ARCHEOLOGICAL RESOURCES

of

CANYONLANDS, CAPITOL REEF AND ARCHES NATIONAL PARKS AND NATURAL BRIDGES NATIONAL MONUMENT, SOUTHEASTERN UTAH

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Midwest Archeological Center
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PREFACE

This document provides background information for use by the Midwest/Rocky Mountain Team, Denver Service Center in developing planning and management documents for Arches, Canyonlands and Capitol Reef National Parks and Natural Bridges National Monument. It was designed to provide basic archeological resource data for park management, development, interpretive and professional needs. The report was put together for use by non-archeologists in understanding the background and nature of the archeology of Canyonlands, Capitol Reef, Arches and Natural Bridges. It is intended as a general introduction to those not familiar with the prehistoric remains of the region. It is not meant to be a synthetic or theoretical statement concerning the archeology of southeastern Utah and it does not include all work done in the region, although all major studies are considered.

This study did not involve new archeological field work in terms of resource inventory. It is, rather, a discussion and evaluation of existing data. However, preparation of the report necessitated the compilation and synthesis of nearly 100 years of archeological reporting. At least 25 professionals plus many, many non-professionals have written about archeological materials located within the Arches, Canyonlands, Capitol Reef and Natural Bridges areas. Countless individuals have published books and articles; prepared manuscripts, field notes, informal sketches, site forms, rough diagrams, detailed maps; and left illegible notes, undocumented

photographs, erroneous and conflicting site information, lost manuscripts, misplaced artifacts and other unusable material of one type or another for the entirety of southeastern Utah. The Park Service's own records are among the worst. As a result, it was essential to locate, review and acquire original site data and unpublished manuscripts whenever possible. Correlation and synthesis of these data for each park area was subsequently carried out by several people, checked and rechecked for accuracy. Conflicting information was reconciled when possible, or so indicated in one fashion or another. Many illustrations in the text are not referenced by site number because, without substantial field checking, accurate site numbers are impossible to determine. In some archeologically significant areas, such as Horseshoe (Barrier) Canyon, reconciliation of the existing data was considered extremely important for evaluation purposes and necessitated trips into the field.

Because of the great range in the quality of information, the site-specific data presented here are also variable in both quantity and quality. Errors surely exist, and the limitations inherent in this information should be kept in mind. The accompanying archeological base maps should be used as guides; many site locations are not precise, and in some areas; such as the Salt Creek Archeological District in the Needles District, Canyonlands National Park; plotting sites with any degree of accuracy was impossible. Furthermore, large gaps in detailed understanding of the areas' archeology exist. These can be filled in only through further inquiry and analysis. The discussions and recommendations presented for

management purposes, however, should not be greatly affected by errors in site specific infomation.

Preparation of this document, because of its very nature, was extremely fragmented and time consuming. The end product is the result of cooperation and support from area superintendents and unit managers, maintenance crews, park resource personnel, university professors, clerical support staff, river-runners and Midwest Archeological Center archeologists who helped compile data on over 1150 sites and carried an extra workload while the report was in preparation. Craig Cellar plotted the material for Arches National Park and helped reconcile conflicting descriptions and locational data. He also helped locate and obtain original reports and site information from the Archeological Laboratory, University of Utah. Danny Olinger helped correlate the six major reports and the generally poor quality original site data available for most archeological work carried out in Capitol Reef National Park. Claudia Shaffer and Steve Spears helped synthesize the generally difficult-to-decipher and extremely variable site information for Canyonlands National Park.

Personnel at the University of Utah, Department of Anthropology, the major repository for releyant site information, were extremely cooperative and allowed us to search their records and take over the Archeological Laboratory with our notes, maps and manuscripts. David B. Madsen, Utah State Archeologist, supplied site numbers for the many previously unrecorded sites located during this study and helped clarify some of the numerous inconsistencies. The most

valuable help, however, came from various field personnel who, vitally interested in providing the best for their parks, loaned two-way radios, vehicles, personal archeological site records and shared time and knowledge of their areas' cultural remains.

A particular thanks goes to my professional colleagues, employed by a variety of federal agencies working in southeastern Utah, who read various working drafts of this document and made valuable suggestions.

Adrienne Anderson

Lincoln, Nebraska
January, 1978

HISTORY OF ARCHEOLOGICAL RESEARCH IN SOUTHEASTERN UTAH

No place in North America contains as many spectacular archeological remains as the Four Corners area, particularly the San Juan drainage. The most outstanding of these are set aside as National Park Service areas: Mesa Verde; Chaco Canyon; Aztec Ruin; Hovenweep; Yucca House and Navajo National Monument, which includes the largest ruin in Arizona, Keet Seel (Fig. 1). It is common knowledge that prior to inundation Glen Canyon harbored outstanding archeological material. Eight years were necessary simply to inventory the more obvious of these remains and excavate the most vital sites (Jennings 1966).

However, there are many other areas, such as Natural Bridges National Monument and Canyonlands National Park, that contain equally unique and important archeological resources even though they are primarily noted for their natural features. Because there are so many ruins and other prehistoric remains, the majority of the archeologically rich canyons and ridges throughout the region, obviously, are not recognized by National Park or Monument status. Some sites are National Historic Landmarks; such as Alkali Ridge, Utah and Lowry Ruin, Colorado. Others; such as Escalante Ruin near Dolores, Colorado and the Temple Mountain Wash pictographs near Hanksville, Utah; are listed on the National Register of Historic Places. Each of these designations provides some degree of recognition and protection.

In considering the prehistoric nature of the canyonlands section of the Colorado Plateau, aboriginal occupation in Arches,

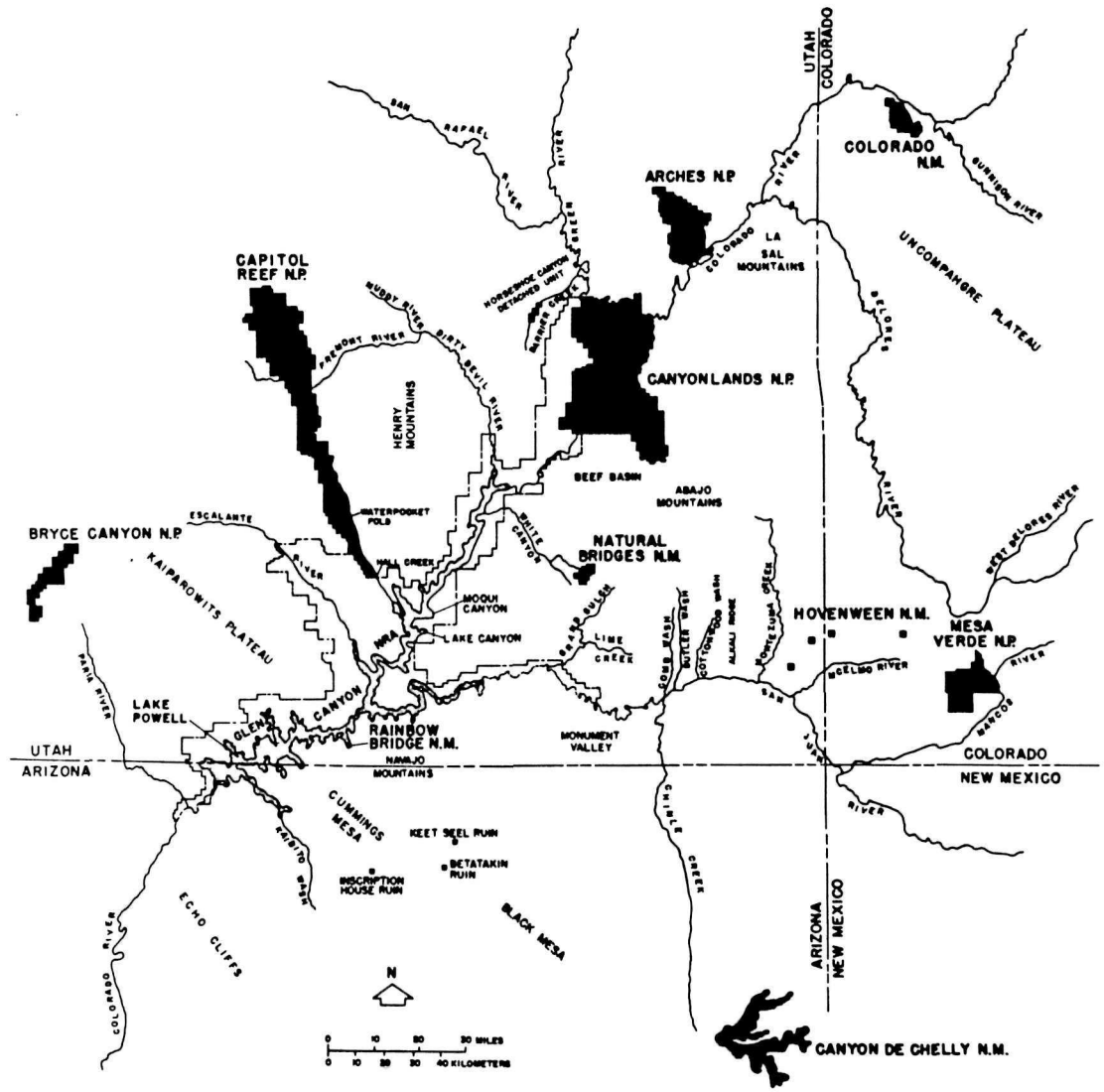

Figure 1. Locational map, southeastern Utah.

Mesa Verde, Natural Bridges or Glen Canyon cannot be discussed in isolation. Park and monument boundary lines are artifically imposed and neither coincide with realities of aboriginal cultural areas, nor reflect limits of aboriginal lifeways. As suggested by National Park Service concern, the general Capitol Reef, Canyonlands, Arches, Natural Bridges, Glen Canyon, Navajo Monument, Hovenweep and Mesa Verde area--the Colorado Plateau--is important for the quality as well as the quantity of its archeological data. However, this region is also highly significant for the role it played in the historical development of southwestern archeological studies and, therefore, the rise of that discipline in North America.

Even though Juan Maria Antonio Rivera crossed western Colorado and eastern Utah during his 1765 trading expeditions (Bolton 1972: 6-7), the earliest known mention of prehistoric ruins in the region was by Franciscans Franciso Atansio Dominguez and Silvestre Velez de Escalante during their 1776 journey northwest from Santa Fe, New Mexico into central Utah and northern Arizona. In the search for a trail across Utah to Monterey and the California missions, Dominguez and Escalante passed through western Colorado into east central Utah, where they were forced to skirt the formidable barrier of the canyonlands country (Bolton 1972; Crampton 1973:44). Although there is a "Spanish Trail" heading north through the Needles, across the Colorado River at the head of Cataract Canyon and up the canyon wall through the Doll's House and the Land of the Standing Rocks to the Golden Stairs; there is absolutely no documented evidence that Spaniards or Mexicans, for that matter, were in this

area or used this so-called "Spanish Trail" (Bolton 1972; Crampton 1973:48, 1976:personal communication).

During the 1820's-1840's fur trappers and traders moved down the Gunnison, Dolores and the Grand (Colorado) rivers in their search for pelts. By the early 1830's Antoine Robidoux had established a trading post on the Uncompahgre River; and Kit Carson, Jim Beckworth and other noted mountain men frequented the region. The Colorado River crossing where Moab is today became an obvious route, and trappers James Workman and Samuel Spencer passed through the area in 1839.

As early as 1836 fur trapper and explorer Denis Julien is assumed to have successfully traveled stretches of the Green and Colorado rivers between Green River, Utah and Glen Canyon. Although little is known of his ventures, four "Julien" inscriptions with an 1836 date have been reported between Green River, Utah and Glen Canyon (Baars 1971:3; Crampton 1973:53). Other "Julien" inscriptions with dates are found further up the Green at the mouth of Chandler Canyon (42UN491); in Whirlpool Canyon, 1838, and in Arches National Park, 1844.

What may be the earliest mention of the tall, multi-story "tower" ruins in Montezuma Canyon and vicinity--similar to those at Hovenweep National Monument--was in an 1854 letter written by W. D. Huntington. He had been sent by Brigham Young to make contact with the Navajos and to explore southeastern Utah (Crampton 1973:85-86).

Although he was not the first to "float" these two rivers, Major John Wesley Powell's noteworthy 1869 journey resulted in the

scientific popularizing of the canyonlands area. Powell, of course, mentioned the prehistoric remains dotting the Colorado and Green rivers during his 1869 and 1871-72 trips through the canyons Dellenbaugh 1926; Powell 1895).

The first recorded journey down the Colorado River from Moab, Utah to its confluence with the Green was made in 1889 by the Kendrick party, an advance survey group for the Denver, Colorado Canyon and Pacific Railroad Company later made famous by Robert Brewster Stanton's water-line survey through the Grand Canyon (Stanton 1890, 1965).

Although Powell's subsequent work and the Wheeler Survey, under the direction of George M. Wheeler, provided some archeological information about the Four Corners area, the 1874-77 Ferdinand V. Hayden United States Geological Survey of the Territories was the beginning of true archeological knowledge of the region. Under Hayden's guidance, W. H. Holmes and W. H. Jackson described the ruins of Mesa Verde, Hovenweep and other areas in the San Juan region. However, the world at large became aware of the archeological richness of the canyons and plateaus in the late 1880's with the Wetherill brothers' discovery and popularizing of the cliff dwellings under the rim of Mesa Verde. In the spring of 1889 the first collection of archeological "treasures" recovered by Richard, Al and John Wetherill and their friends was shown in Denver--it eventually was sold to the Colorado State Historical Society. The 1892 World's Columbian Exhibition in Chicago and the Chicago World's Fair featured articles recovered by the Wetherills

from Mesa Verde (McNitt 1966:323-329). This immediately sparked tremendous interest in the prehistoric inhabitants of the region and their "relics." The Colorado Plateau was swamped with collectors who, on occasion, dynamited above ground rooms to get at the pottery located in burials below and with more reputable individuals and expeditions from major universities and museums. Unfortunately, the latter also frequently used what are today considered less-than-desirable techniques for obtaining outstanding specimens for their display cases.

