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ARCHAEOLOGICAL RESEARCH AT GOODMAN POINT PUEBLO AND THE DEPOPULATION OF THE MESA VERDE REGION, UTAH-COLORADO, USA

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Abstract

Archaeological investigations conducted from 2005 to 2007 in Goodman Point Pueblo focused on ancient Pueblo culture in the Mesa Verde region on factors that stimulated migrations from the area at the end of thirteenth century A.D. This archaeological research[1] was conducted with cooperation between archaeologists and Native Americans, including descendants of ancient Pueblo people.

This article briefly summarizes three seasons of archaeological research at Goodman Point Pueblo and sketches the final period of Pueblo settlement in the Mesa Verde region, a piece of the Pueblo past that has been pondered since the nineteenth century, when archaeological remains were first studied in the area.

ANCIENT PUEBLO CULTURE IN THE MESA VERDE REGION

The Mesa Verde region is a part of a larger area refferred to as the North American Southwest[2] (Fig. 1). Mesa Verde, considered as an archaeological term, includes adjacent parts of what it is present southeastern Utah, southwestern Colorado, northwestern New Mexico, and northeastern Arizona in the

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[1] Archaeological investigations at Goodman Point Pueblo were carried out by the Crow Canyon Archaeological Center, Cortez, Colorado. The senior author of the article participated in that research in 2005 and 2006, principally as one of the supervisors of participants during the excavations.

The article is an expanded and updated version of the article "Goodman Point Pueblo: Research on the Final Period of Settlement of the Ancestral Pueblo Indians in the Mesa Verde Region, Colorado, USA. The Preliminary Report, 2005–2006 Seasons" by Radosław Palonka and Kristin Kuckelman, submited for publication in "Recherches Archéologiques" in 2007.

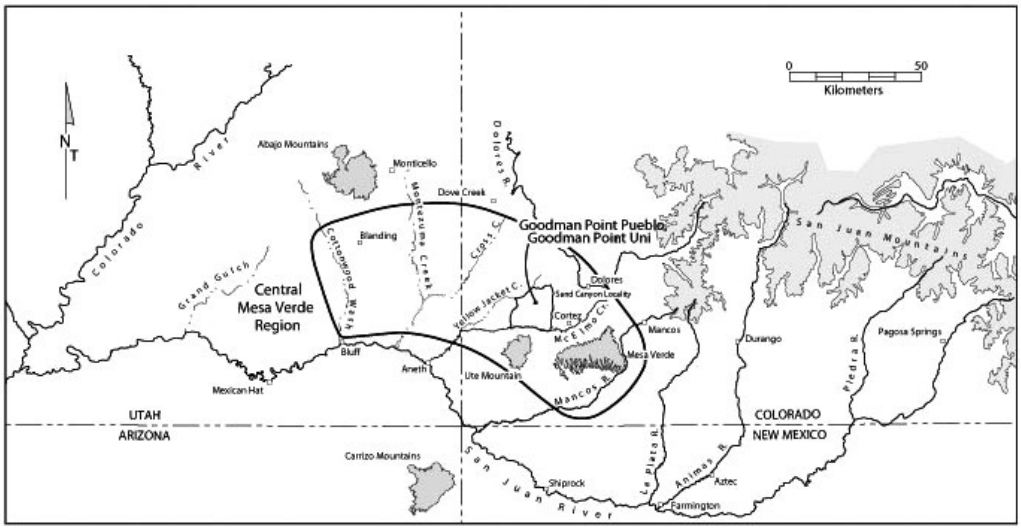
[2] Archaeologically, the Southwest includes today's Utah, Colorado, Arizona, New Mexico, southeastern Nevada, and western Texas in the United States and the northern portions of the states of Sonora and Chihuahua in Mexico.

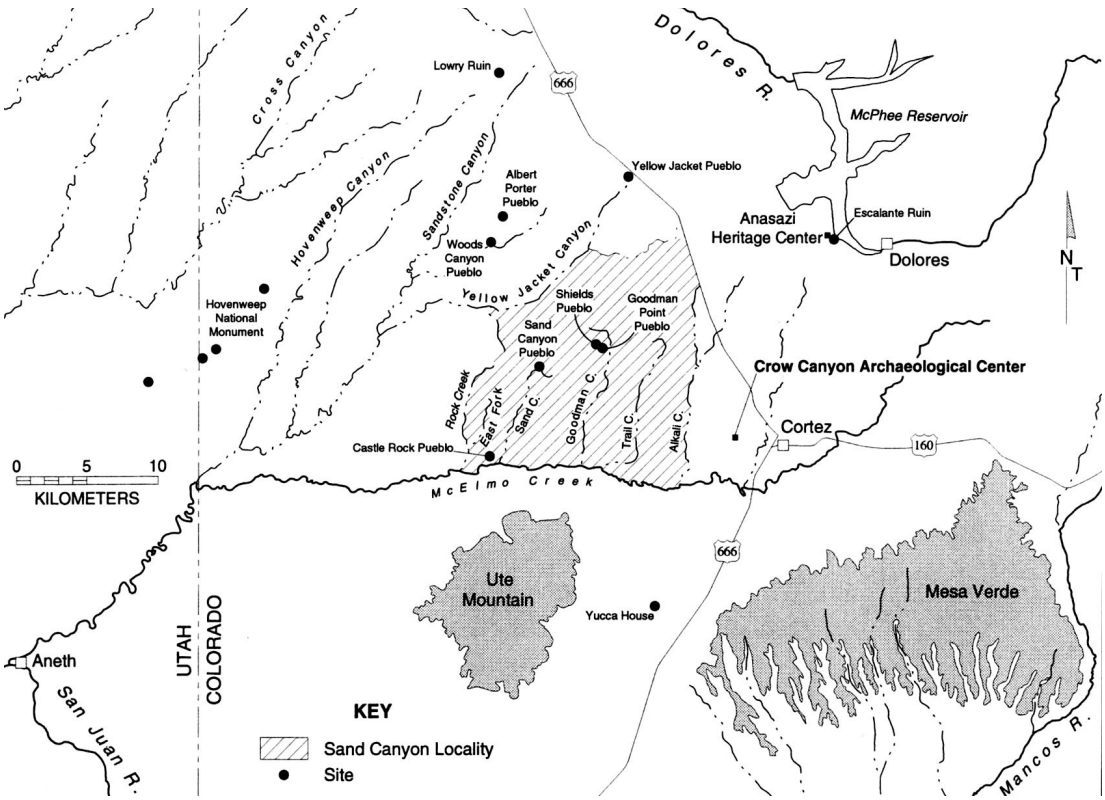
Fig. 1. The location of North American Southwest (after Cordell 1997).

United States. The term "Mesa Verde" is often used interchangeably with the name: "Northern San Juan region" (the San Juan is a large river in the area) (Lipe 1995:143-144; Varien 2000:6). This article is focused on the central part of the Mesa Verde, the area called the Central Mesa Verde region (Figs. 2a, 2b), that is defined as an area from the Mancos River and Mesa Verde National Park, Colorado in the south to Cottonwood Wash, Utah in the west (Varien 2000:6-7).

The Mesa Verde and the entire southwestern region includes diverse geographic and climatic conditions, though dry semi-desert plains prevail; these are interrupted by plateaus and mountain ranges with pine and spruce woodlands (Plog 1997:12-15).

In the past, the territory inhabited by Pueblo Indians culture (also called Anasazi culture) was the vast area that today includes Mesa Verde and other parts of the North American Southwest (Fig. 1). Today, Pueblo peoples live in some 20 to 30 pueblos on reservations in Arizona and New Mexico as





Figs 2, 2a. Central Mesa Verde Region and Goodman Point Pueblo. Courtesy of Crow Canyon Archaeological Center.

