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An Ancestral Puebloan Community in Morefield Canyon, Mesa Verde National Park

The Mesa Verde National Park Community Center Survey (MVNP CCS) is a multi-year study with the goal of understanding the formation of large, aggregated pueblo villages from A.D. 600-1300 in the central Mesa Verde region in southwestern Colorado (Glowacki and Varien 2003; Glowacki and Ortman, in prep). One goal of the project is to understand the reasons why populations moved from dispersed homesteads and hamlets into larger aggregated communities. During our eight-week field season, we found evidence of public architecture and infrastructure that had the potential to greatly enhance the agricultural productivity and population carrying capacity in one area of the Park, Morefield Canyon. These initial population aggregations sowed the seeds for the later massive cliff dwellings that give Mesa Verde its fame.



Detail from a panorama of the central valley of Morefield Canyon. Water management feature can be seen as a strip of green grass, marked by the red arrow. A large reservoir is indicated by a magenta arrow in the [larger image](#).

The MVNP CCS 2009 field season focused on gathering site size and occupation history data at four site clusters—Morefield Canyon Community, East Fork of Long Canyon Community, Head of Long Canyon Community, and Sun Temple Ridge Community—in order to identify “community centers.” Typically having some of the longest occupational histories of sites in the region, these key nodes of social, economic, and political interaction consisted of large settlements (usually the largest in the vicinity) of 50 or more total structures and often include public architecture, such as kivas (Adler and Varien 1994; Lipe and Varien 1999: 345). While the importance of communal investment and village-wide gatherings is suggested by the presence of great kivas, the high number of newly identified and previously recorded water control features highlights the cooperative communal action necessary to irrigate crops and sustain large populations. Of the site clusters, Morefield Canyon represents the best candidate for identification as a community center. Morefield Canyon is a broad and lush canyon near the eastern boundary of Mesa Verde NP.

Survey Methods

Extensive archeological survey was conducted in Morefield Canyon by University of Colorado field schools in the late 1960s and early 70s and also during the Bircher-Pony Post Fire Assessment Survey (Kleidon et al 2003). MVNP CCS focused on the northwest slope, and coincided with the location of most of the larger sites and all of the public architecture. Foot survey was conducted to identify new sites and to re-locate previously identified sites. Survey entailed re-mapping known sites to gather data about architectural features, which are used in estimates of site size, and completing in-field ceramic analysis for chronological assessment.



Archeologists mapping a site in the central valley of Morefield

Roomblocks were identified based on visible wall alignments, rubble scatters with distinct boundaries, and higher rubble

concentration than surrounding area. Each site was first subjected to a brief evaluation in which MVNP CCS data were compared with previous recorded site data. The spatial extent of field ceramic analysis varied, depending on the quantity and concentration of visible ceramics (3 meter radius dogleash, complete site tally, or complete tally of discrete artifact scatter). Kivas were classified as "oversized" (8-10 meters in diameter) or great kivas (10+ meters in diameter, associated walls, isolated placement). Site size was calculated with ArcGIS by taking area of polygon around extent of cultural material, as well as by using length and width measurements to calculate the area of an ellipse or rectangle around the site.

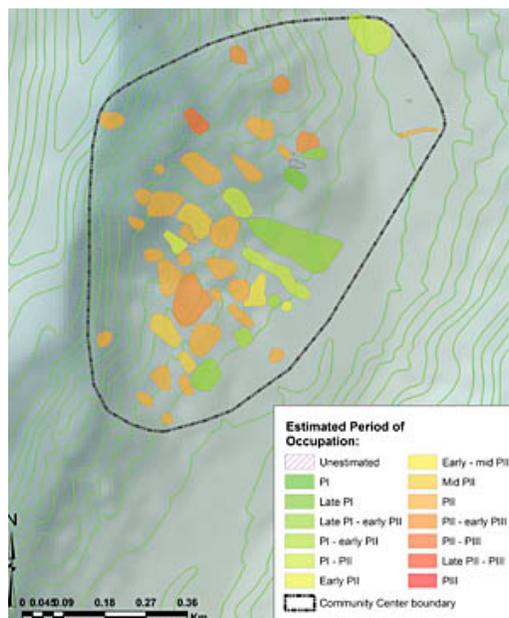
Canyon. Sketch maps were drawn for most sites, and were later used to correct instrument maps.