Concomitant with these collecting activities, interest arose in dating the remains. Archeologists and others began describing the ruins and artifacts recovered with an eye to determining their relationships. Development of a cultural chronology for the southwest--the order in which prehistoric events occurred--became of great concern.

During the 1890's the Wetherills expanded their collecting activities into southern Utah from whence they had heard reports of other heavily occupied, although not quite as spectacular, canyons. It was here, in the Butler Wash, Cottonwood Canyon and Grand Gulch area just southeast of Natural Bridges National Monument (Fig. 1), that Richard Wetherill first realized he was finding materials that were distinct from and earlier than the usual Pueblo remains (Lister and Lister 1964:8; McNitt 1966:53-75; Wetherill 1897). In 1897, while leading a collecting party for the Hyde Expedition, it occurred to Wetherill that the prehistoric population being recovered had undeformed skulls; manufactured superb basketry and sandals; lived

in pit houses and lacked ceramics, bows, arrows and stone axes--all distinctions recognized today between the Basketmakers and the later, Pueblo period cliff dwellers. Prudden (1897) announced the existence of a Basketmaker period in an 1897 article, but it wasn't until George Pepper (1902) published Wetherill's defining characteristics in 1902 that the Basketmaker concept was finally accepted by the academic world.

In addition to Wetherill's recognition of the Basketmakers as a distinct cultural group, other archeologically important developments occurred in southeastern Utah around the turn-of-the-century. From 1895 through 1940, Byron Cummings, Dean of the College of Arts and Sciences at the University of Utah, headed a program of exploratory forays into the region (Cummings 1910a, 1910b, 1910c, 1915; Smith 1950:24; Turner 1962). Under his direction in 1908, excavations began in a large village on Alkali Ridge (Fig. 1). Later this spot was established as the Pueblo I type locale (Brew 1946). Cummings, along with other archeologists; such as A. V. Kidder (1910, Kidder and Guernsey 1919), Neil Judd (1924) and T. M. Prudden (1903); spent many summers exploring the San Juan drainage. He traveled through White Canyon in 1906 and 1907 (Turner 1962:1) and discovered sites "between the Augusta (Sipapu) and the Carolyn (Kachina) bridges," Natural Bridges National Monument (Cummings 1910a:20). Cummings was the first archeologist to see Betatakin and Inscription House, now in Navajo National Monument, northern Arizona and to describe the towers of Hovenweep National Monument (Cummings 1910a:29-30).

In 1906 the United States Congress passed the Antiquities Act, the first regulation designed to protect our Nation's cultural heritage. (Refer to Appendix A for discussion of subsequent cultural resource legislation.) This legislation was an outgrowth from both professional and amateur concern for southwestern sites that were disappearing at an alarming rate as a result of indiscriminate collecting activities. The act requires that any party or individual undertaking archeological activities on federal lands obtain a special permit and report the work for public edification and enjoyment.

That same year Mesa Verde National Park was brought into the National Park system, followed by Chaco Canyon National Monument in 1907. Natural Bridges was proclaimed a National Monument in 1908.

In 1916 astronomer A. E. Douglass (1935:10), spurred by the prospect of dating Pueblo Bonito in Chaco Canyon, began refining his technique of dendrochronology (tree-ring dating). Several years previously he had been looking at tree rings to see if periods of high or low sunspot activity were reflected in these growth patterns. Inadvertently, he developed the technique of counting a tree's annual growth rings and built a long chronology from living trees (Douglass 1937). But that wasn't satisfactory to Douglass. He wanted to go back in time and started looking at cores from roof beams in modern pueblos, such as the Hopi villages. Shortly, his tree-ring samples included specimens from Aztec Ruins National Monument and Mesa Verde National Park as well as many other areas, and he developed two chronologies: the first was based on living

trees and samples from the modern pueblo villages; and the second, an unattached or "floating" chronology, was based on the prehistoric specimens. After years of searching, in 1929 Douglass found a tree-ring specimen that tied his floating chronology to the chronology of known age, thereby, providing immediate dates for prehistoric Pueblo occupation of the Colorado Plateau (Douglass 1935, 1937). By dating a ruin, or even specific rooms within a ruin, the architectural styles and associated ceramics can be dated. Subsequently, the pottery types and architectural styles are used to date other sites that can not be directly dated through dendrochronology. Douglass' work constituted an exciting and most significant contribution to southwestern archeological inquiry.

The 1920's was the period of Charles Bernheimer's explorations into the Navajo country, carried out through the American Museum of Natural History (Adams 1960:7-8; Bernheimer 1923, 1924). On these annual forays Bernheimer and a fluctuating group of adventurers, including John Wetherill, Ezekiel (Zeke) Johnson and Earl Morris, explored the canyons and plateaus of the San Juan drainage noting many archeological remains.

By 1927 (Kidder 1927) a fairly accurate, general developmental scheme for the Colorado Plateau had been established (Fig. 2). It was recognized, however, that north of the Colorado River the structures and artifactual remains being discovered were similar to, but certainly not typical of those further south. In this year the Peabody Museum of Archaeology and Ethnology initiated a four-season expedition (1928-31) into the Fremont River drainage.

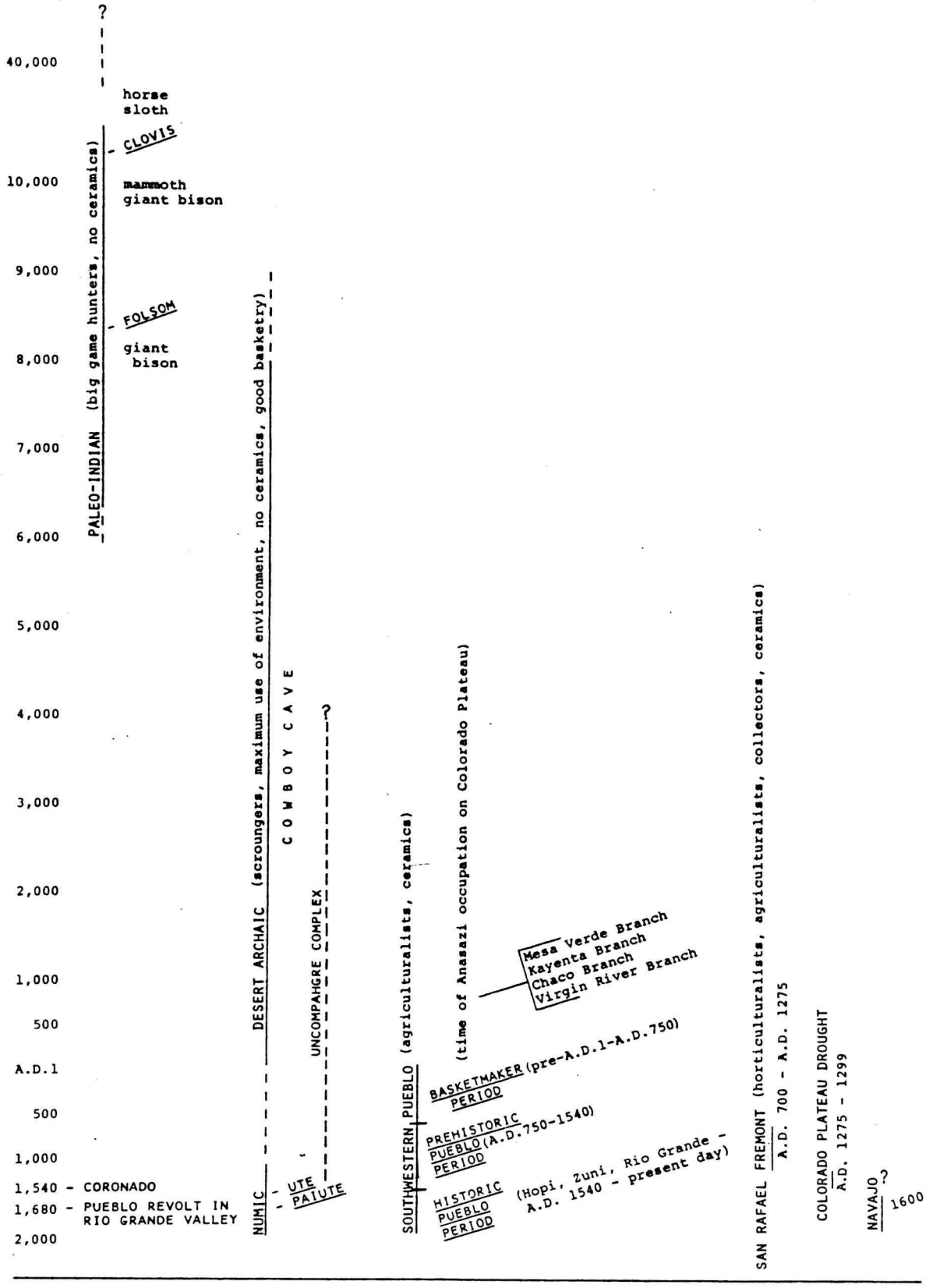

Figure 2. Generalized cultural sequence, northern Colorado Plateau.

Funded by two Boston businessmen, William H. Claflin and Raymond Emerson, parties from the Museum under Nöel Morss and Henry Roberts worked the Fremont and Dirty Devil rivers and their tributaries; the Duchense River in the north and the Green River and its many tributaries, including Horseshoe (Barrier) Canyon (Fig. 1) to the south (Gunnerson 1969). They also visited the Beef Basin area, Indian Creek and the Salt Creek drainage in what is now the Needles District, Canyonlands National Park. In 1931 Morss reported this work and defined the Fremont Culture from sites located along that river--many of which are now in Capitol Reef National Park. Unfortunately, because of sudden illness, Robert's portion of the Claflin-Emerson project was not reported until Gunnerson synthesized the expedition's discoveries in 1969. But, Morss' 1931 delineation of the Anasazi-related, but distinct Fremont culture group provided a framework within which subsequent discoveries could be evaluated and introduced considerable order into the previous archeological confusion.

In 1929 Julian Steward published his famous study, Petroglyphs of California and Adjoining States, which included sites in Capitol Reef National Park (1929:152) that were subsequently described by Morss (1931).

By the 1930's and 1940's, the archeological richness and scenic wonders of southeastern Utah were well-known. The area became a focal point for educational/exploratory expeditions as well as many impromptu, amateur pot collecting ventures. The Rainbow Bridge - Monument Valley Expedition carried out extensive scientific

investigations in the San Juan/Colorado River drainage between 1933-1938 (Adams 1960:9; Beals, Brainerd and Smith 1945; Hargrave 1935; Rinaldo 1935; Wetherill 1935). Unfortunately, little of the archeological work was ever reported in print; the scant extant documents are located at the University of California at Los Angeles (Adams 1960:9).

During this period more detailed archeological reporting, as we think of it today, began. Sporadic reports appeared in print, such as those by Beej and Paul Averitt (Averitt and Averitt 1947), Gordon C. Baldwin (1946, 1949), John Otis Brew (1946), Lynn Hargrave (1935, 1936), Randal Henderson (1946a, 1946b), Carling Malouf (1940, 1941, 1944), Paul S. Martin and others (Martin, Loyd and Spoehr 1938; Martin and Rinaldo 1939; Martin, Roys and von Bonin 1936), Nöel Morss (1931), Charlie Steen (1937) and Julian Steward (1929, 1941). In 1934 Frank Beckworth was "appointed to take charge of an archeological study for the government in the Moab area" (Anonymous 1934:11). The Explorers Club established its program of Southwest Explorations, headquartered in Bluff, Utah.

During 1945-1947, the Carnegie Museum of Pittsburg fielded three poorly reported expeditions into the San Juan triangle, specifically, the Beef Basin area (Fable Valley and John Palmer Canyon) and the upper tributaries of White Canyon (Butler Wash, Cheesebox Canyon and Hideout Canyon). Materials recovered during this work were stored at the museum and eventually analyzed in 1961 as part of the University of Utah's Glen Canyon Project (Sharrock and Keane 1962).

In 1948-49 John and Virginia Garner, working for the Harman Foundation, made a movie and took hundreds of pictures of the Beef Basin and Needles areas. Virginia Park was named for Mrs. Garner (DiPeso 1977: personal communication). Charles DiPeso, among other promising young archeologists, was invited along to explore and explain the prehistoric wonders.

In 1949 the University of Utah, under the continued direction of Jesse D. Jennings, initiated its Statewide Archeological Survey program. This is a reconnaissance and excavation program, which continues today, to (1) inventory the archeological remains of Utah and (2) provide a base from which to evaluate and understand the state's prehistory (Jennings 1957:vi-vii). Initial work carried out in southeastern Utah was by Gunnerson (1957, 1958), Hunt (1953), Mulroy and Kowta (1964), Pierson (1957, 1959), Rudy (1952a, 1952b, 1953, 1955) and Sharrock (1966).

As a result of increasing knowledge, during this same period refinement of Morss' initial 1931 description of the Fremont was possible (Jennings 1956; Wormington 1955; Wormington and Lister 1956), and a clearer picture of the lifeways and interaction among the various prehistoric cultural groups occupying the Colorado Plateau developed.

In 1957 the University of Utah, along with the Museum of Northern Arizona, became immersed in the large, multi-year pre-inundation archeological survey and salvage program in Glen Canyon, which monopolized its activities during the early 1960's (Jennings 1966).