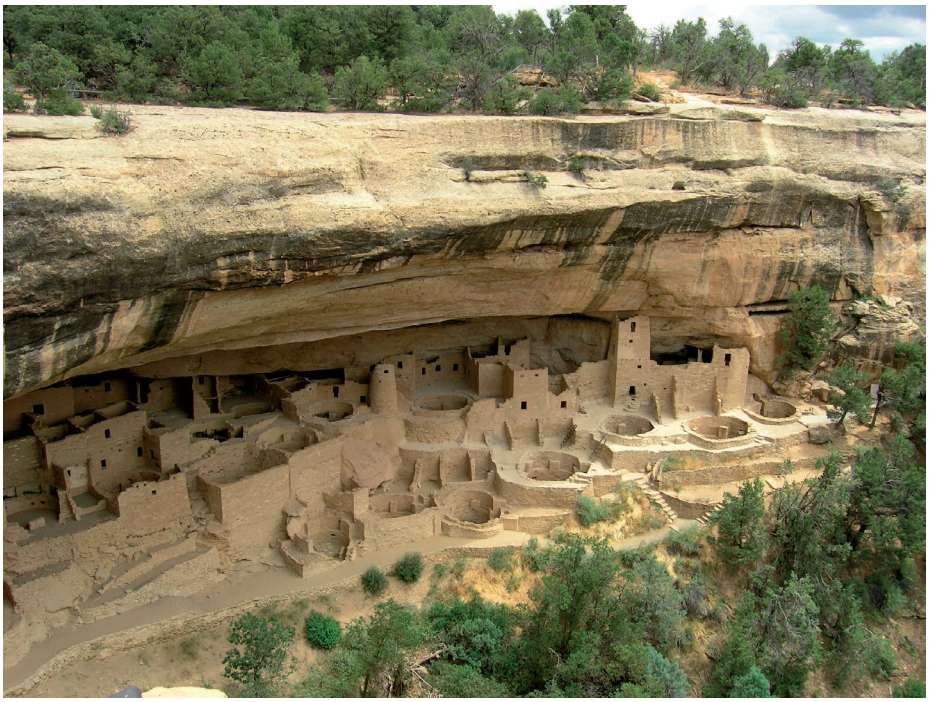


Fig. 3

Fig. 4

Figs 3, 4, 5. Cliff dwellings from 13th century A.D. Mesa Verde National Park, Colorado: 3) Cliff Palace, 4-5) buildings and the plaza in Long House, photo by R. Palonka.

well as in towns and cities across the Southwest. Consequently, Pueblo culture exemplifies cultural continuity from ancient times through the present day.

Although local chronologies of Pueblo culture vary to some extent across the southwestern region, they are all based on the traditional chronology – the Pecos Classification[3] – established in 1927 (Kidder 1927; Cordell and Fowler 2005). Dating primarily on the basis of pottery seriation and dendrochronology, the landscape around the Goodman Point Pueblo was very sparsely inhabited by ancestral Pueblo Indians as early as the Basketmaker III period (A.D. 500–750). Population density increased during the Pueblo II period (A.D. 900–1150), and the peak density occured during the Pueblo III period (A.D. 1150–1300) (Kuckelman et al. 2004).

The developmental and population-density peaks of the Pueblo culture in Goodman Point Pueblo and across the whole Mesa Verde region occurred during the thirteenth century, although the occupation

[3] The periods of this classification are as follows: Basketmaker II (1000 B.C.–A.D. 500), Basketmaker III (A.D. 500–750), Pueblo I (A.D. 750–900), Pueblo II (A.D. 900–1150), Pueblo III (A.D. 1150–1300), and Post-Puebloan (A.D. 1300–1840) (Lipe et al. 1999). The Pueblo culture continues to the present, and is represented by contemporary Pueblo Indians such as Hopi, Zuni, Acoma, Jemez.

of the region by Pueblo peoples drew to a close near the end of that century (Cameron 2006; Lipe 1995; Varien 2006; Varien et al. 1996). Because this region was, during the Pueblo III period, one of the most densely populated areas of the Southwest, the depopulation of the region at the end of the thirteenth century is intriguing and still not completely understood.

Results of archaeological research provide clear evidence that the economy of the Pueblo people was based on farming, dominated by growing maize as well as squash and beans (Cordell 1997; Plog 1997). During later time periods, cotton was also cultivated. To supplement these crop foods, ancient Pueblo Indians gathered and consumed wild plant foods and procured meat by hunting local animals such as deer, rabbits, and turkeys. Wild turkeys were at least semi-domesticated as early as the end of the Basketmaker III period (A.D. 750), although they were exploited primarily for their feathers and bones rather than as a foodstuff until late Pueblo II times.

During the Basketmaker period, the ancient Pueblo Indians lived in villages of a few or as many as several dozen pithouses. Most pithouses were subrectangular or circular in plan. During the Pueblo periods I–III, architecture underwent a series of significant changes, and buildings two or more stories tall were eventually constructed. The walls of these buildings were built of shaped sandstone rocks; the roofs were of wooden beams, poles, and brush, topped with a layer of sediment. Ordinary-size kivas were the primary domiciles, although great kivas were clearly nonresidential structures used for ceremonies and other large gatherings. The first Europeans in the Southwest, used the term "pueblo" for these settlements, a Spanish term for "village" (Figs 3, 4, 5).

The first contacts, as well as the later permanent presence of Euro-Americans in the Southwest, left written records about Puebloan societies. As the southwestern region of the United States is still inhabited by the descendants of ancestral Pueblo people, the cooperation between archaeologists and modern Pueblo Indians is also very important issue in reconstructing the past (Swidler et al. 1997; Thompson 2002; Varien, Wilshusen 2002). The interdisciplinarity of research and the attendant potential for comparison of archaeological data, ethnohistoric records, database of ethnographic information as well as Native Americans oral traditions can contribute to our understanding of past of Pueblo society and culture.

GOODMAN POINT PUEBLO: SITE DESCRIPTION AND HISTORY OF RESEARCH

Goodman Point Pueblo (site 5MT604) is situated approximately 16 km (10 mi) west-northwest of Cortez, Montezuma County, in the southwestern part of Colorado, USA (Connolly 1992; Kuckelman et al. 2004). This was one of the major ancient settlements of the Pueblo people in the Mesa Verde region (Figs. 1, 2a) in the thirteenth century (Varien 1999; Varien et al. 2000). Goodman Point Pueblo is within the Goodman Point Ruins Group Unit, a 58-hectare (142 acres) area that is part of the federally protected Hovenweep National Monument. This monument is a complex of ancient Pueblo sites situated on the Colorado-Utah border. The Goodman Point Unit is managed by the Southeast Utah Group of the National Park Service (SEUG-NPS), and the research reported here is being conducted by the Crow Canyon Archaeological Center (CCAC), Cortez, Colorado, in partnership with this group.

Goodman Point Pueblo, the largest site in the Unit, has been protected by the federal government since 1889 and thus at present is one of the best preserved sites in the region (Connolly 1992; Kuckelman et al. 2004; Varien 2006). It was also added to the National Register of Historic Places as a historic dwelling featuring residential buildings as well as public architecture that includes a great kiva, several plazas, and a D-shaped building that was at least three stories tall – the tallest structure in the village (Kuckelman and Coffey 2007). The name of the Unit and the site was derived from the name of Henry

Fig. 6. Map of Goodman Point Pueblo including all excavation units opened from 2005 to May 2007. Courtesy of Crow Canyon Archaeological Center.

Goodman, a foreman of the Lacy-Coleman Cattle Company, who brought many thousands of head of cattle through the Goodman Point area in the 1870s, but who never lived in the area himself.