Results

Survey work during the 2009 field season entailed the assessment of the 101 sites comprising the four clusters to determine which were contemporaneous and may have comprised a community center. Fifty sites were recorded in Morefield Canyon, including one previously unrecorded water control feature. A total of 18,283 ceramic sherds were analyzed in order to refine site chronology. Public architecture identified included great kivas, large multi-story roomblocks, and a number of water control features.

Site Distribution Over Time

Sites in the canyon are present in highest concentration on benches and finger-ridges on both northwest and southeast slopes. The relative positions of the Pueblo I (A.D. 600–910) and Pueblo II (A.D. 910–1140) great kivas suggest a gradual movement of settlement-focus from the canyon floor onto the benches above the valleya general trend corroborated by the analysis of ceramic assemblages. This movement may reflect a growing pressure, over time, for more agricultural space or a desire for more prominence on the landscape, perhaps for defensive purposes. Similar trends occur elsewhere on Mesa Verde, with people moving away from agricultural spaces (usually mesa tops) to more defensible locations on mesa edges.



Estimated period of occupation for each site was deduced in-field from architectural features and ceramic analysis. These estimates suggest a gradual movement of settlement-focus from the canyon floor onto the benches above the valley, indicating pressure for more agricultural space or an interest in more prominence on the landscape. [See larger view.](#)

Reservoirs

A large Pueblo II reservoir just north of a bend in the canyon was trench-excavated in 1967 (Smith and Zubrow 1993) and retrenched in 1995-1997 (Wright Paleohydrological Institute 1998). Originally a four foot deep pond in the canyon's bottom, differential erosion on the periphery of the reservoir, the accumulation of dredged sediment, and the construction of water-controlling berms contributed to the reservoir's present inverted frying pan shape (Wright et al. 2005). Pueblo people probably used this reservoir to collect precious drinking water during summer monsoons.

Great Kivas

The great kivas in Morefield Canyon were partially excavated in 1967 (McLellan 1969). One kiva is set atop a finger ridge high above the valley floor. The site consists of a likely Pueblo II great kiva with evidence of double course architecture; a long room block with five associated pit structures is located some 12m to the north. Another is situated on a low-lying bench in central valley of canyon, some 200m south of the reservoir. This site consists of a great kiva with twin kivas to the west and associated room blocks employing upright-slab architecture, testifying to a Pueblo I occupation. Great kivas represent large-scale public architecture suggesting communal investment and use.

Check Dams

A number of check dams were built to manage water flow through the intermittent drainages that cut between the finger ridges upon which most sites are situated. They controlled erosion, and possibly served as temporary storage for water collected after summer storms (Rohn 1963). Broader dams on mesa tops or in valleys were used to create rich terraces on which to farm. These features, along with the reservoir and other water control features, represent the intensive, large scale communal investment in public water control required to sustain sufficient agricultural output and large human populations.

Stone Alignments

During the survey, MVNP CCS researchers identified a previously unrecorded water control feature in the valley of Morefield Canyon. The feature consists of a series of discontinuous stone alignments (90 x 10 m area), all of which are aligned south-southwest; they connect an intermittent drainage on the east side of the canyon and the canyon's main drainage. This feature may have been an attempt to prevent alluvial fan diffusion at the mouth of an intermittent drainage and direct water through artificial channels towards fields in the main canyon. Morefield Canyon has the highest maize productivity potential in the northern Southwest (Benson 2010); perhaps innovations such as this feature contributed to the more productive soils there and allowed larger crops.

Conclusion

Containing public architecture, water control features, and a settlement density that suggests the necessity of land sharing and communal investment practices, Morefield Canyon is a Pueblo "community center." The concept of a "community center," developed for central and western portions of Mesa Verde (e.g., Canyon of the Ancients National Monument and southwestern Utah; Adler and Varien 1994; Glowacki and Varien 2003; Lipe and Varien 1999: 345; Varien et al. 1996) is subject to intraregional variation, but continued fieldwork at MVNP should help to enhance our understanding of the development and role of large aggregated pueblo settlements within the broader landscape.

Acknowledgements

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Find out more about the people of [Mesa Verde](#).

By Charles Reed, Ryan Lash, and R. Kyle Bocinsky

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