At the same time, Arches National Monument Superintedent Bates Wilson and others who hoped to save the unspoiled canyonlands country pushed hard for the establishment of Canyonlands National Park. One of their areas of concern was the abundant archeological remains and spectacular rock art (Gunnerson 1958; Hunt 1952; Hunt and Wilson 1952; Pierson 1959, 1962). In 1964 the park became a reality, and the following year Sharrock (1966) initiated the most systematic archeological study carried out in the area to that time.

The late 1960's and 1970's have seen a proliferation of small, clearance-oriented archeological surveys for road alignments, gas and oil drilling sites, pipelines, etc. (Anderson 1975; Dalley 1973; Kay 1973; Lindsay and Madsen 1973; Marwitt 1970a; Schroedl 1976b; Wilson 1974). More comprehensive, systematic surveys, as required under Executive Order 11593 have been carried out in portions of Arches (Berry 1975a, 1975b) and Canyonlands (Hogan, Losee and Dodge 1975; Losee and Lucius 1975; Lucius 1976) National Parks. Brigham Young University has been operating in Montezuma Canyon since 1959, and systematic survey and test excavations at Hovenweep National Monument were carried out in 1974-1976 (Winter 1974, 1976, 1977). Major excavations in the immediate area have been undertaken at Clydes Cavern (Winter and Wylie 1974), Innocents Ridge (Schroedl and Hogan 1975) and Cowboy Cave (Jennings 1975). The Museum of Northern Arizona (Lipe and Matson 1973) has had an ongoing research interest in the Cedar Mesa/San Juan Triangle area

since the early 1970's in response to Lipe's (1967, 1970; Lipe, Matson and Powers 1977) activity in the area.

In 1976 the Bureau of Land Management Utah State Office initiated a statewide, systematic sampling program of archeological survey and resource evaluation for management purposes (Hauck 1977; Hauck and Harman 1977; Hauck, Nielson, Harman, Weder, Lucius, Drollinger and McDonald 1977; Lipe, Matson and Powers 1977; Thompson 1977; Worthington 1977). This work has the long range goal of developing a predictive model of site location.

Most recently, Madsen and Lindsay (1977) have reevaluated the concept of the Fremont culture within the framework of today's archeological knowledge. They suggest that a Fremont entity cannot be clearly defined and consider it merely a northern varient of the Anasazi (Madsen and Lindsay 1977:90).

Archeological work continues in southeastern Utah and, in conjunction with the substantive work that has been carried out in the past, there is potential for significantly adding to the archeological understanding of the area.

CULTURAL CHRONOLOGY AND PREHISTORIC LIFEWAYS, SOUTHEASTERN UTAH

Paleo-Indian

The earliest inhabitants of southeastern Utah were probably Clovis and Folsom-age groups who practiced a big-game hunting and collecting lifeway (Fig. 2). This assumption is based on the presence (Hunt and Tanner 1960:116; Jennings 1975; Madsen, Currey and Madsen 1976) of now-extinct megafauna (horse, sloth, mammoth and giant bison) and many isolated finds of Paleo-Indian projectile points on the northern portion of the Colorado and Uncompahgre plateaus. Hunt and Tanner (1960) report a series of undated, surface Folsom point discoveries in the general area of the Island-in-the-Sky District, Canyonlands National Park. Pinto Basin-type points have been reported from the Cave Spring area of Squaw Flats in the Needles District, Canyonlands National Park. Gunnerson (1956) discusses an isolated Folsom point from the multi-component Silverhorn site (42EM8) on a tributary of the San Rafael River northeast of Capitol Reef National Park, and Tripp (1966) reports a Clovis point found on a hill overlooking the Acord Lake Valley near the head of the Fremont River drainage. Schroedl (1977b) has recently reported additional discoveries of Paleo-Indian materials from the Colorado Plateau, and a number of unverified reports of these early remains exist. However, definite sites and irrefutable, in-context evidence of these early hunters are lacking in southeastern Utah.

Desert/Colorado Plateau Archaic

While the Paleo-Indian hunters appear to have developed a highly specialized lifeway centered around now-extinct game animals, a partially contemporaneous, desert-adapted group evolved whose lifeway was organized around intensive utilization of the environment (Schroedl 1976a). These Archaic peoples, through intimate knowledge of their local environments and highly specialized techniques, made maximum use of the plants and animal resources available to them. As a result, Archaic artifact complexes vary from region to region. These groups were wanderers, although their seasonal movements probably followed a highly structured pattern. They produced finely-made basketry for use in processing, carrying and probably storing vegetal materials. They did not manufacture ceramics (Jennings 1957).

The earliest well-documented evidence of Archaic period occupation in the canyonlands country is from Cowboy and Jim Walters Caves (42WN420 and 42WN421), sites in the upper drainage of Barrier Creek (Fig. 1). At Cowboy Cave, excavated by the University of Utah Department of Anthropology (Jennings 1975), radiocarbon dates of 8275 ± 80 years: 6325 B.C. (SI2418); 7215 ± 75 years: 5265 B.C. (SI2419) and 6830 ± 80 years; 4880 B.C. (UGA637) were obtained from the basal portions of a thick midden deposit. The materials in these earliest deposits could be subdivided into several discrete units by the presence of nearly sterile bands of windblown sand. The site most likely represents a series of recurrent occupations for the purpose of harvesting the wild cereal grasses that thrived

around a nearby spring. Jennings (1975) has tentatively assigned the latest Archaic period occupation of the cave to the Desha complex, a complex initially defined at Sand Dune Cave, located slightly northeast of Navajo Mountain. This site's component was dated at 5000 to 6000 B.C. (Lindsay, Ambler, Stein and Hobler 1968:101-102).

Pendergast (1961:6) reports the presence of split-twig figurines, which are considered diagnostic of late Western Archaic occupation, in Moonshine Cave (42GR239) on Mill Creek just southeast of Moab, Utah. These figurines; also found in Cowboy Cave, in Jim Walters Cave, under an overhang near Green River (Tripp 1967) and in a shelter 10 miles northwest of Moab (Pierson and Anderson 1975); have been dated elsewhere to between 4,100 and 3,100 years ago (Euler and Olson 1965; Fowler 1973; Schroedl 1977a; Swartz, Lang and de Saussure 1958).

Other Archaic period sites have been located on the extreme western edge of the Colorado Plateau; although these, like Cowboy, Jim Walters, Moonshine and Sand Dune caves; are rock shelter situations. They are specialized in nature and not plentiful enough to provide sufficient data for hypothesizing Archaic period subsistence/settlement patterns in the canyonlands portion of the Colorado Plateau.

In Glen Canyon a series of buried, non-ceramic sites were given Archaic designations based on their stratigraphic positions and lack of ceramics even though none yielded diagnostic artifacts (Lindsay, Ambler, Stein and Hobler 1968; Lipe, Sharrock, Dibble and Anderson

1960; Long 1965; Sharrock 1964; Sharrock, Day and Dibble 1963). These were not thoroughly excavated and provide little information for understanding details of Archaic occupation in southeastern Utah.

More recent work in the Dangling Rope area of Glen Canyon (Schroedl 1976b) on what are believed to be Archaic period surface campsites yielded northern side-notched projectiles, six large dart points, a slab-lined hearth and a slab-lined cache pit.

For the La Sal Mountain area southeast of Arches and east of Canyonlands National Park, survey work by Alice Hunt has established the presence of pre-agriculture groups (Hunt 1953; Hunt and Tanner 1960). She defines a series of tentative complexes based on surface collections and questionable associations. However, Hunt correlates the most recent-dating material with the Uncompaghre complex (Fig. 2). This is a late Archaic complex originally defined by Wormington and Lister (1956) from sites on the nearby Uncompaghre Plateau. It is, theoretically, typified by small corner-notched projectile points, slab grinding stones and lack of ceramics or agriculture. Buckles (1971:1248-1298) has more recently subdivided the complex into a series of phases that may range in time from 8000 B.C.-A.D. 1880. However, dating of the earlier phases is tenuous. The Uncompaghre complex is proposed by some investigators as the regional precursor of Fremont agriculturalists (Hunt 1953; Hunt and Tanner 1960; Wormington and Lister 1956). Buckles (1971: 1326-1340) suggests that this Uncompahgre/Fremont relationship did not exist and that the Uncompahgre Complex is simply one of many local Archaic period

cultural manifestations related more to specific activities than a cultural tradition. This may or may not be the case; the complex is ill-dated and no direct continuity has yet been established with later agricultural groups.

Pueblo-Period Agriculturalists

Prehistoric agricultural settlement in southeastern Utah can be subdivided into four areas (Fig. 3) based on significant differences among a wide complex of Pueblo traits (Aikens 1966b; Jennings 1966, 1974; Marwitt 1970b; Sharrock 1966). Virgin River branch Anasazi occupation occurs in the western portions of Arizona and Utah, concentrating north and west of the Colorado River (Aikens 1966b:2). Mesa Verde branch Anasazi sites concentrate in southwestern Colorado and southeastern Utah, north of the San Juan River and south of the Colorado (Jennings 1966; Sharrock 1966). The majority of the sites that can be identified in Arches and Canyonlands National Parks and Natural Bridges National Monument represent the Mesa Verde Anasazi. Kayenta branch Anasazi sites most frequently occur in southern Utah around the juncture of the Colorado and the San Juan Rivers and southward into northern Arizona. The remainder of Utah was occupied by Fremont agriculturalists. Sites occurring in Capitol Reef National Park are typically Fremont (Gunnerson 1957, 1969; Morss 1931).

While classified as agriculturalists because they had a good understanding of farming practices, including water control, and raised domestic corn, beans and squash, these Pueblo period peoples

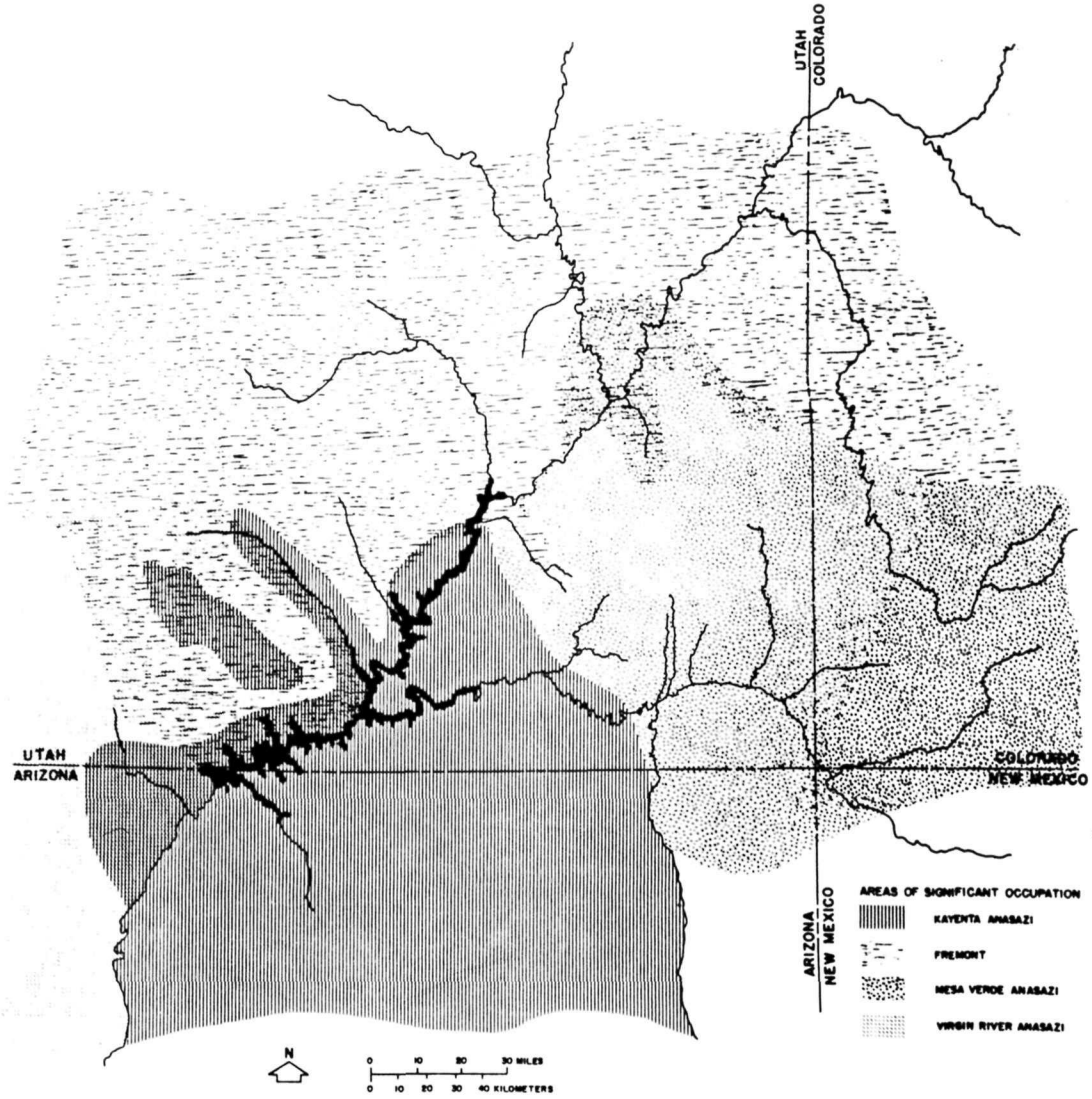

Figure 3. Pueblo period sub-cultural distribution, southeastern Utah (Aikens 1966; Hunt 1953; Jennings 1966, 1974; Lipe, et al. 1960; Marwitt 1970b; Morss 1931; Rudy 1954; Sharrock 1966; Wormington 1955).

have left sufficient evidence that they also relied heavily upon hunting and the harvesting of wild vegetal materials. A wide variety and large quantities of grass seeds, berries and nuts as well as faunal remains from game animals have been recovered archeologically. These materials and the locations of storage structures, temporary campsites and longer-term habitations suggest that part of each year's activities included travel for acquisition and processing of other than agricultural resources. These seasonal movements depended, of course, upon a variety of fluctuating environmental and cultural factors. The reliability of agriculture, obviously, varied from area to area, and crops were probably planted in a variety of ecological niches to insure at least some success, comparable to modern Hopi practices (Hack 1942). Many storage structures occur in small shelters and ledges in the Salt Creek Archeological District, Canyonlands National Park, and numerous small granaries can be seen in Cutler Formation ledges, which line the banks of the Colorado and Green rivers. These remains and the plentiful storage structures (granaries and cists) located near stream beds, alluvial fans and wide flood plains where creeks empty into the Colorado and the Green suggest that a range of gardening areas were exploited. In the Maze District, Canyonlands National Park, habitation sites and storage structures are found only in the few places, such as Anderson and Spanish bottoms, where agriculture was possible through the propitious combination of arable land and dependable water (Hogan, Losee and Dodge 1975; Losee and Lucius 1975; Lucius 1976). The only site in Horseshoe Canyon Detached

Unit, Canyonlands National Park that does not contain rock art consists of eight storage cists (42WN373). The concept of small groups from the more populated centers using these marginal areas for farming and/or hunting for brief periods has been suggested as a Pueblo period lifeway by several authors (Adams and Adams 1959; Gunnerson, Lipe, Lister and Suhm 1959; Lister 1958.