A total of 39 additional ancestral Pueblo sites – including an isolated great kiva – and two historic sites were also recorded within the 58-hectare Goodman Point Unit. These ancient sites include small farmsteads and vestiges of ancient roads and farmlands. The historic sites are mostly small refuse deposits and faint roads from early Euro-American settlers in the 19th and 20th centuries (Connolly 1992).

Goodman Point Pueblo (Fig. 6) wraps around the head of a small tributary canyon on the west rim of Goodman Canyon at an elevation of 1920 meters (ca. 6300 ft) above sea level. A spring issues from the canyon head at the center of the site; the locals call this Juarez Spring. This spring was probably the primary source of potable water for the ancient villagers. The larger portion of the site is north of the canyon; however, a few architectural blocks (Blocks 1200 and 1300) and a great kiva are located on the south rim of the canyon. The flora, which is typical of the area, include juniper, pinyon (with edible nuts), sagebrush, and rabbitbrush; this vegetation grows on the slopes within the canyon as well as on the canyon rim and the rolling uplands away from the rim (Fig. 7).

Goodman Point Pueblo contains 13 architectural blocks; each block comprises a cluster of adjacent dwelling and storage structures, associated middens (refuse areas), and outdoor use areas. The primary dwelling structure in the village was the "kiva", although these buildings were also used for household-

Fig. 7. View of western part of the canyon and typical flora of Goodman Point Unit, photo by R. Palonka.

level rituals. In historic and modern times kivas were used primarily for ritual and social gatherings and ceremonies (Plog 1997). Such compact complexes of dwellings and storage rooms were characteristic of the architecture of the Pueblo Indians in the Pueblo III period (A.D. 1150–1300) and were probably inhabited by one or more families or individual clans (Lipe and Ortman 2000; Nordby 2006). In addition, Goodman Point Pueblo was enclosed by sections of a stone masonry wall that closed gaps between roomblocks.

Before CCAC began its work in the Goodman Point Unit, research in the Unit had been limited to control and management of the land by the federal government and to surveys and surface collections by Pinkley in 1951, McLellan and Hallisey in 1967, and by an unknown researcher in 1969 (Kuckelman et al. 2004). In 1986 archaeologists with CCAC, an archaeological research and education institution located near the town of Cortez in the southwestern part of Colorado, surveyed the sites in the Unit and mapped the large pueblo as part of the Sand Canyon Project, a larger research project within the locality. In 2003 archaeologists with CCAC and the SEUG-NPS conducted a more-detailed survey of the cultural resources in the Unit. The information from this survey was used to design six years of excavation research on 16 sites within the Unit, and these excavations began in 2005.

Research conducted thus far indicates that Goodman Point Pueblo was constructed and occupied during the late Pueblo III period. Tree-ring dates from the first two seasons of excavations (2005-2006) suggest that the village was founded about A.D. 1260, grew very rapidly during the 1260s, and was probably vacated when the Mesa Verde region was depopulated about A.D. 1280.

ARCHAEOLOGICAL RESEARCH IN GOODMAN POINT PUEBLO (2005 TO 2007)

In 2005, archaeologists from CCAC began the six-year research project called the Goodman Point Archaeological Project: Community Center and Cultural Landscape Study. The excavation of sites in the Goodman Point Unit is designed to reveal the history of settlements of the Pueblo Indians in the Goodman Point community as well as trying to answer the question: what can sites in the Goodman Point Unit tell us about the regional migration that occurred during the late A.D. 1200s?

First three years of the project (2005–2007) were focused on investigating Goodman Point Pueblo. The last three years (2008–2010) will be devoted to the examination of other ancient remains in the Unit – 15 smaller habitations and the remains of such features as ancient roads, trails, and farming fields that were detected during survey and on aerial photographs.

The methodology of the archaeological research conducted by CCAC (Kuckelman et al. 2004) is based on conservation archaeology. In this case, the investigation of archaeological sites is intended to obtain the maximum volume of information making the minimum physical invasion in the structure of the site. In practice, such research comes down to making individual test pits of a standardized size at different locations on the site, some of them randomly selected by the computer. At Goodman Point, this type of research involves excavating a limited number of test pits of a standard size (either 2 m x 2 m, 1 m x 2 m, or 1 m x 1 m) carefully dispersed across the site. As a result of this method, only selected portions of specific structures are exposed by excavation; other architecture is left untouched. For maximum statistical manipulation of midden data, the locations of these types of excavation pits are selected randomly by the computer. A minimum of five such units are excavated for each architectural block at the site. Using conservation archaeology techniques, less than 1 percent of Goodman Point Pueblo, and less than 2 percent of the other sites, will be impacted by these excavations.

During the three seasons of excavations at Goodman Point Pueblo (2005–2007), several dozens of test pits were excavated in each of 13 architectural blocks at the site (Fig. 6). In 2007 the great

kiva from the southern part of the pueblo was also investigated. The most extensive excavations were conducted in residential structures – rooms and kivas. Rooms are rectangular and were one, two, or three stories in height (mutiple-story rooms are sometimes called towers). The kivas are circular in plan and were subterranean when the soil depth allowed, or were one story tall if constructed on an exposed bedrock. Each architectural block contains from two to 20 kivas and the rooms associated with them, and these blocks of adjoining structures are typical of Pueblo III habitations in this region. One kiva and its associated rooms, outdoor use spaces and refuse areas constitute the space used by one residence group and is called a "kiva suite." Each of these suites was probably occupied by a nuclear family or an extended family.

In ancestral Pueblo habitations dating from the Pueblo III period (A.D. 1150–1300), residents deposited refuse adjacent to clusters of residential buildings. Typically, these middens were located to the south of each residence. This discarded material provides a great deal of important data about many aspects of the society, culture, and lifeways of the villagers of Goodman Point Pueblo.

Archaeological data from the northern part of Goodman Point Pueblo

Architectural blocks 100, 200, and 300 are located in the northern part of Goodman Point Pueblo, and Block 100 is the northernmost of the three. Sections of a village-enclosing wall link these blocks with each other and with Block 400 to the south. Such a link is not visible at the modern ground surface southeast of Block 200, however, and this gap might reflect an intentional opening left between roomblocks for ease of passage in and out of the village.

Excavations in Block 100 (Figs. 8, 9) during 2005 included excavating and documenting a lower-story room (Room 105) at the north edge of the village. Nearly 100 artifacts were found on the floor of the room within the excavation unit, including a substantial quantity of sherds from a Mesa Verde Black-on-white pottery vessel, a large metate (grinding stone), and a nearly complete corrugated jar (cooking or storage vessel). This room appears to have been almost square, measuring 2.6 m, unusually large for a Pueblo III room. A doorway was exposed in the east wall and another was exposed in the south wall of the room. The height of the entire structure, as calculated from the exposed walls plus the amount of rubble removed from the interior of the room during excavation was a minimum of two stories.

The kiva being tested in this block (Kiva 107) is located just south of Room 105. The construction of this kiva was dated by dendrochronology to a year or two after A.D. 1265. The kiva hearth had been remodeled twice. During the second remodeling, the builder left three slender finger impressions in the adobe wall of the hearth (Fig. 10); the size and shape of these impressions lead to the inference that the final remodeling was done by a woman or a young person. Floor-associated materials included a heap of refuse that contained many turkey bones and a complete rabbit skeleton. These bones, along with durable remains screened from the hearth ash, will yield important information about the final meals consumed in this kiva just before the village was vacated.

The research in Blocks 200 and 300 included a test excavations in one room and one kiva of each block. The stone architecture was well preserved in both of these kivas. Kiva 207 contained a large hearth and coursed-masonry deflector as well as the remains of a four-year-old child in the collapsed roofing material south of this deflector. In compliance with applicable federal legislation and CCAC's own policy on the treatment of human remains, this skeleton was only minimally exposed and analyzed before being re-covered with sediment. Room 205 (Figs. 11, 12), situated a few meters northeast of Kiva 207, has an irregular shape – one of its walls runs along a slightly bent curve, as opposed to the walls of typical rooms at that site, usually built on a straight line. A well preserved clay-pasted feature, probably a metate bin, i.e. a place used to grind maize into flour, was discovered on the floor in the

Fig. 8. Two adjacent rooms in 100 Block in the northern part of Goodman Point Pueblo, photo by R. Palonka.

