figure 7: Trench #76 bonded corner

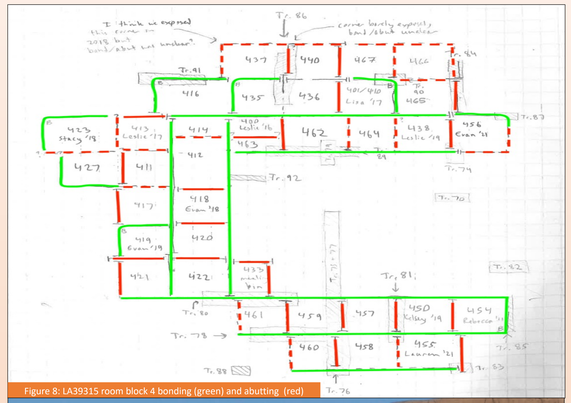

Figure 8: LA39315 room block 4 bonding (green) and abutting (red)

Conclusion

Gila River Farm site (LA39315) represents a large Cliff phase Salado village of room blocks constructed out of adobe and cimiento footing stones. The sites construction was rapid and characteristic of accretional growth. This is evidenced by bonding and abutting patterns to form continuous stretches of wall with inconsistent bonding between sections and corners. Cimiento stones used to create the base of each wall are doubled-coursed and variable in quality and size. Rooms at Gila River Farm show minimal evidence of repair and infrequent remodeling. All of which supports a short-term sedentism model during this period.

Subsistence and settlement patterns during the Cliff phase is comparable to past subsistence and settlement patterns of Classic Mimbres and Kayenta (pre-migration). Many resources and farming techniques used during previous periods are similar to that of Salado. Yet, frequent migration to account of resource replenishment represents a shift in subsistence strategies that is represented in the rapid construction and short-term occupation at Gila River Farm.

References

Bear, George D., and Richard M. Hansen. "Food habits, growth and reproduction of white-tailed jackrabbits in Southern Colorado." *Food habits, growth and reproduction of white-tailed jackrabbits in Southern Colorado*. 90 (1967).

Blake, Michael, Steven A. LeBlanc, and Paul E. Minnis. "Changing settlement and population in the Mimbres Valley, SW New Mexico." *Journal of Field Archaeology* 13, no. 4 (1986): 439-464.

Dungan, Katherine, Deborah Huntley, Jeffery Clark, Robert Jones, and Andrew Laurenzi. "Exploring the Late Prehistoric Occupation of the Upper Gila Region Through Preservation Archaeology." *Natural History of the Gila* (2010): 20.

Hegmon, Michelle, Karen Gust Schollmeyer, and Margaret C. Nelson. "The Classic Mimbres Period in the Eastern Mimbres Area: Evidence from Ceramics, Architecture, and Settlement." *Kiva* 87, no. 4 (2021): 410-436.

Hegmon, Michelle, and Margaret C. Nelson. "The Diversity of the Postclassic Mimbres Periods (AD 1150–1450): Insights from Las Animas Village in Southwestern New Mexico." *Kiva*84, no. 3 (2018): 342-366.

LeBlanc, Steven, and Ben Nelson. "The Salado in Southwestern New Mexico." *Kiva* 42, no. 1 (1976): 71-79.

Monteith, Kevin L., Vernon C. Bleich, Thomas R. Stephenson, and Becky M. Pierce. "Population dynamics of mule deer in the eastern Sierra Nevada: implications of nutritional condition." *California Department of Fish and Game, Bishop, California, USA* (2010).

Ondrasek, Gabrijel, Zed Rengel, and Szilvia Veres. "Soil salinisation and salt stress in crop production." *Abiotic stress in plants-Mechanisms and adaptations* (2011): 171-190.

Pool, Michael D. "Mimbres Mogollon Farming." *Soils, Climate, and Society: Archaeological Investigations in Ancient America, edited by JD Wingard and SE Hayes* (2013): 85-107.

Schollmeyer, Karen Gust, and Margaret Nelson. "Architecture, settlement, and the construction of Perry Mesa pueblos." In *Alliance and Landscape on Perry Mesa in the Fourteenth Century*, pp. 79-103. University of Utah, 2014.