It is also apparent that Fremont groups, living in areas climatically less reliable for crop production than those occupied by their Anasazi counterparts to the south where a longer growing season exists, were more dependent upon wild food resources.

The Pueblo period chronology developed for southeastern Utah does not differ greatly from areas further south. Based on data from the northern Colorado Plateau Berry (1975b:78-79), in his report of archeological survey work in Arches National Park, succintly summarizes the Basketmaker I through Pueblo V development sequence for the Kayenta and Mesa Verde Anasazi areas:

Basketmaker I	before 1950 years ago (pre-A.D. 1)
Basketmaker II	1950 to 1450 years ago (A.D. 1-500)
Basketmaker III	1500 to 1200 years ago (A.D. 450-750)
Pueblo I	1200 to 1050 years ago (A.D. 750-900)
Pueblo II	1150 to 850 years ago (A.D. 800/850-1100)
Pueblo III	850 to 650 years ago (A.D. 1100-1300)
Pueblo IV	650 to 250 years ago (A.D. 1300-1700)
Pueblo V	250 years ago to the present (A.D. 1700-to the present)

> Basketmaker I was originally an hypothesized hunter-gatherer stage presumed to have existed over the entire southwest prior to the introduction of cultigens. Subsequent work has tended to support the hypothesis, since most workers agree that the Archaic period populations are representative of the Basketmaker I level of technology. However, the commonly held assumption that Basketmaker II developed from an Archaic or Basketmaker I substratum within the region of Anasazi occupance has yet to be demonstrated.

Basketmaker II is the term applied to the earliest Anasazi farming groups of the Southwest. Defining characteristics include domesticated corn and squash, the atlatl, milling stones, distinctive sandals and basketry. The majority of excavated sites are located in caves and rockshelters and frequently contain numerous slab-lined pits and storage cists (Kidder and Guernsey 1919; Guernsey and Kidder 1921; Nusbaum 1922; Guernsey 1931; Morris and Burgh 1954). However, the earliest dated Basketmaker II remains in Utah are open sites with pit structures on Cedar Mesa (Lipe and Matson 1973) and Castle Wash (Sharrock, et al 1963). Radiocarbon determinations and dendrochronology tentatively place occupance at ca. 1650 B.P. (A.D. 300) and 1751 B.P. (A.D. 200) respectively.

The majority of Basketmaker III sites in Utah are small open settlements consisting of one or two subrectangular pit dwellings, though numerous cave/rockshelter sites are also reported (Lindsay, et al 1968; Dalley 1973; Wilson 1974). The artifact assemblage is essentially identical to Basketmaker II with the addition of both plain and black-on-gray pottery vessels and unfired anthropomorphic figurines. Cultivated plants include domesticated corn, beans, and squash. Dated sites on Cedar Mesa (Dalley 1973; Wilson 1974) and Navajo Mountain (Lindsay, et at 1968) range from 1350 to 1250 B.P. (A.D. 600-500).

The "type" site for Pueblo I in Utah is Site 13, Alkali Ridge (Brew 1946). This extensive settlement consisted of over 300 contiguous jacal and slab foundation surface structures enclosing three large plazas. The plazas contained small rectangular pit structures nearly identical to the Basketmaker III dwellings and three large, deep, circular pit structures. Pottery included a neck-banded gray ware, red-on-orange bowls, and effigies. The bow and arrow replaced the atlatl as the principle hunting weapon by the beginning of Pueblo I times. The dates from Site 13 cluster around 1200 B.P. (A.D. 750). No additional Pueblo I sites of this size have been reported in Utah. Most sites contain only one or two pit structures and associated surface dwellings similar to Basketmaker III settlements.

Pueblo II sites typically consist of a single subterranean structure and one to four contiguous masonry surface rooms (Brew 1946). The subterranean structures are generally referred to as kivas which (from ethnographic data) connote a ceremonial function. However, prehistoric ceremonial usage cannot be unequivocally demonstrated and it is equally plausible that these structures served as dwellings. Black-on-white decorated pottery and corrugated cullinary vessels were the dominant ceramic

> types. The bow and arrow remained in use but side-notched points replaced the corner-notched varieties characteristic of the Pueblo I period. The early Pueblo II period was marked by dispersed site distribution and small settlement size (Brew 1946; Jennings 1966). Settlement pattern gradually became more nucleated in late Pueblo II times with a consequent increase in village size (see Dalley 1973; and Lister, Ambler and Lister 1960 for examples).
>
> The Pueblo III period is best seen as a continuation of this nucleating trend, culminating in the large and impressive cliff dwellings of Mesa Verde and Canyon De Chelley and the large multi-story Pueblos and Great Kivas of Chaco Canyon. Pueblo III settlements in south-eastern Utah were considerably less spectacular than the ruins of the great centers, but nonetheless indicate a heavy occupational density (Brew 1946; Lipe and Matson 1973; Dalley 1973; Wilson 1974). Anasazi abandonment of the area occurred by ca. 700 B.P. (A.D. 1250) for reasons which have yet to be adequately explained.

Fremont farmers who occupied the entire state of Utah north of the Anasazi area have been subdivided, like the Anasazi, into major variants (Marwitt 1970b). Sites of concern here, located in Canyonlands and Capitol Reef National Parks, belong to the San Rafael variant (Schroedl and Hogan 1975). The earliest Fremont sites on the Colorado Plateau appear around A.D. 800 and last until general Fremont demise around A.D. 1275. Thus, Fremont occupation parallels Anasazi Basketmaker III through Pueblo III. Furthermore, as Berry (1975b:79) points out ". . .the only way to distinguish a Fremont from an Anasazi site, especially in the ill-defined 'border area' between the San Rafael Fremont and the Mesa Verde/Kayenta Anasazi, is on the basis of pottery types." In terms of the generally accepted trait lists for Fremont and Anasazi, sites in the area are nearly identical. This can be underscored by the problem of categorizing sites in the Needles, Island-in-the-Sky and Maze districts

of Canyonlands National Park (Hogan, Losee and Dodge 1975; Losee and Lucius 1975; Lucius 1976; Sharrock 1966).

The old belief that Fremont sites are only found north of the Colorado and Anasazi sites to the south of the river certainly is not true--neither in terms of rock art styles, structure types, artifacts nor inferred behavioral activities. However, Marwitt (1970b) indicated that recognizable Fremont sites contain diagnostic pottery types, evidence of the bow and arrow, domesticated corn and many minor artifact forms that do not regularly occur in Anasazi contexts. Very distinctive anthropomorphic rock art figures and "Utah type" metates are heavily associated with the Fremont. Unfortunately, highly productive, stratified San Rafael Fremont sites have not been excavated and San Rafael occupation is poorly documented. Extreme variation exists as to size and style of village sites, and subsistence-related data are too scant for reliable interpretive purposes. As indicated above, there is obvious dependence on domestic corn and squash, but the numerous temporary sites suggest high dependence on wild plant and animal resources as well.

The question of Anasazi and Fremont origin and demise has long been debated. It has generally been assumed that both groups developed smoothly out of local Archaic period cultures (Jennings 1966, 1974:317; Marwitt 1970b; Wormington 1955; Wormington and Lister 1956) or stemmed from the Northern Plains (Aikens 1966a). However, a recent reassessment by Madsen and Berry (1975) demonstrates for the western Great Basin an approximately 2000-year gap between the supposed end of the Archaic and rise of the Fremont

agriculturalists. Furthermore, Berry indicates (1975b: 80) that there is no evidence of Archaic/Fremont or Archaic/Anasazi continuity on the Colorado Plateau. He suggests the Fremont are nothing more than an extension of the Anasazi north of the Colorado. Buckles (1971:1326) also believes that Fremont relationships with the Archaic Uncompahgre Complex are nil. However, there is no evidence of population movement into the area with resultant introduction of cultigens from elsewhere. Most recently, Madsen and Lindsay (1977:90) have suggested that a Fremont entity cannot be clearly defined and does not exist. In concert with Berry's (1975b) viewpoint, they consider the Fremont a northern variant of the Anasazi. Until further study of the problem is undertaken, the answers to Anasazi and Fremont origins will have to remain vague.

It is well-known that by approximately A.D. 1300 both Fremont and Anasazi groups were gone from southeastern Utah. The A.D. 1275-1299 period of drought has, until recently, been blamed for Pueblo III demise. However, major abandonment of the San Juan drainage and areas to the north may have occurred as early as A.D. 1150. The most acceptable explanation based on more recent work is that undesirable fluctuations in the climatic regime became so dominant that the existing lifeways became more and more difficult to maintain. Seasonality and intensity of rainfall changed and numbers of frost-free days decreased. This forced withdrawal from the Colorado Plateau to more favorable areas further south. It has also been suggested that nomadic Numic (Ute and Paiute) speakers

further helped displace established Fremont groups (Aikens 1970; Euler 1964).

Historic Occupation

When the first Spanish explorers crossed southeastern Utah they found small groups of Utes occupying the area. Subsequent travelers and early settlers found themselves in occasional difficulties because of aroused Utes. It has been suggested that these generally nomadic Numic speakers entered the southeastern Great Basin from southern California around A.D. 1100, co-occupied the Nevada/Utah border area with Fremont agriculturalists for a 100-200 year period and gradually succeeded, along with a series of climatic factors, in hastening the disappearance of Fremont lifeways (Madsen 1975). The time of their arrival on the Colorado Plateau has not been determined.

In 1855 when the Mormon Elk Mountain Mission first attempted to settle the Moab Valley, a band of Utes was living in the area, raising corn, beans and squash. During late September of that year, the Elk Mountain Utes killed three men outside the settlement, which was subsequently abandoned for 22 years (Crampton 1973:88). Somewhat later, just south of the La Sal Mountains, a party of geologists attached to the Hayden survey of 1875 were treated to a banquet of green corn, then attacked and driven from the area (Hunt 1953:16).

Horseback petroglyphs at two sites in the Needles (42SA1566, 42SA1633) may be Ute in origin (Sharrock 1966:67). Hunt (1953:16)

reports Paiute-Shoshoni (Numic) pottery at approximately 30 prehistoric sites in the La Sal Mountain area. This indicates that Utes were occupying the canyonlands country prior to the advent of the white man. None of these sites can be precisely dated, however, so the specific time of Numic arrival is indeterminate.

Because this was Ute territory, Navajo habitation of southeastern Utah has been sparse, although Navajo structures are reported from the Natural Bridges National Monument area (Farmer 1952; Schroeder 1964a) and a probable cribbed Navajo hogan (42SA1661) was found in the Squaw Flats area of the Needles District, Canyonlands National Park (Sharrock 1966:63, 71). Sharrock indicates that if, in fact, the structure was a hogan it probably dates to the mid-nineteenth century because cribbed hogans became popular only after the arrival of the railroads, which provided ties for construction. Undiagnostic sites in the area may be seasonal Navajo or Ute camps associated with pinyon nut harvesting.

By the 1870's tremendous herds of cattle had been brought into the sparse sagebrush lands of southeastern Utah, and sizeable cattle empires dominated the scene. Development of the cattle industry was accompanied by the influx of outlaws and rustlers; such as the famed Butch Cassidy and his "wild bunch" who sought refuge in the Robbers Roost area just west of the Maze District, Canyonlands National Park (Baker 1971; Kelly 1959); and gave rise to names such as Rustler and Horsethief canyons. Zane Grey's (1932) Robbers Roost was based on tales from the area. By 1940 the Scorup cattle company, headquartered at the Dugout Ranch just east

of Canyonlands National Park on Indian Creek, was one of the largest in the west (Newell 1970:46). Line camps were established in the Needles District at Lost Canyon, Chesler Park and Cave Spring in the Squaw Flats area.

During the late 1950's and 1960's exploration for oil and uranium dominated the economic scene. Although a number of test wells were drilled, no oil or gas was found in economical quantities on what are now National Park Service lands. Unfortunately, a few of the oil and mineral rights acquired prior to National Park Service management are still viable, and in this time of energy crisis techniques may be devised to make their development economically feasible.