Fig. 9. Western wall of one of the rooms in Block 100 showing a doorway, photo by R. Palonka.

Fig. 10. Finger impressions in hearth wall in Kiva 107, photo by K. Kuckelman.

Fig. 11. Test pits in 200 Block (Room 205 and a kiva, south of the room), photo by R. Palonka.

Fig. 12. Room 205 with the metate bin feature in northeastern corner of the room, photo by R. Palonka.

Fig. 13. Southern part of Kiva 307, photo by R. Palonka.

northeastern corner of that structure. The roof of Kiva 307 (Fig. 13) had been burned and yielded numerous tree-ring dating samples that date the construction of the kiva to sometime after A.D. 1265. The hearth in this structure was also exposed and the ash collected for analysis. The rooms that were investigated in these two blocks revealed evidence of household activity such as the presence of metate bins (for grinding corn and wild seeds). A doorway was exposed in the south wall of one of the rooms. The preserved height of the exposed walls plus the volume of rubble removed from the fill indicates that this structure was probably three stories tall.

Some of the midden deposits (Figs. 14a, 14b) tested thus far in this section of the pueblo were very shallow and contained sparse quantities of artifacts, such as those in Block 100 and Block 200, which form the north and northeast boundaries of the village. This suggests relatively briefer occupation of those roomblocks and supports an inference that the village could have been founded at the canyon rim (where the accumulation of waste is relatively larger) and expanded northward with time.

In middens at the site as well as in structures and collapsed structural debris some human remains have been found. Federal law (the Native American Graves Protection and Repatriation Act) and CCAC's policy guides the handling of human remains found during excavations conducted by CCAC (see the subsection: "Cooperation between archaeologists and American Indian" below).

Fig. 14

Figs. 14, 14a. Northern profiles of the midden units in Blocks 300 and 500, photo by R. Palonka.

The central and southern parts of the pueblo

The central portion of the village was formed by Blocks 400, 500, 600, 700, 800, and 900. These blocks are east of a very shallow drainage that bisected the village. Two small rubble mounds that flanked this drainage were tested during 2006; excavations revealed that these were not towers, as surmised during initial mapping of the site, but isolated kivas (Kivas 702 and 1103) (Fig. 15) constructed within masonry structures built on an exposed bedrock. Blocks 400 and 500 actually formed one very long east-west block. CCAC archaeologists arbitrarily split the block down the center (designating the west half as Block 400 and the east half as Block 500) to ensure that this mass of architecture was adequately sampled during excavations. This long roomblock might have once, before Blocks 100, 200, and 300 were constructed, formed the northern boundary of the village. The much sparser refuse deposits in these latter three blocks suggest that they were occupied more briefly than blocks nearer to the canyon rim, which have much more abundant refuse.

In Kiva 405, a coursed-masonry deflector and a hearth were exposed. This deflector is unusual in that three small niches were constructed in its northern face; these features were probably used for ritual purposes (Fig. 16). Many sherds from Mesa Verde Black-on-white vessels were collected from this

Fig. 15. Part of the Kiva 1103 (former considered as a tower), photo by R. Palonka.

Fig. 16. Masonry deflector and a hearth in Kiva 405, photo by R. Palonka.

structure as well as many sherds from corrugated, or cooking, pots. Room 404 is just northwest of this kiva and was probably built and used by the residents of Kiva 405. Excavations exposed the southwest corner of this room. A great deal of stone debitage and several ground-stone tools were found on the floor. This room had been added to the exterior face of the north wall of the Block 400 roomblock.

Two kivas and one room were tested in Block 500. Kiva 501 had been built inside a rectangular masonry room and its roof had been burned at abandonment (Fig. 17). Surprisingly, metate bins had been constructed in the southern recess of this kiva, a very unusual location for such a feature. Many burned chunks of adobe from the roof ("roof casts") were observed and examined during excavations in this kiva. Most of these chunks of adobe exhibited impressions of the vegetal roof materials – large-diameter roofing timbers and smaller beams, as well as distinctive imprints of what appeared to be pinyon pine branches with needles attached (Fig. 18). Karen Adams, CCAC's archaeobotanist, concluded that these branches had been used with adobe to construct the uppermost layer of the flat kiva roof.

During the 2006 season, excavations along the northern wall of Block 700 revealed that this block had been at least three stories tall. Even more significant, careful observation and detailed mapping led to the discovery that the block is D-shaped which, in this region, is indicative of special use. This "D" is formed by single row of rooms; the interior of the D is divided into halves by a north-south wall, and two small kivas are west of this wall, and one oversized kiva is east of the wall.

Fig. 17. Kiva 501 built inside a rectangular masonry room, photo by R. Palonka.

Fig. 18. Burned chunk of adobe with impressions of tree branches (part of burned roof of Kiva 501), photo by R. Palonka.