CANYONLANDS NATIONAL PARK

Among the many reasons for which this spectacular canyonlands country became a national park is its outstanding archeological resources. One purpose of Canyonlands National Park is ". . . to preserve an area . . . possessing superlative scenic, scientific and archeological features for the inspiration, benefit and use of the public . . ." (PL 88-590).

Some of the most spectacular rock art in the nation is found in Horseshoe (Barrier) Canyon and in the Maze and Needles districts. Aboriginal site density in the Salt Creek and Horse Canyon drainage of the Needles is among the highest recorded for the late Pueblo II-early Pueblo III time period (A.D. 1050-1150). Cowboy Cave (42WN420), on Bureau of Land Management land immediately west of the Maze District in the upper reaches of the Horseshoe (Barrier) Canyon drainage, has recently yielded the earliest, in-context cultural materials known in the Four Corners area (Jennings 1975). Canyonlands National Park has the greatest variety of archeological remains of any southeastern Utah National Park Service area. However, identifiable prehistoric occupation was, for the most part, limited to Pueblo period Fremont and Mesa Verde Anasazi peoples.

The prehistoric sites in Canyonlands have two distinctive characteristics: (1) they reflect the meeting and interfingering of Pueblo period Fremont and Anasazi cultures and (2) they clearly demonstrate the effect that canyonlands country topography had on

aboriginal population distribution and settlement patterns. Natural features acted as barriers or channels for travel, and the limited occurrence of reliable water and arable land determined agricultural potential and land usage. Not only the general locations of sites in Canyonlands National Park, but the distribution of various types of sites directly reflect the area's topography.

History of Archeological Research

Archeological work in Canyonlands National Park has, at best, been sporadic over the years. Even though its most spectacular sites have long been known, only select portions of the park have been systematically surveyed. This work done by Anderson (1976); Hogan, Losee and Dodge (1975); Kay (1973); Lindsay and Madsen (1973); Losee and Lucius (1975); Lucius (1976); Marwitt (1970a) and Sharrock (1966) has produced information on at least 650 archeological sites.

In addition to these major survey efforts, select sites have been reported by Baldwin (1946, 1949); Cummings (1910a, 1910b); Gunnerson (1957, 1958, 1969); Hunt (1952, 1953); Hunt and Tanner (1960); Hunt and Wilson (1952); Malouf (1940, 1941); Ross (n.d.); Rudy (1952a, 1952b) and Schaafsma (1971). Canyonlands park personnel have also been conscientiously locating and plotting archeological sites unrecorded in any previous survey.

The earliest professional work in Canyonlands was that done between 1928-31 under the Peabody Museum of Archeology and Ethnology's Claflin-Emerson Expedition. In 1930 Museum parties explored the

Colorado and Green rivers from about the San Juan/Grand county line to Gypsum Canyon, which is at the head of Lake Powell (Gunnerson 1969). This project also yielded 12 sites in what was called Barrier Canyon, only three of which are actually in the Horseshoe Canyon Detached Unit of Canyonlands; 12 sites in the Ruin Park area of Beef Basin; 14 sites along the Salt Creek drainage and the Fort Bottom Ruin at Fort Bottom on the Green River (Fig. 4).

The unique pictographs of Horseshoe (Barrier) Canyon were first documented by Henry B. Roberts in 1929-30 (Morss 1931). Later Gunnerson, reporting the Peabody Museum of Archaeology and Ethnology's Claflin-Emerson Expeditions (1969), Kay (1973) and Schaafsma (1971) noted their high quality, quantity and significance. Henderson (1957:10), in writing about the pictographs says, ". . .on the great Navajo sandstone wall was an amazing display of well-preserved Indian paintings, like nothing I have seen elsewhere in the Southwest."

In 1972 portions of Horseshoe Canyon were listed on the National Register of Historic Places. The Salt Creek Archeological District in the Needles District and the Bird Site (the Harvest Scene--42WN655) in the Maze District were listed on the National Register in 1976.

Needles District

The archeological richness of Salt Creek, Horse Canyon and Indian Creek, while previously recognized, was popularized by the earliest ranchers of the area who by 1900 had collected considerable

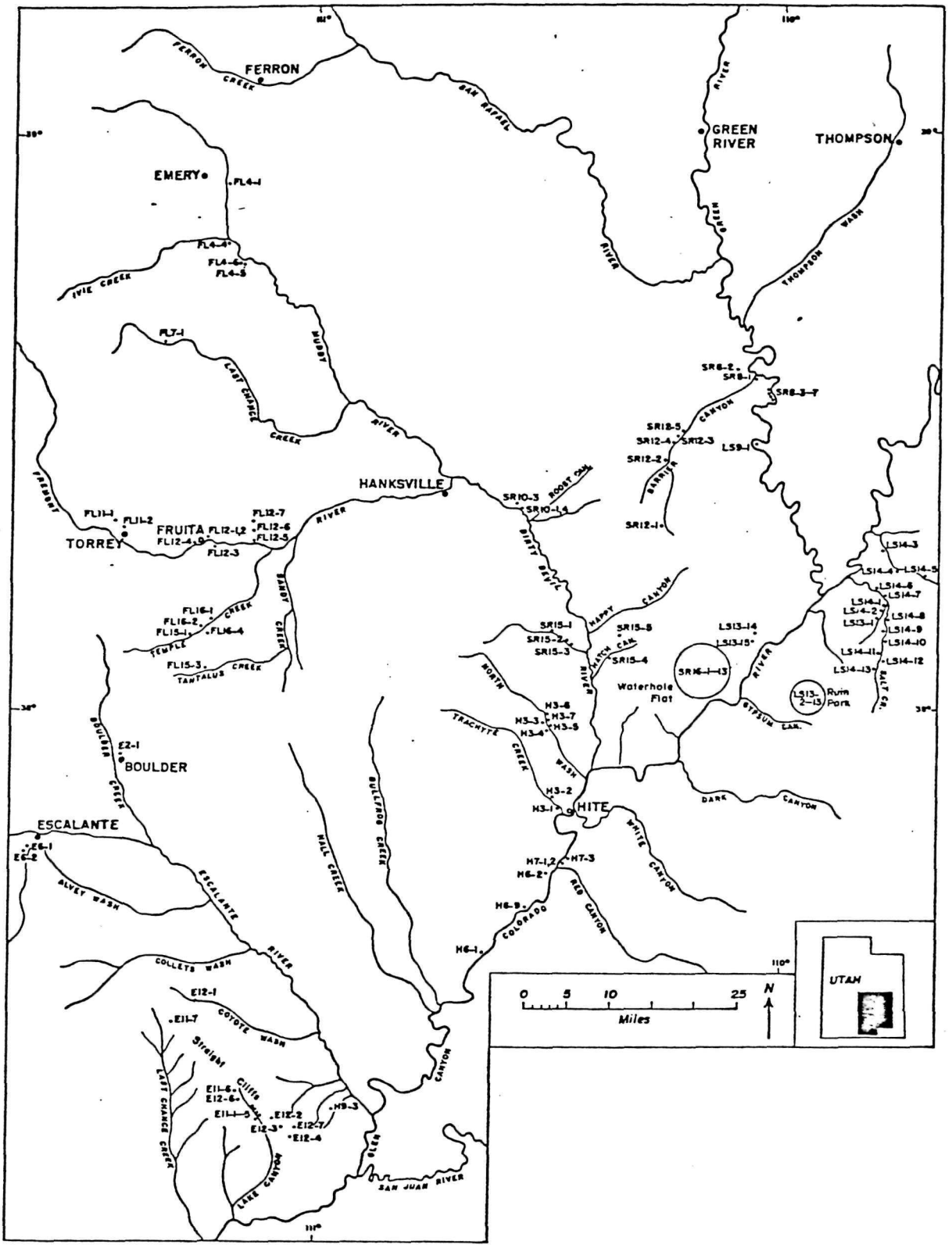

Figure 4. Archeological sites investigated during the Peabody Museum of Archeology and Ethnology's Claflin-Emerson Expeditions (Gunnerson 1969). Drainage names in the Capitol Reef area do not correspond with those on the U.S.G.S. topographic base map. See Morss (1931:7) for explanation.

numbers of whole pots, baskets and an assortment of digging tools and miscellaneous items. While seeking shelter in the many alcoves and small caves, these cowboys frequently passed the time by excavating burials, storage cists and other archeological features. Extensive museum collections were occasionally based on these high-quality discoveries. (Refer to 1950-1951 correspondence between Neil M. Judd, United States National Museum and Charles H. Turner who was part of a turn-of-the-century family ranching operation in the area. By 1893 the Turner family had made significant finds in the Salt Creek drainage and in Beef Basin to the south. Relevant correspondence is on file at Canyonlands National Park).

During their 1930 trip, members of the Peabody Museum's Claflin-Emerson Expedition located eight sites along Salt Creek and three on its tributary, Lost Canyon, in the Salt Creek Archeological District. They also reported three sites from along Indian Creek, just outside Canyonlands National Park (Table 1). Unfortunately without field checking these sites cannot be correlated with those recorded by Sharrock (1966) or other investigators (Cummings 1910a; Gunnerson 1959; Hunt 1952, 1953; Hunt and Wilson 1952).

During the 1940's and 1950's, the Explorers Club conducted its Southwest Explorations under the field direction of Kenneth I. Ross, "to provide young men of high school and early college age with opportunities to participate in fieldwork in the biological, geological and archeological sciences, under the direction of competent scientist leadership" (Ross n.d.:1). Archeologists involved

Table 1. Sites in the Salt Creek Archeological District recorded during the 1930 Peabody Museum Claflin-Emerson Expedition (Gunnerson 1969:38-46).

INDIAN CREEK

LS 14-3--pictograph (Fremont style?)

"This pictograph site. . .contains several featureless, undecorated anthropomorphic figures with square heads and some small-headed sheep with rounded bodies. A few more-or-less geometric designs were also present."

LS 14-4--storage?

"This site. . .consists of a platform constructed by laying poles across two narrow ledges on either side of a wide place in a triangular crevice. The platform, about 2 by 2 m., was undoubtedly built for storage purposes."

LS 14-5--storage?

"This site, located in the canyon wall. . ., consists of the remains of a structure situated in a small niche which it had nearly filled. The room, now very poorly preserved, had walls constructed of irregular stone slabs roughly laid, apparently without the use of mortar, but chinked on the inside with adobe. The roof had been supported on poles that rested on the walls."

LOST CANYON, TRIBUTARY TO SALT CREEK

LS 13-1--alcove habitation

"In Lost Canyon near Cave Spring there are several rock shelters containing small structures. At this particular site there are the remains of four curved structures built of medium-sized

stone slabs laid in heavy mortar. One is circular, free standing, and 1.4 m. in diameter. A second, also circular, but built against one wall of the shelter, is 1 m. in diameter. A third, semicircular and utilizing the wall of the shelter as one of its walls, is 1.3 by 1.1 m. The fourth structure is built on a narrow ledge about 14 m. from the main part of the shelter and utilizes the cliff face as part of its back wall. . . ." Mesa Verde Anasazi pottery, a juniper bark coil (pot rest?), an anvil for fire-drill and what may be a mountain sheep horn sickle were recovered.

LS 14-2--storage?

"A moderately well-built structure was found under a protective overhang in the wall of Lost Canyon. A wall forming about two-thirds of a circle abuts the rear wall of the shelter at either end, enclosing an area about 1.5 m. in diameter. The wall, consisting of stone slabs laid in adobe mortar, is well constructed and still stands about 1 m. high. The doorway, in one side, has a stone slab still about halfway up the wall and apparently once extended to the roof, which is now missing."

SALT CREEK

LS 14-6--pictograph

"In Salt Creek Canyon, about .25 mile below Peak-a-boo (a natural arch), there are pictographs of many hands painted in red, white, yellow, and black."

Sites in the Salt Creek Archeological District recorded during the 1930 Peabody Museum Claflin-Emerson Expedition, cont.

LS 14-7--pictograph

"At Peek-a-boo. . .there is a row of at least 60 white dots directly above two circular figures, probably anthropomorphic. At the top of one of these is a round head on a thin neck, and projecting from the bottom are two straight lines, probably legs. The circular body is almost entirely covered with small squares. The other figure has a larger nearly square head but no legs, and is decorated with vertical lines alternating with rows of dots. The white figures had been painted over red figures, now very faint."

LS 14-8--habitation

"This site, Cedar House, is located about 5 miles above Peek-a-boo. . .and gets its name from a structure about 3 by 2.5 m. and 1.2 m. high that was constructed of cedar poles, essentially by cribbing them. The sides were then covered with adobe, and flat stone slabs were set on edge at the base of the walls. The structure was roofed with long cedar poles covered with adobe and stone spalls." Mesa Verde Anasazi pottery, a metate and a plaited mat fragment were reported.

LS 14-9--alcove habitation

"Several small structures are located under an overhang. . .about 8 miles above Peek-a-boo. Two of these structures, built against the cliff face, were constructed of irregular stone slabs, apparently without the use of adobe mortar. At least one of the rooms had been chinked with adobe and still has a roof consisting of parallel cedar poles resting on top of the wall and covered with a layer of grass and a layer of adobe. This structure, essentially circular. . .has a nearly square doorway with a single-stick line. A second room consists of two parallel walls about 2.2 m. apart, extending from the cliff face to two large boulders about 3 m. away. The roof is missing, but a doorway .5 m. wide and 1.4 m. high, with a lintel composed of three cedar poles, is preserved. A third structure, 2.5 m. in diameter, and a small cist in the floor of the shelter, partially covered with a pole-and-adobe roof with a square opening are also present."

Sites in the Salt Creek Archeological District recorded during the 1930 Peabody Museum Claflin-Emerson Expedition, cont.

LS 14-11 (42SA1563-Big Horned Sheep Ruin)--alcove habitation/pictograph (Fremont style)

"This site, containing ten habitation rooms or houses plus a number of smaller storage rooms, occupies an overhang about 40 m. long, situated on the west side of and about 30 m. above Salt Canyon, about 2 miles below its fork. The floor of the shelter was very irregular and had been leveled in places with poles and rocks. The houses tend to be square or square with rounded corners and were constructed of rough, unshaped stone slabs laid in heavy mortar. At floor level in the front wall of each house is a small ventilator, directly in front of which is the fireplace. The roofs were apparently constructed of cedar poles, rushes, and adobe. . .On the back wall of the shelter are some pictographs. Among them are trapezoidal-bodied anthropomorphs with decorations suggestive of necklaces and sashes, sheep, geometric designs resembling pottery decorations, and negative-painted hands." Mesa Verde Anasazi pottery types; a sandal; ring pot rest; reed mat, cord and Yucca chain fragments and corn and squash remains were found.

LS 14-12--alcove habitation/pictograph

"This site, another cliff dwelling similar to LS 14-11, is located about .5 mile farther up Salt Canyon from it. There are three or four single houses and about fifteen small storage rooms at the site. On the back wall of the shelter are pictographs including several negative-painted hands and what is probably part of a curvilinear anthropomorphic figure."

LS 14-13--alcove habitation

"This site, another cliff dwelling similar to LS 14-12, is on the north side of Salt Canyon where the West Fork enters it."

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in these explorations included Fay-Cooper Cole, A. K. Guthe, George Neumann and Arthur Woodward. During short periods in 1946, 1950, 1952, 1954, 1955 and 1958, the group worked in the Salt Creek/Needles/Beef Basin area. Its 1946 project involved study of the Indian and Salt creek petroglyphs and pictographs under the direction of Arthur Woodward. Unfortunately, most of the field notes, manuscripts and at least 1,000 photographs taken during this work were destroyed in a 1959 fire at the club's headquarters in Bluff, Utah.

Working out of Arches National Monument in 1952, Bates Wilson, then Superintendent, and Boy Scout Troop 317 from Moab carried out the first more-or-less systematic survey of areas later to become part of the Needles District, Canyonlands National Park. They recorded 44 sites in Horse Canyon and its tributaries, indicating that the remains were only a representative sample from the area (Hunt and Wilson 1952). Unfortunately, their site locational data, prepared without the benefit of U.S. Geological Survey topographic maps, and site descriptions are such that only 10 of the sites can be confidently correlated with sites recorded during subsequent work. In their report of that work Hunt and Wilson (1952:2) noted the beginnings of site vandalism and indicated that the whole vessels found were collected, "for these could not be expected to survive the pothunters. . . ." The next year Hunt (1952) carried out a brief survey of nearby Indian Creek, the mouth of which is located within Canyonlands National Park; and Bates Wilson, accompanied by Lloyd Pierson and, once again, with Boy Scout Troop 317, recorded 11 sites in the Horse Canyon-Salt Creek area (Rudy 1953:1).

In 1965, the year after Congress created Canyonlands National Park, extensive inventory was carried out by University of Utah personnel (Sharrock 1966). A total of 239 sites in the Needles District were located or relocated, although this by no means represents all the sites that occur in the district. Nonetheless, they are indicative of the area's heavy aboriginal occupation.

Sharrock (1966) reported 190 sites flanking the Horse Canyon and Salt Creek drainages, which now comprise the Salt Creek Archeological District. Later, Marwitt (1970a), who had participated in Sharrock's 1965-1966 survey party, discovered 15 additional sites while carrying out pre-construction inventory along the proposed Squaw Flats to the Confluence Overlook road right-of-way. Lindsay and Madsen (1973:17-27) located two more chipping sites during their survey of the proposed road realignment from Squaw Flats to Big Springs Canyon. Unfortunately, they made no attempt to correlate their discoveries with previously recorded sites, and lack of good locational data prevents accurate plotting of the sites without field reconnaissance. Subsequent to this work many more sites have been located by Needles District personnel, such as the Sky Faces pictograph panel.

ARCHEOLOGICAL REMAINS IN THE NEEDLES DISTRICT

To the extent that it is possible to determine without substantial field checking, it is estimated that 300 sites have been recorded at one time or another in the Needles District. For the most part, these are larger, more substantial and spectacular

architectural remains than sites located in the other districts of the park. This is a direct reflection of the reliable water and arable land available along Salt Creek and Horse Canyon and the ease of access through these drainages. The Salt Creek drainage system can be entered and traversed in any direction, except from the Colorado River where the White Rim Sandstone and the Rico Formation limestones have formed steep, barrier ledges.

It is not surprising, that no structural remains or midden deposits were found at the 15 upland sites located along the proposed Squaw Flats to the Confluence Overlook road (Marwitt 1970a). Similarly, in the Needles and Grabens areas where the water supply is seasonal and limited, only rock art and temporary camp sites were found. These latter sites reflect seasonal hunting and collecting activities. The rock art was probably produced by peoples moving from the heavily occupied Beef Basin and Ruin Park area just south of the park through these easily traversed, north-south graben valleys (Sharrock 1966).

It is estimated that, during the major period of prehistoric occupation, alluvial deposits filled the Salt and Horse Canyon drainages to a depth of 40-60 feet and that water was plentiful (Sharrock 1966:59). The high canyon walls afforded protection from the elements and the alcoves and overhangs provided considerable space for habitation and storage structures. Today, however, the streams have entrenched to bedrock through this alluvium, an erosional process that occasionally has exposed evidence of aboriginal remains (Fig. 5).

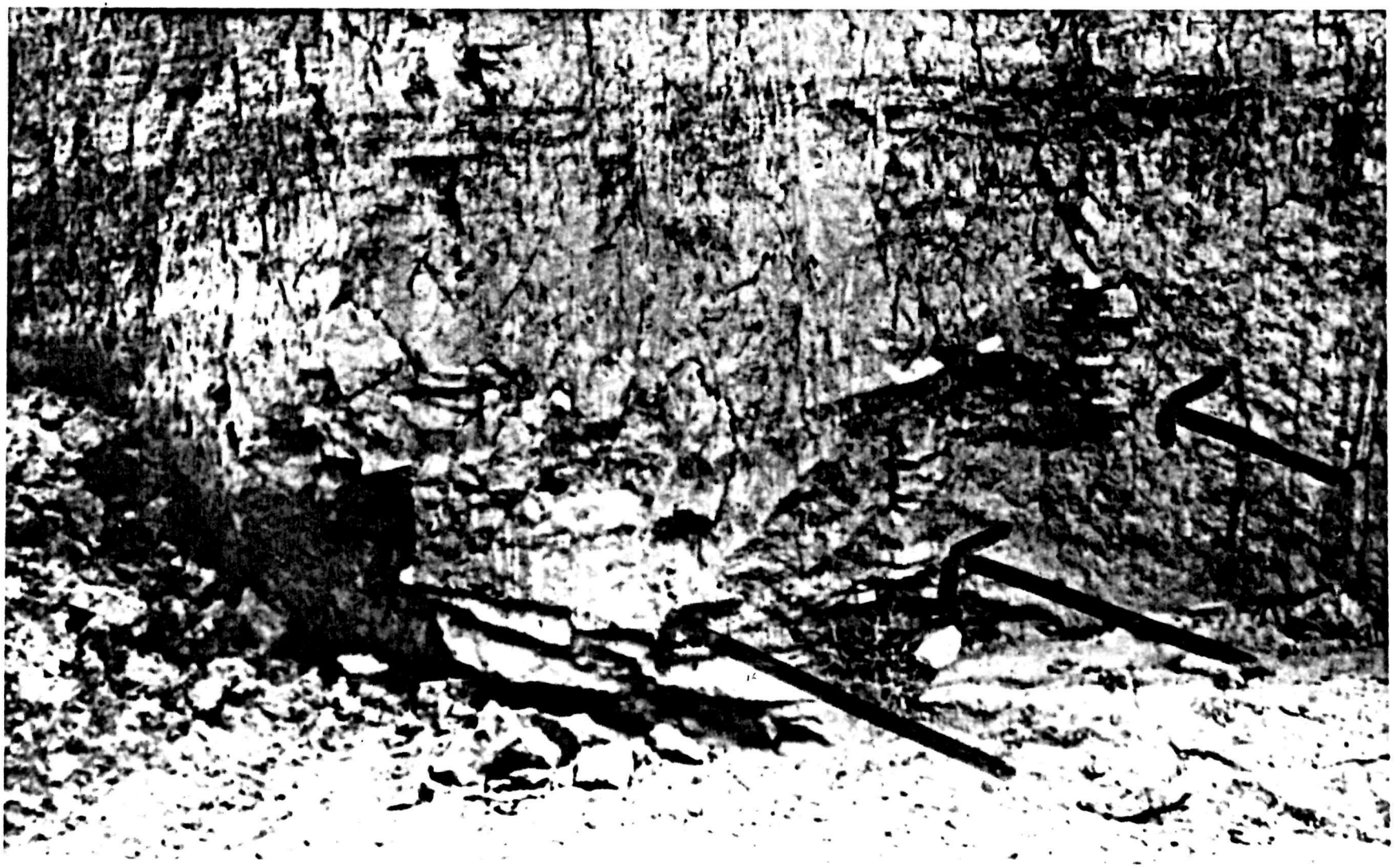


Figure 5. The Loope site, 42SA3709, buried in the Salt Creek drainage.

Site Classification

Sharrock (1966:64-67) subdivided the 239 sites he located into eight basic types: chipping sites, transient camps, alcove camps, storage sites, open habitations, alcove habitations, petroglyph/pictograph sites and rockshelters. Categorization of these sites and description in terms of suspected site function provided a basis for understanding aboriginal land use and settlement activities in the Needles District. Only a few sites were classified into more than one category. Ninety-two sites represented habitations; the remaining 147 sites reflect temporary activities, probably carried out by the occupants of the habitation sites. (Appendix B).

Chipping sites. These are open sites where the major activity was stone tool working--manufacturing or sharpening--and are evidenced by chipping debris, implements broken during manufacture and a few complete artifacts. The 11 chipping sites located by Sharrock in the Needles District appear to cluster in the lower portion of Salt Creek and nearby areas, such as Squaw Flat and Salt Creek Pocket, where chert, naturally occurring in limestone lenses within the Cedar Mesa Sandstone, is readily available as a raw material. Without exception, locally available lithic raw materials were used (Sharrock 1966:70). While chipping debris does occur at other types of sites, it does not constitute the major component.

Transient camp sites. Transient or overnight camps are most frequently situated in small alcoves or under low overhanging rocks, although some occur in the open. The 24 sites located by

Sharrock are marked by the presence of fire hearths, ceramics, flint debris and sometimes impermanent-types of architectural features. These may be circular, scooped areas marked by low "walls" resulting from clearing activities or low, dry-laid windbreaks at the front of the niche or shelter. Transient camps are particularly numerous in the Salt Creek drainage.

Alcove camp sites. Sharrock's 17 alcove camps are distinguished from transient camps by their larger size, more elaborate structures and higher frequency of artifacts, including grinding equipment--metates, manos and bedrock mortars. These remains suggest limited, everyday living activities; alcove camps were probably temporary habitations, involving both men and women, and are associated with agricultural fields or other seasonal activity loci away from the main camp. Rock art is frequently associated with alcove camps.

Storage sites. Most of the 59 storage sites located by Sharrock are composed of one to five contiguous or adjacent granaries nestled in small alcoves or on narrow ledges just large enough to contain the structures. This category consists of storage structures not clearly associated with dwellings, but generally located in areas where agriculture was possible. Although most structures are built against a cliff, which usually serves as one wall and frequently the roof of the structure, some are circular and free standing. They average less than 5 feet across. All granaries observed by Sharrock are of slab masonry construction, usually

well-sealed by mud mortar as rodent-proofing (Fig. 6). Doors were shaped slabs, also sealed with mud.

Some storage chambers are actually large enough to be inhabitable and are more properly called storage rooms than granaries. These are distinguished from habitations by the absence of interior features, such as fire hearths or mealing bins.

Storage sites are usually on high ledges or alcoves and of extremely difficult access. Some may be buried (Figs. 7, 8). Sharrock (1966:65) suggests several possible purposes for these inaccessible locations: (1) these sites may have kept the grain high and dry; (2) would-be theives may have been fooled--the high, small structures are not readily apparent and blend into the surrounding rock and (3) the high locations may have kept the grain out of reach of most rodents.

Artifacts are rare in storage sites, although nearly all granaries have been vandalized and their contents scattered.

Open habitation sites. While many alcove sites contain structures built out in the open, 15 sites in the Big Pocket area of the Salt Creek Archeological District were composed entirely of structures built in the open. Unfortunately, these sites are almost completely in ruins and appear as aligned piles of slabs. All such sites are on high ground--dirt knolls or wind-swept bedrock.