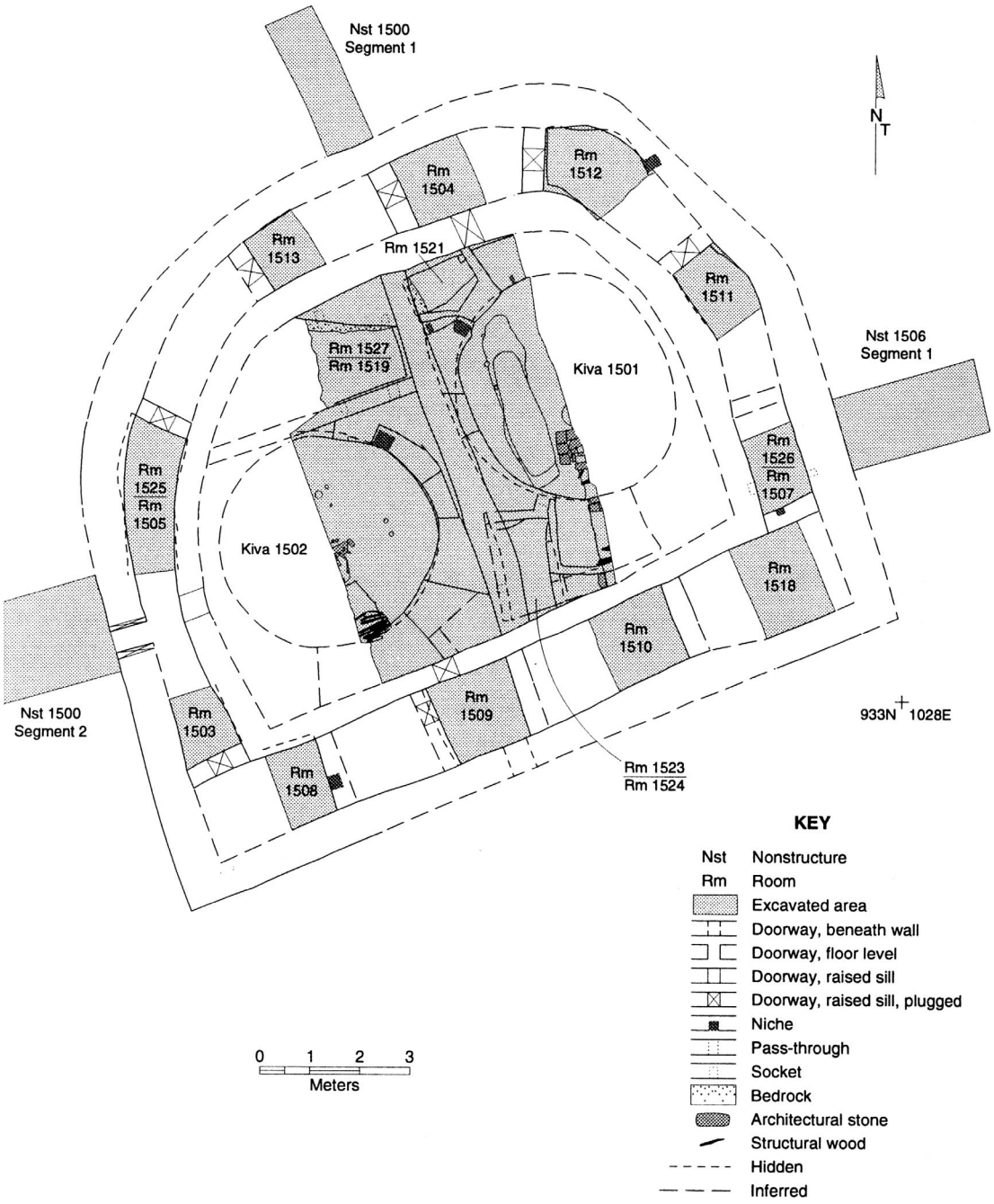


Fig. 19. Block 1500 (Sand Canyon Pueblo), D-shaped structure similar to structure 700 at Goodman Point Pueblo (after Ortman and Bradley 2002).

This is a sensational discovery – a block of this size, shape, and orientation was excavated during a previous CCAC project at Sand Canyon Pueblo (Block 1500) (Figs. 2b, 19), a contemporary village a few kilometers west-southwest of Goodman Point Pueblo. The similarities of these two structures (often called bi-wall structures) must reflect a relationship between the two villages. Other D-shaped structures in the northern Southwest include Sun Temple at Mesa Verde National Park and structures at Chaco Canyon in northwestern New Mexico. In Chaco Canyon, some entire pueblos, such as Pueblo Bonito, are D-shaped in plan; this enormous "apartment building" contained more than 700 rooms.

Kiva 706, the oversize kiva within the D-shaped structure, and Room 709, one of the rooms in the row of rooms that forms the "D", were tested archaeologically. The walls of this room are unusually thick, and some unusual artifacts were found in wall-collapse debris and in refuse southwest of this block. Inferences must await formal artifact analysis, but among other items, two objects made of hematite were found near the northern wall of the block. Such items are known from historic sources as "medicine stones" and considered by some tribes to be helpful in hunting, especially during deer hunting. Similar stones have also been used as pigment for personal adornment. The roof-collapse debris on Kiva 706 contained abundant pottery sherds, many were from black-on-white vessels.

Additionally, during the 2007 season, in the western part of the Block 700 wall the relatively well preserved doorway was found. Many artifacts, including pottery and two-hand mano were found close

Fig. 20. The floor of one of the rooms in 900 Block (in southwestern corner a small "pocket" is visible), photo by R. Palonka.

to the doorway. In 1500 Block in Sand Canyon Pueblo, the only one known doorway inside the D-shaped structure is in almost the same relative location.

The eastern part of Block 500 and Blocks 900 (Fig. 20) and 1000 formed the central-eastern and central-southeastern edges of the village and Block 1000 was the southernmost block in this part of the pueblo. These blocks were almost certainly, like Blocks 100, 200, and 300, used for residential purposes. The thickest midden deposits found thus far at the site are located in Block 1000, suggesting that this block was constructed earlier than blocks to the north.

Block 1100 formed part of the western edge of the pueblo and is situated between two shallow drainages that crossed the western part of the village and that converge just above Juarez Spring. This block is unusual in that its long axis runs north-south instead of the typical east-west orientation. Excavations revealed that one of the kivas in this block was encircled on the west by a curved row of rooms similar to that in Block 700. Structures encircled by curved rows of rooms (the so – called bi-wall structures) is not the typical layout of structures on ancestral Pueblo sites; however, in addition to Block 700 and 1100, Block 1200, and as occurred in 2007 Block 600, at this site also contains such architecture. These four blocks encircle Juarez Spring to the north, west, northwest, and southwest, and this configuration might reflect heightened status of the residents of these blocks.

The most abundant deposits of refuse found thus far at the site were associated with Blocks 400, 500, 900, and 1000. These middens contained manos, metates, hammerstones, peckingstones, pendants, projectile points, axes, ornaments, bone tools such as awls and needles, charcoal, charred plant foods (including maize kernels), animal bones (mostly turkey, rabbit, and deer), and abundant quantities of sherds from corrugated and Black-on-white pottery vessels (Figs. 21, 22, 23, 24, 25, 26, 27). Additionally, in 2007, there were found numerous painted pottery sherds in refuse beneath collapsed wall debris south of the kivas in Block 600, and some artifacts not common in the site, e.g. in Block 1100 midden a pendant made probably from a jet, and in 400 Block midden small effigy (probably duck) fashioned from pottery clay and the burned bird-bone "tinkler" made from a burned bird bone in. This last item could have been a part of a ceremonial costume, creating a tinkling sound as the wearer danced.

To learn as much as possible about environmental conditions and the subsistence of the residents, we were collecting flotation samples from all deposits of ash and charred organic material that could contain food remains. These samples are processed and analyzed at the CCAC laboratory, and the food remains from middens will be compared to food remains left in the cooking hearths (in kivas) to detect any change in subsistence practices that could indicate subsistence stress near the end of the occupation of the village and the region.

Excavations of structures on the south rim of the canyon concentrated on some rooms and four kivas (and the great kiva) in Block 1200 (Figs. 28, 29) as well as in the middens associated with this block. The sampling of this refuse is crucial for detecting the activities and uses of the special structures, such as the great kiva, in this block. Limited excavations occurred in the great kiva itself and in Block 1300 (which is at the extreme southeast edge of the site) during the final season of excavations in Goodman Point Pueblo, in 2007. In Block 1300 located at the southeast edge of the site several structures were sampled, including kiva that might have been burned, a small multistory structure, part of village enclosing wall and the midden. Some buried timbers from the kiva roof have been collected, which is important to make chronology of this southeasternmost block in the village.

The aforementioned structure with a curved row of rooms in Block 1200 is actually a complete circle formed by adjoining curved rooms. Four small kivas are contained within the interior of this enclosure of rooms. This layout is even more unusual than the D-shaped layout of Block 700, and one of these interior kivas (Kiva 1204), as well as one of the encircling rooms, is currently being

Figs. 21, 22. Painted pottery sherds (Mesa Verde Black-on-white style) from Goodman Point Pueblo, photo by K. Kuckelman.

Fig. 23. The painted bowl discovered in Sand Canyon Pueblo. In 2006 in Goodman Point Pueblo (Kiva 1103) a partially damaged bowl with almost identical design was found, photo by R. Palonka.

Fig. 24. Stone axe in situ in one of the structures at Goodman Point Pueblo, photo by K. Kuckelman.

Figs 25, 26. Projectile point and some flakes from excavations in middens, photo by R. Palonka.

Fig. 27. Charred maize kernels, photo by R. Palonka.

Figs 28, 29. Excavations in bi-wall structure in 1200 Block, photo by R. Palonka.

Figs 30, 31. View of eastern part of the village-enclosing wall, photo by R. Palonka.

tested in an attempt to learn more about the uses of this intriguing building and to gain more thorough knowledge of its importance to this ancient Pueblo community.

Village-enclosing walls, towers and traces of public architecture

The data at hand indicate that the entire village might have been enclosed by discrete sections of one-story tall stone wall that linked the ends of successive roomblocks. The section of enclosing wall that links Blocks 100 and 300 was observed to abut the northwest corner of Block 300; it is therefore

Fig. 32. Part of the structure (probably tower) in 1000 Block, photo by R. Palonka.

reasonable to infer that roomblocks were built first and sections of the wall were then constructed as needed to bind extramural spaces within the village. The exception to this scenario was the eastern village-enclosing wall; data suggest that this wall was built as a unit first, then adjacent structures were abutted to it (Coffey and Kuckelman 2006).