The maximum number of rooms observed by Sharrock in any open habitation site was 34. Generally, all but a few rooms appeared to be contigious. A few pit houses or kivas are suggested by surface depressions. At the knoll sites there appear to be significant

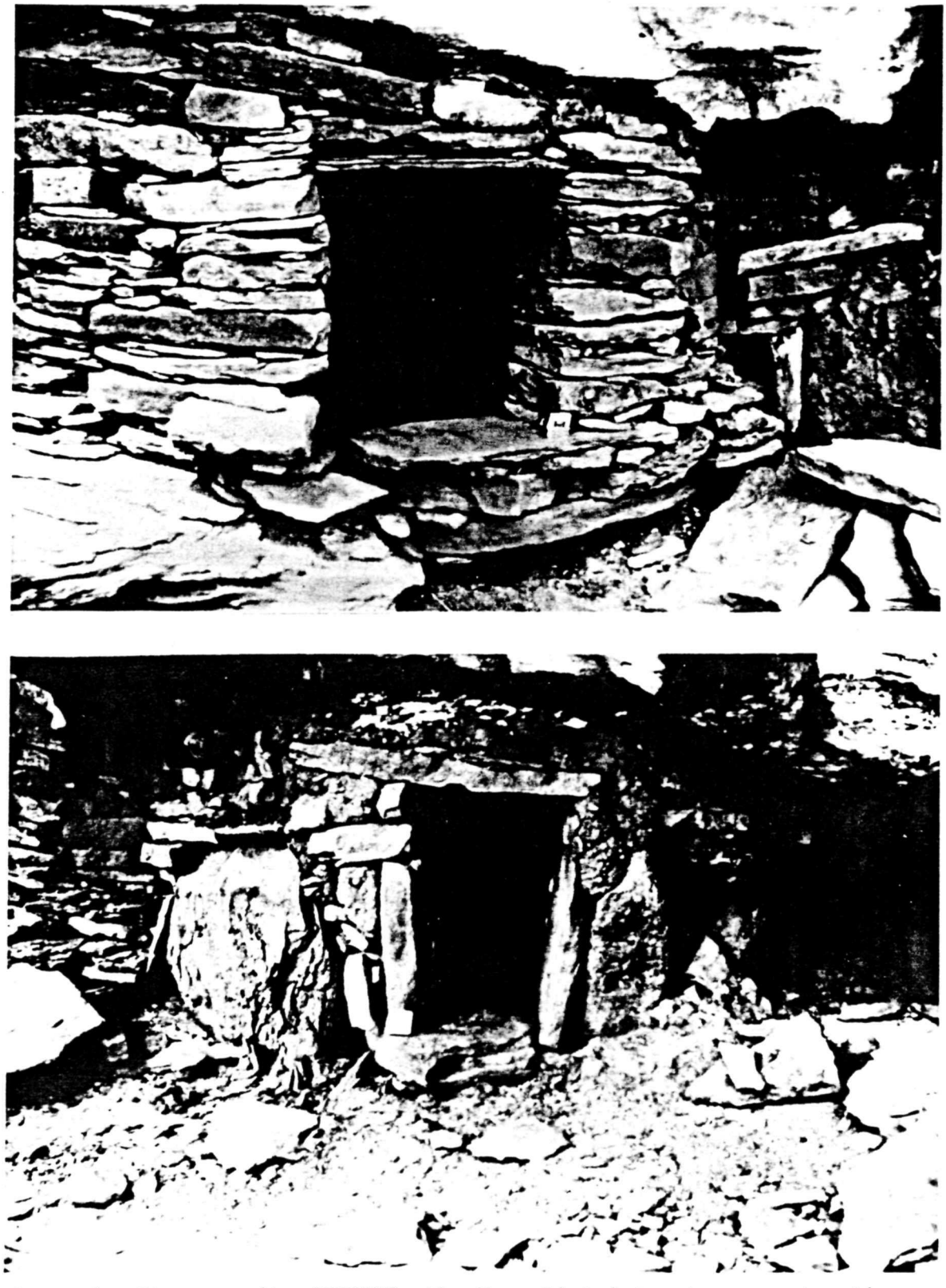


Figure 6. Storage site 42WN727, the Maze District. top, construction detail, structure D; bottom, doorway detail.

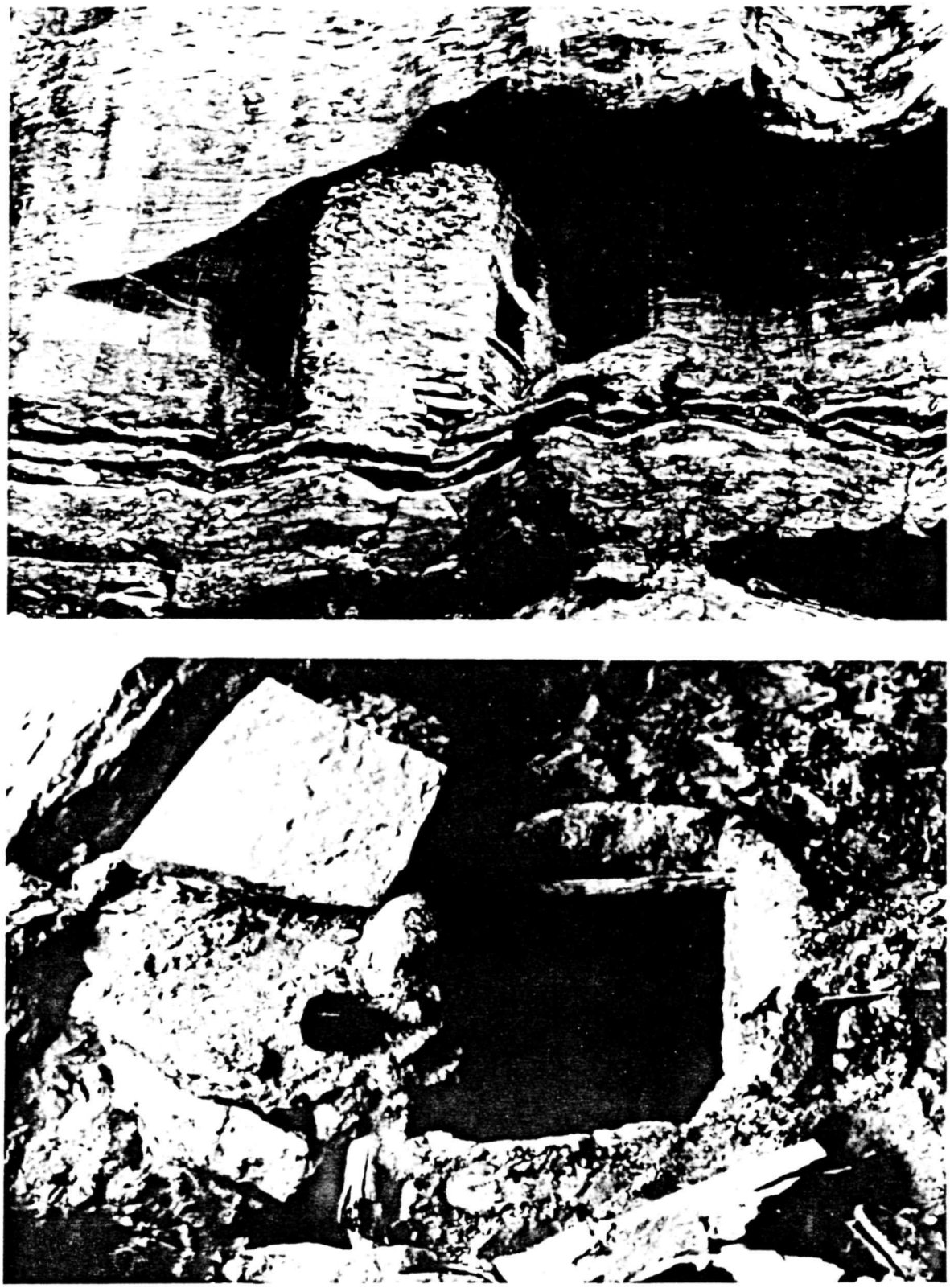


Figure 7. Storage sites 42WN724 and 42WN636, the Maze District. top, example of storage site in high ledge, 42WN724; bottom, buried storage site, 42WN636.

Figure 8. Alcove storage sites, the Needles District. top, unidentified site photographed in 1949 by C. DiPeso and M. Winifred; bottom, Keyhole Ruin, 42SA1469.

midden deposits of habitation debris. The artifactual remains, particularly the ceramics, are identical to those found at alcove habitation sites; therefore, the presence of open habitation sites cannot be explained in terms of time differential.

Alcove habitation sites. This category includes 78 sites located by Sharrock in alcoves or beneath overhangs that are made up of a number of structure types: one or more structures obviously used for habitation; evidence of kivas; mealing bins; open air and walled use areas; extensive rock art panels; granaries and artifacts for domestic use, such as pottery, basketry and grinding equipment. Habitation rooms are distinguished by their size and interior features, such as firepits and mealing bins. The masonry is all slab and mortar (Figs. 9, 10).

Alcove and open habitation sites are the bigger sites in Canyonlands National Park and concentrate in the Salt Creek drainage system. They are particularly numerous in the Big Pocket of Salt Creek, in the lower reaches of the West Fork of Salt Creek and along Horse Canyon. Ninety-two such dwelling sites were recorded by Sharrock.

Rockshelter sites. The few true rockshelter sites in the Needles are characterized by heavy, thick cultural deposits and lack of associated architectural remains. The one good example is a small cave in the middle reaches of Salt Creek (42SA1505). It is filled with a midden deposit rich in charcoal, ash and late Pueblo II and early Pueblo III ceramics (A.D. 1050-1150).

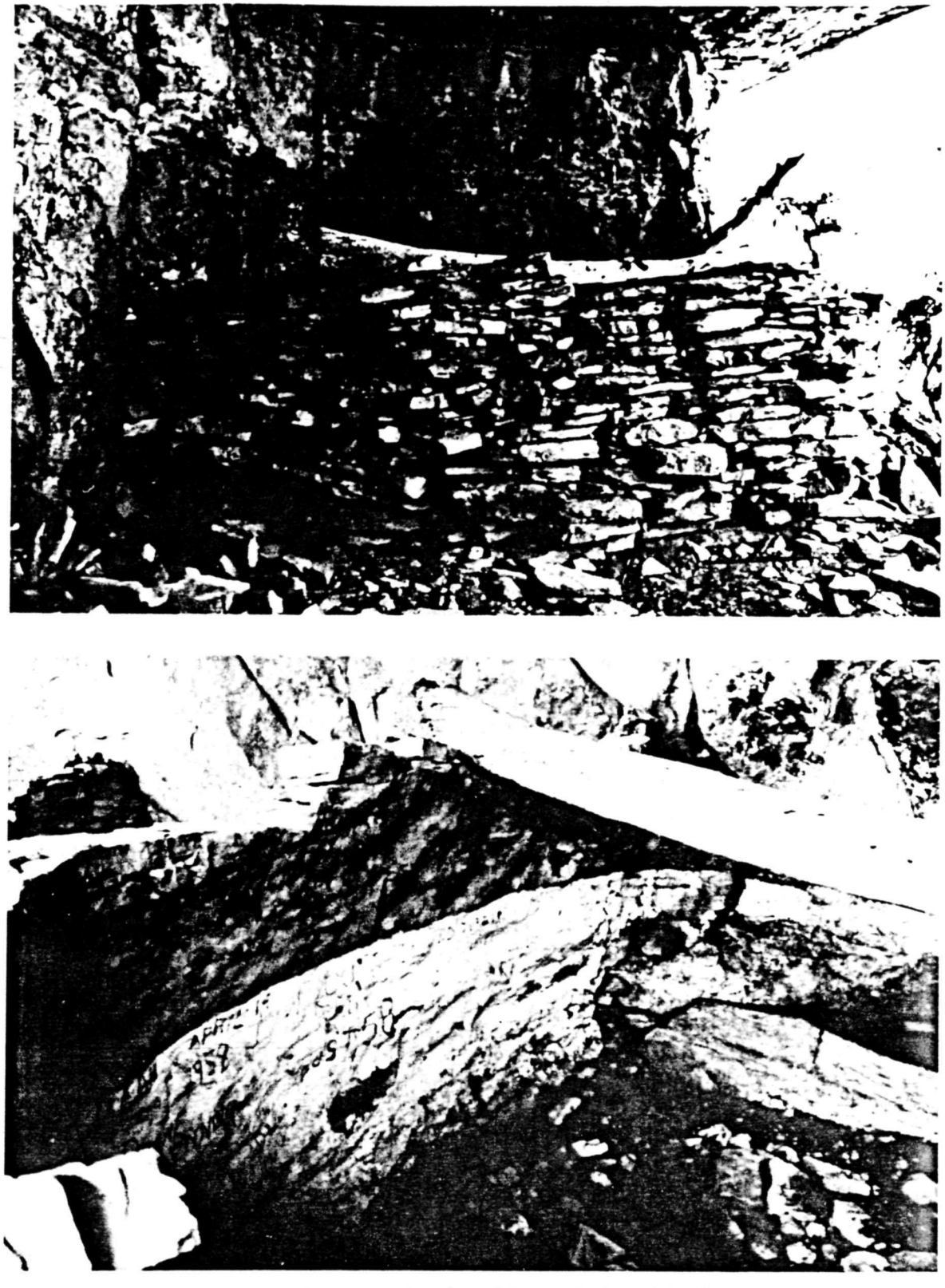


Figure 9. Whitewash Ruin, 42SA86 (duplicated 42SA1491), Salt Creek Archeological District. top, exterior view of habitation structure; bottom, white wall with evidence of vandalism.