Excavations exposing sections of the village-enclosing wall in Blocks 300, 900, and 1000 indicate that this wall was minimum one story tall and was 50 to 60 cm thick (Figs. 30, 31). Many of the stones visible in both faces of the wall were shaped; however, in general, these stones were not as finely shaped and dressed as the stones used to construct rooms and kivas. Refuse – including ash and charred maize kernels – was found just inside the village-enclosing wall in Block 900, but no refuse was found just outside this same section of wall.

One cluster of adjoining structures was constructed outside the village-enclosing wall east of Block 1000 (Fig. 32) and is the only architecture located outside the village boundary as delineated by this wall. On the basis of our excavations, we now think the most prominent structure in the cluster was a tower, which appears to have been built on a boulder or sandstone ledge, and that minimum one room and a kiva are also present in this cluster. The use of this cluster of structures and the reason for its unusual location have not been discovered yet.

As previously stated, two free-standing buildings (702 and 1103) that we originally thought might be towers have now been shown through test excavations to actually be kivas within masonry containing structures. Most structures being called towers at this stage of the excavations are rectangular multistory rooms, such as Room 105 and Room 308, within roomblocks.

Surveys and archaeological excavations revealed in Goodman Point Pueblo at least few examples of public architecture: a great kiva, several plazas, and a D-shaped building from 700 Block that was at least three stories tall. The most examined was above described the D-shaped building (bi-wall structure) in 700 Block. In 2007 limited excavations was also carried out in the great kiva.

GOODMAN POINT PUEBLO IN THE CONTEXT OF DEPOPULATION OF THE MESA VERDE REGION

The depopulation of the Mesa Verde region clearly visible in archaeological record remains as one of the most intriguing issues of the archaeology of the northern Southwest, although researchers have made great strides in recent years in determining the contributing factors. The majority of researchers assume the theory of a great migration of Pueblo people to the south, into the areas of today's central and southern Arizona and New Mexico (Cameron 2006) in the end of the thirteenth century A.D. (Fig. 34). Prevailing theories about this migration include such explanations as unfavorable climatic changes (mostly persistent and severe drought), subsistence stress, appearance of new ideology or religion in the south, and escalation of violence and conflicts (good summaries can be found in Cordell 1997, Lipe 1995, and Nelson and Schachner 2002).

Perturbations and climatic variability brought on by the Great Drought (A.D. 1276-1299) in the northern San Juan basin and the beginning of the Little Ice Age (ca. 1200 A.D.) in many parts of the world including North America were often considered as the main reasons of the depopulation of the Mesa Verde region. However, recent data show (Kohler 2005; Van Vest and Dean 2000), that although the climate change and the period of the Great Drought were probably serious problem for the ancient Pueblo farmers in the Mesa Verde region, the environmental conditions would have allowed some people to have remained there.

Although the diet of ancient Puebloans in Mesa Verde region depended mostly on farming, dominated by growing maize, the data from Goodman Point Pueblo and many other late thirteenth

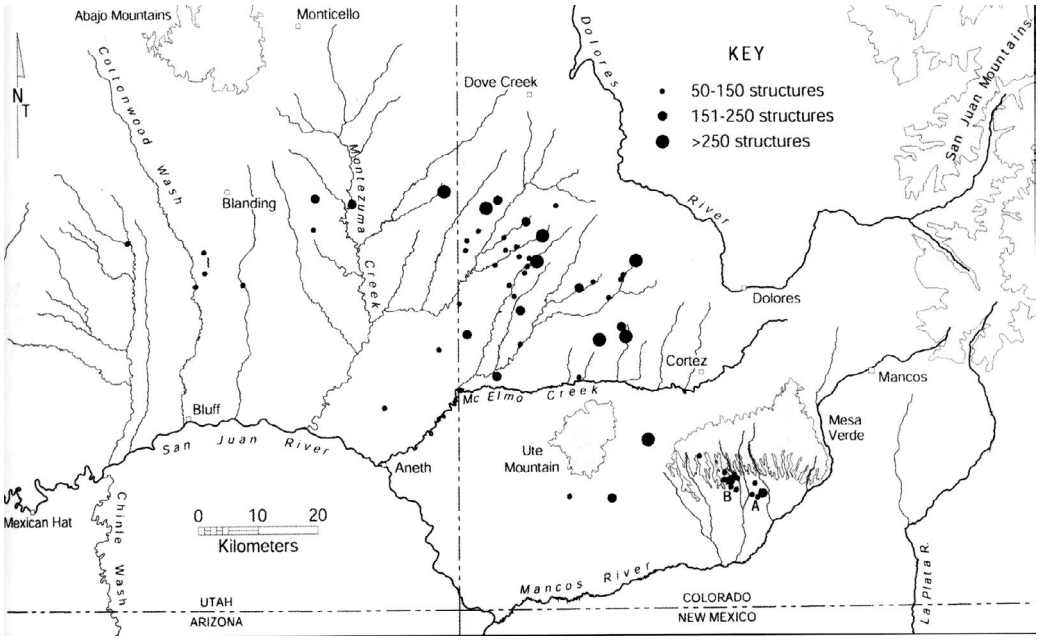


Fig. 33. Community centers in the Central Mesa Verde region in the 13th century A.D. (after Varien 2006).

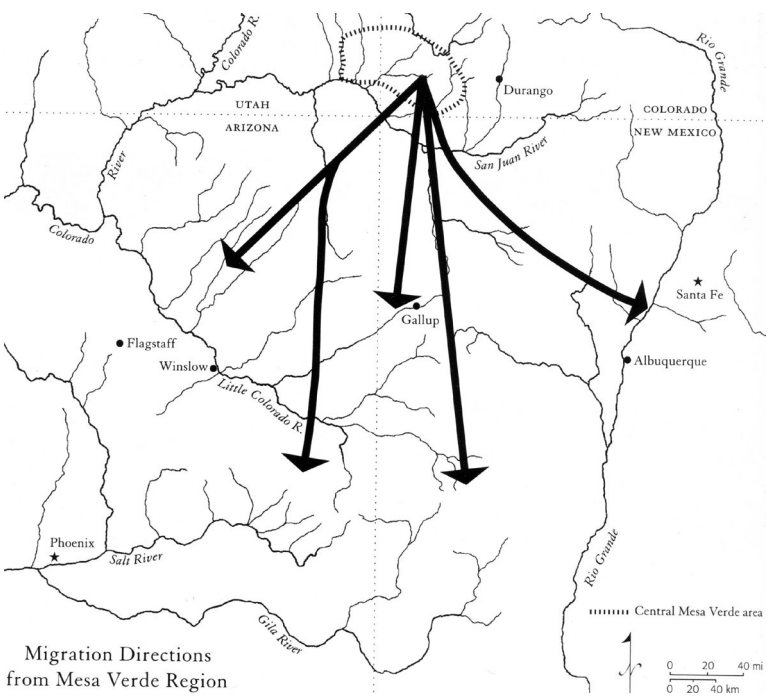
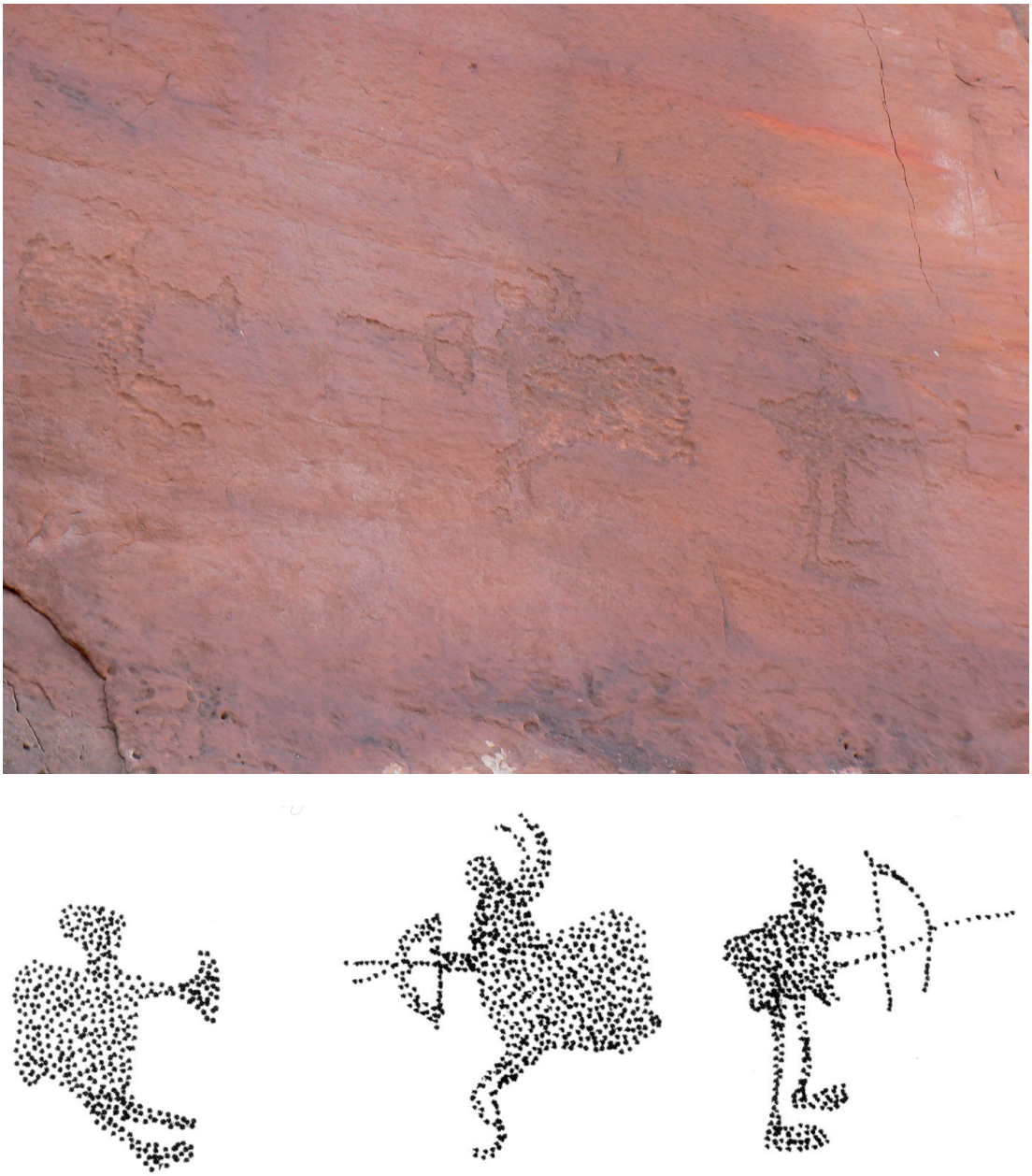


Fig. 34. The possible routes of migration of Pueblo people from the Mesa Verde (after Cameron 2006).



Figs 35, 35a. Rock art in Castle Rock Pueblo, southwestern Colorado, showing the fighting peoples, photo by R. Palonka (drawing after Kuckelman 2002).

Fig. 36. Towers in Hovenweep National Monument (Southeastern Utah), photo by R. Palonka.

century settlements in Mesa Verde suggest an increasing consumption of wild rather than domesticated plants and animals. This shift appears to have coincided with the onset of the Great Drought in A.D. 1276 (Kuckelman 2008).

Another factor in regional depopulation was the escalation of violence and conflicts (Haas and Creamer 1996; Kuckelman 2002; Kuckelman et al. 2002; Wilcox and Haas 1994). The conflicts could have resulted from drought and crop failure and could have occurred between different Pueblo groups but the raids and attacks from non-Puebloan groups are also possible. Often cited are nomad groups of Numic speakers (ancestors of the Ute, Paiute, and Shoshone Indians) and Athapascans (Apaches and Navajos) (e.g. Cordell 1997:375-383).

The settlement pattern of Pueblo communities changed midway through the thirteenth century in this region (Varien 1999). In many communities, the residents of clustered farmsteads aggregated into large villages centered on their water sources (Fig. 33). The majority of these settlements, such as Sand Canyon and Goodman Point pueblos, were built on high-elevation areas on canyon rims; many other buildings were constructed on cliff overhangs in what is today Mesa Verde National Park in southwestern Colorado. Numerous pueblos such as Cliff Palace and Long House (Figs. 3, 4, 5), called cliff dwellings, were built in canyon's alcoves that were difficult to access. Some characteristics of settlements built about this time appear to have been stimulated by a need for defense (Kuckelman

2002). Also, there are many other traces of conflicts across the area during this period, including defensive architecture, burned structures and sites, skeletal evidence of violence, artifacts, and rock art images depicting violent scenes (Figs. 35a, 35b) (Kuckelman 2002; LeBlanc 1999).

Goodman Point Pueblo was largely enclosed by a stone wall. In the eastern part of the village, this wall was built before the adjacent roomblocks. In other areas of the village, the blocks were built first, and sections of village-enclosing wall were abutted to these blocks. Only one group of structures was constructed outside this wall – a cluster including a tower, kiva, and associated rooms. Village-enclosing walls and towers (some of which were connected to kivas via underground tunnels) were common in Pueblo III settlements in this region (Varien et al. 1996; Varien 2006). Enclosing walls were first constructed as early as the twelfth century A.D., although they became much more prevalent during the thirteenth century. They have been found on sites located on canyon rims and in cliff dwellings. The height of the preserved walls across the region ranges from about 50 cm to more than two meters. These stone walls as well as towers (Fig. 36) have been interpreted as defensive in use (Kenzle 1997; Kuckelman 2002).

It is very probable that the depopulation of the Mesa Verde region and the entire area of the northern Southwest was caused by a variety of climatic, environmental, and social factors. The escalation of conflict could also have been a major stimulus behind this migration

COOPERATION BETWEEN ARCHAEOLOGISTS AND AMERICAN INDIANS IN RECONSTRUCTING THE PAST OF GOODMAN POINT PUEBLO AND THE MESA VERDE REGION

Today, Crow Canyon Archaeological Center (CCAC) is a leader in conducting archaeological research and educational programs for the public dedicated to the archaeology of the Southwest and is committed to cooperating with Indian societies in reconstructing the past. In 1995, CCAC formed a Native American Advisory Group (NAAG), composed of several members representing various Southwest Indian tribes as well as tribes from other regions of North America. This group officially meets at CCAC twice per year, and its members serve as consultants who review educational curricula and provide feedback on research designs and publications (Kuckelman et al. 2004), among other activities and duties (Fig. 37). One member of NAAG who is affiliated with the Acoma community (a Pueblo Indian group in New Mexico), Ernest M. Vallo, Sr., conducted a blessing ceremony in 2005 for the excavations commencing at Goodman Point Pueblo. This ceremony was also attended by Hopi representatives from Arizona and a member of the Alutiiq from Alaska.

The handling of human remains has been the most important and delicate issue in relations between archaeologists and American Indians (Downer 1997; Watkins 2003). Members of NAAG were also consulted during the drafting of CCAC's policy on the treatment of human remains found during excavations. This policy pursuant to federal legislation and National Park Service permit stipulations, allows neither the full exposure nor the removal of human remains from an excavation pit. Thus, at Goodman Point Pueblo, human remains that have been found accidentally during excavations are minimally exposed, documented in situ, and the pit is then backfilled. The National Park Service (the government agency that manages the monument) is notified of each such discovery within 24 hours.

American Indians are also participating in consultations with CCAC archaeologists on the issues of traditional Pueblo horticulture, the use of water resources by contemporary Pueblo Indians, and the use and significance of roads and other routes that connected major settlements during ancient Pueblo times. This traditional knowledge will be an extremely valuable addition to the information obtained

Fig. 37. Cooperation between archaeologists from Crow Canyon and Native American Advisory Group includes visiting ancient Pueblo sites, like Goodman Point Pueblo. October 2006, photo by R. Palonka.

from the archaeological excavations. Additionally, the oral tradition of many modern Pueblo groups says that groups of their ancestors came from the Mesa Verde and its vicinity (Thompson 2002).

The cooperation between archaeologists and American Indian societies has improved during recent decades. In the past, many ethnographers and archaeologists were insensitive to the feelings, needs, and perspectives of the tribes they studied. Many American Indians oppose archaeological study of their past, especially research involving the excavation of burials and interpretations of the histories of individual tribes (Downer 1997; Zimmerman 2003). Disputes between scientists and tribes have occurred not only in the Southwest but also in other places in North America where Indians resented interference from researchers. Some disputes were adjudicated in court; the case of Kennewick Man is one well known example (Watkins 2003).

Despite this history of strained relations, interactions between scientists and American Indians have been gradually improving. The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, federal legislation that regulates both the excavation of skeletal remains of American Indians and dictates ownership of such remains, specifies that remains and associated funerary objects, sacred objects, and objects of cultural patrimony that are removed from the ground will be returned to the most closely related descendant group (Renfrew and Bahn 2002). Many museum collections

– especially funerary objects and human remains – have been returned to their rightful owners, i.e. the respective Indian tribes. Numerous reburials with attendant special ceremonies have occurred; in some instances, both scientists and Indians attended these events. The reburial of Seminole Indians from Florida (Renfrew and Bahn 2002), for example, took place at Wounded Knee, South Dakota in 1989 to emphasize the origin of a national cemetery for American Indians.

Cooperation between archaeologists and American Indians improved after the passage of NAGPRA, partly because of an increased awareness and respect among researchers of the rights of Indians regarding their past and partly because disputes were then resolved by relevant law. Also, scientists increasingly respect the oral traditions of American Indians; not only do these songs and tales corroborate many facts discovered by archaeologists (Colwell-Chanthaphonh and Ferguson 2006; Echo-Hawk 1997), but they also provide important additional avenues of learning about the past.

Many tribes are expressing an increased interest in discovering their past with the aid of archaeologists and anthropologists. For example, more of the exhibits and educational activities in tribal museums are being developed with the cooperation of research centers or the academic community. Many American Indians have become aware of the efforts of researchers and the advantages of using archaeological findings to reconstruct their past and ethnic identity and to share their Indian heritage with a wider audience. With increasing frequency, Indians themselves are becoming professional archaeologists and anthropologists and occupy positions at universities or other scientific research institutions, which offers new fields of development for archaeological studies (Cordell and Fowler 2005).

CONCLUSIONS

This paper is a brief report on the three seasons of excavation at Goodman Point Pueblo and although data analysis and final report preparation will be conducted by archaeologists at CCAC and the resulting conclusions made available only after the research is completed, the information provided herein describes preliminary findings of this important project and sheds new light on this village and other settlements in the Mesa Verde region that were abandoned in the late thirteenth century.

Goodman Point Pueblo was one such major settlement or community center in the central Mesa Verde region in the thirteenth century. Detailed mapping of the site has located 114 kivas (domiciles), several hundred rooms (used for working and storage), and several structures that appear to have been used for special purposes. The quantity of kivas suggests that approximately 550 to 800 people inhabited the village during the height of occupation. The majority of the buildings were built on bedrock. Kivas were either built within rectangular masonry structures or were supported by massive earth-and-stone berms.

Several types of data, including tree-ring dates, the prevalence of Mesa Verde Black-on-white pottery, and McElmo architectural characteristics, indicate that this was a late Pueblo III village that was founded about A.D. 1260 and grew rapidly during the 1260s; the occupation of this settlement probably ended when the Mesa Verde region was entirely depopulated about A.D. 1280. It is likely that the part of the village along the canyon rim, was built first, and the settlement quickly expanded northwards. The construction sequence within the village will be revealed when all tree-ring analysis, conducted by the Laboratory of Tree-Ring Research in Tucson, is completed.

Numerous structures in the village were two stories tall, and some were three stories, as calculated from the extant height of the walls and the volume of rubble associated with these buildings. Excavations in four blocks of structures clustered around the spring at the center of the village revealed bi-wall rooms that encircle (Block 1200), partly encircle (Block 1100), at least partly encircle (Block 600) or form a “D” shape around three kivas at its center (Block 700). This last block was probably the tallest structure in the village – a minimum of three stories in height. The configuration and location of Block

700, as well as the artifacts recovered from the cultural deposits thus far, indicate that this complex was built and used for special and important purposes. The layout of this block is very similar to the Block 1500 in Sand Canyon Pueblo that lies only a few miles west-southwest of Goodman Point Pueblo.

The contents of middens at Goodman Point Pueblo shed some light on the material culture and human activities in this ancient village. These assemblages indicate that most architectural blocks in the pueblo were used primary for ordinary residential purposes, whereas others structures or entire blocks have signs that they could have been used for special purposes or by special people (for example Blocks 700 and 1200). Some structures was probably public architecture that could have served for special purposes and gatherings, like ceremonies and events for the whole pueblo. In Goodman Point Pueblo it includes at least the great kiva, several plazas, and a D-shaped building (700 Block). Plazas and kivas in historic times were used primarily for ritual and social gatherings and ceremonies (also modern Puebloans use them in a similar way).

The basic diet of ancestral Pueblo farmers during this time period included the cultigens maize, beans, and squash. Large quantities of turkey and rabbit bones found at Pueblo III sites in this region reveal that the diet of the ancient Pueblo Indians during the middle A.D. 1200s was heavily dependent on turkey and rabbits. The dominant role of cultivated maize is indicated by numerous mano and metate grinding stones and charred maize kernels. However, findings from contemporary sites in the region suggest an increase in the consumption of wild rather than domesticated plants and animals just before the region was depopulated about A.D. 1280 – this shift appears to have coincided with the onset of the Great Drought in A.D. 1276 (Kuckelman 2008).

In the last quarter of the thirteenth century Pueblo people from Goodman Point Pueblo and other villages across the Mesa Verde region left their settlements and went southward, to the area of present-day central and southern Arizona and New Mexico. The most recent research on catalysts of this migration have made substantial inroads in delineating the couses, which include the Great Drought, increasing vidence, cooling temperatures, overpopulation, and fluctuating moisure regimes; however, additional research is needed. Conflicts and vidence, clearly visible in the archaeological record, occurred beetwen Pueblo groups or beetwen Pueblo and non-Pueblo Indians, and is likely yo have played a role in regional depopulation. One of the main objectives of the Goodman Point Unit research is to gather additional data to deepen understanding the reasons for this depopulation of the Mesa Verde region.

Euro-Americans and Indians perceive the ancient Pueblo habitations differently. According to contemporary Pueblo Indians, these sites were not abandoned. Instead, they are still inhabited by spirits of their ancestors. These ancient sites are respected by modern American Indians and some are mentioned in their oral traditions. Incorporating these oral traditions into archaeological interpretations is one goal of the cooperation between CCAC and American Indians, and will undoubtedly greatly enrich our understanding of the Pueblo past.

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