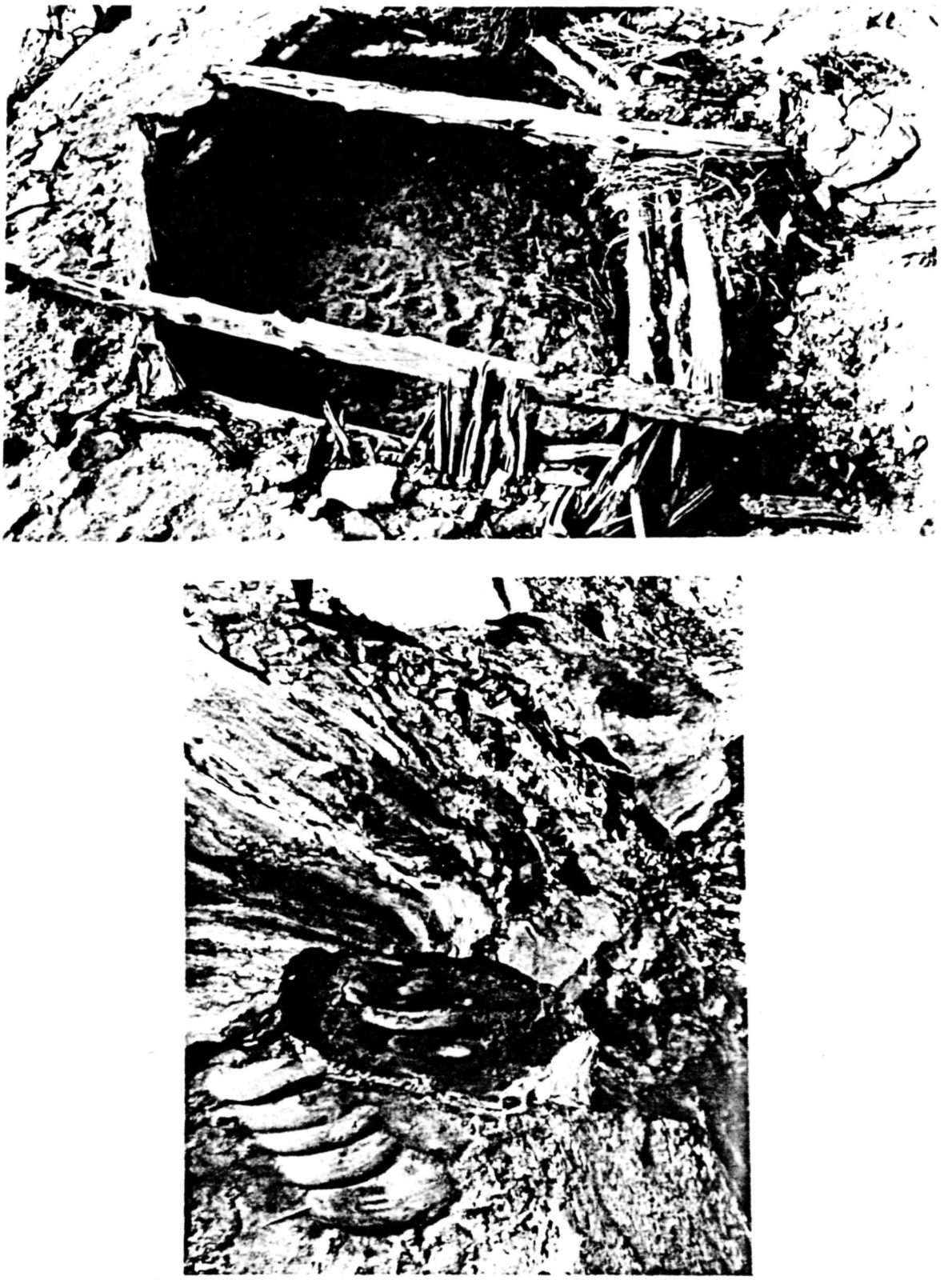


Figure 10. Alcove habitation site features, Ruin Pocket, Salt Creek Archeological District. top, details of deteriorating kiva; bottom, bedrock abraders and deteriorating kiva tumbling off ledge where site is located.

Petroglyph/pictograph sites. Rock art was found at most alcove or ledge sites, all habitation sites, many storage sites, at a few transient camps and rockshelter sites and as isolated panels without associated materials remains. There are a number of noteworthy features of the rock art in the Needles District: abundance and quality, design motifs, site distribution, coIors, superposition of figures and the enigmatic occurrence of classic Southern San Rafael Fremont style designs at the Mesa Verde Anasazi sites (Schaafsma 1971:50-54). (For a more detailed discussion of Fremont style rock art refer to the section in this report on the rock art of Capitol Reef National Park.)

It should be noted that rock art sites labeled as Fremont by Sharrock (1966) are not necessarily so. When his study in the Needles District was carried out, Schaafsma (1971) had not yet differentiated between Fremont style art and the now-well-accepted Barrier Canyon style, which is earlier. (For a more detailed discussion of Barrier Canyon style rock art refer to the section in this report on Horseshoe Canyon.) For example, a large Barrier Canyon style panel slightly upstream from Peekaboo Spring has traditionally been referred to as the "Fremont Site." The Peekaboo Spring rock art panel itself has prominent Fremont style shield figures superimposed over unmistakable Barrier Canyon style elongated anthropomorphs. Because of this situation, the number of Fremont style rock art panels associated with Mesa Verde ceramics and architecture needs to be reassessed. However, there is much Fremont style art in the district.

The more outstanding Fremont style motifs include shield figures; such as the All American Man (42SA1614); horned dancers and the classic Fremont trapezoidal figure with large head, fancy headdress, earrings, necklace, heavily striped torso and kilt. These are typified by the Thirteen Faces (42SA1652) and a pictograph panel at 42SA4974 along the Colorado River (Figs. 11, 12). Many geometric designs, the zoomorphs that are ubiquitous in the Anasazi area--mountain sheep and deer--and a proliferation of handprints also occur. These latter are both positive and negative (Fig. 13). Negative prints were done by either dipping the hand in paint and stamping the cliff or by drawing the hand with a series of concentric lines.

Sites 42SA1633 and 42SA1566 show definite superposition of rock art motifs. Here Anasazi painted figures are partly obliterated by scratched and pecked figures. There are also horseback petroglyph figures at both sites that suggest Ute artisans.

Sharrock (1966:67) believes that the distribution of large rock art panels in the Needles District suggests their use as trail markers. Large panels do occur along natural travel ways, such as the graben valleys of Devil's Lane and Elephant Canyon. Rock art is particularly plentiful in the easily traversed Salt Creek drainage.

Salt Creek Archeological District

As the above discussion suggests, a very high percentage of the known sites in the Needles District occur along the Salt Creek and Horse Canyon drainage (Appendix B). This high site density coupled with the rugged nature of the topography have made accurate

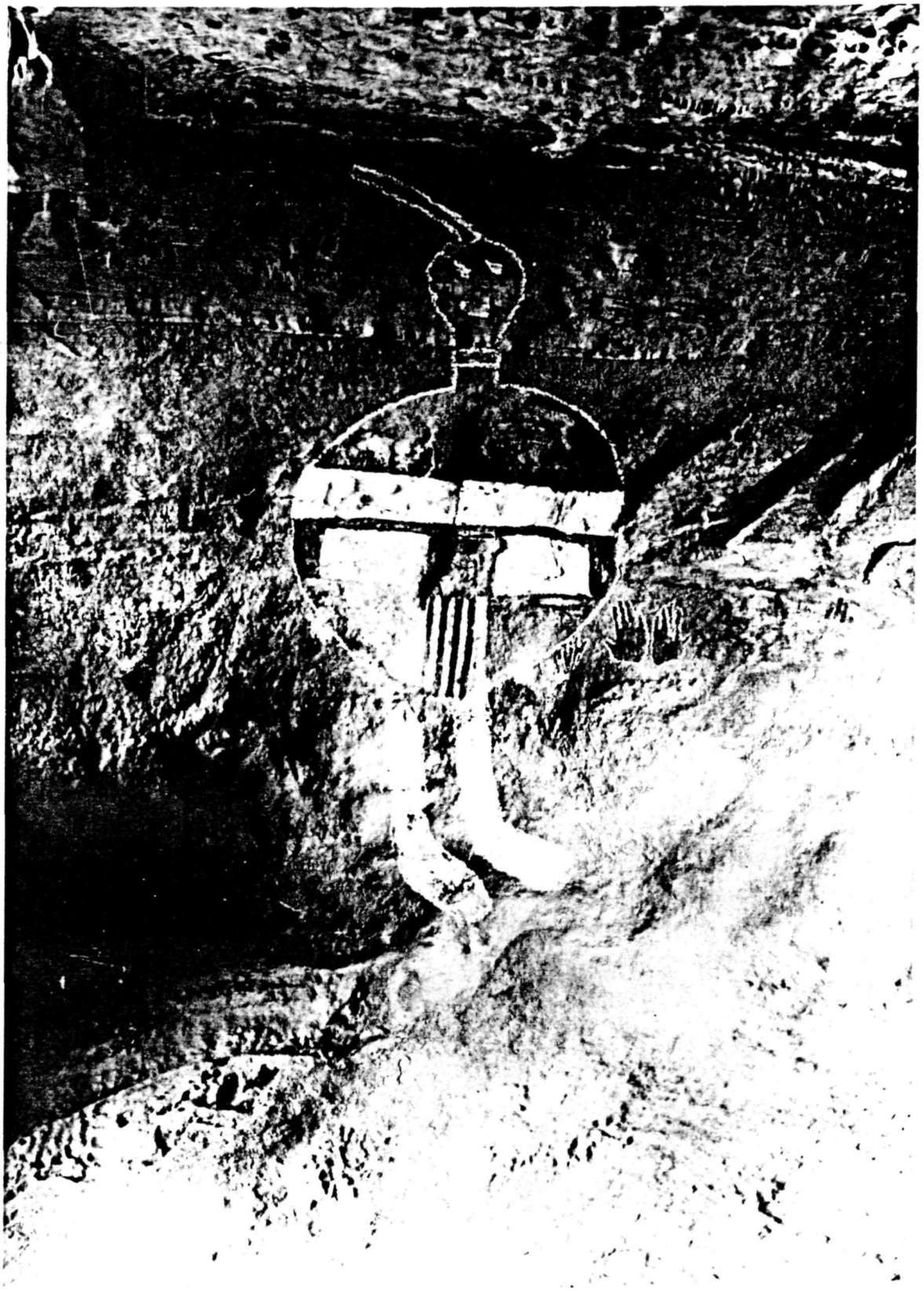


Figure 11. All American Man, 42SA1614, Salt Creek Archeological District.

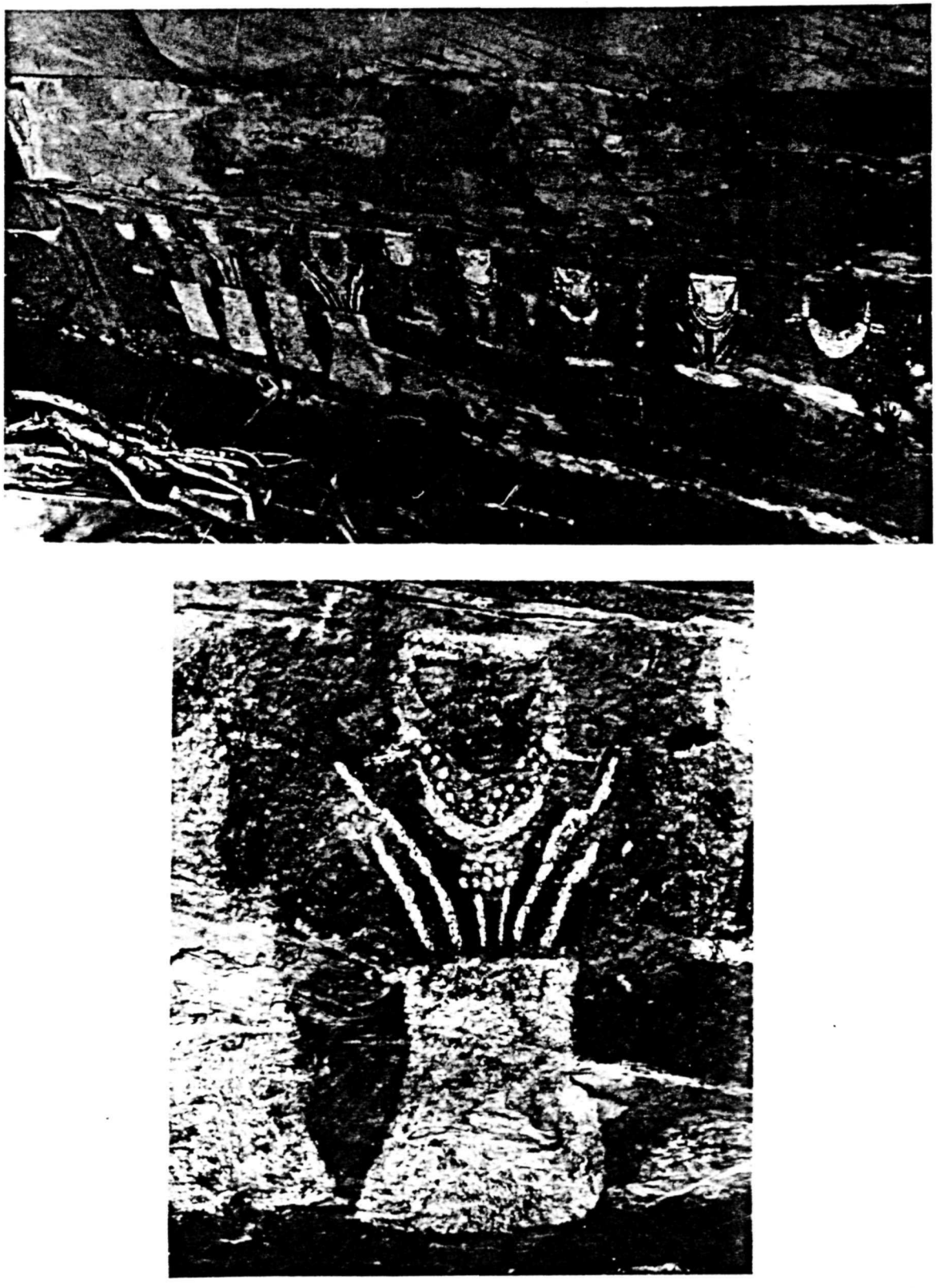


Figure 12. Thirteen Faces pictograph panel, 42SA1652, Salt Creek Archeological District.

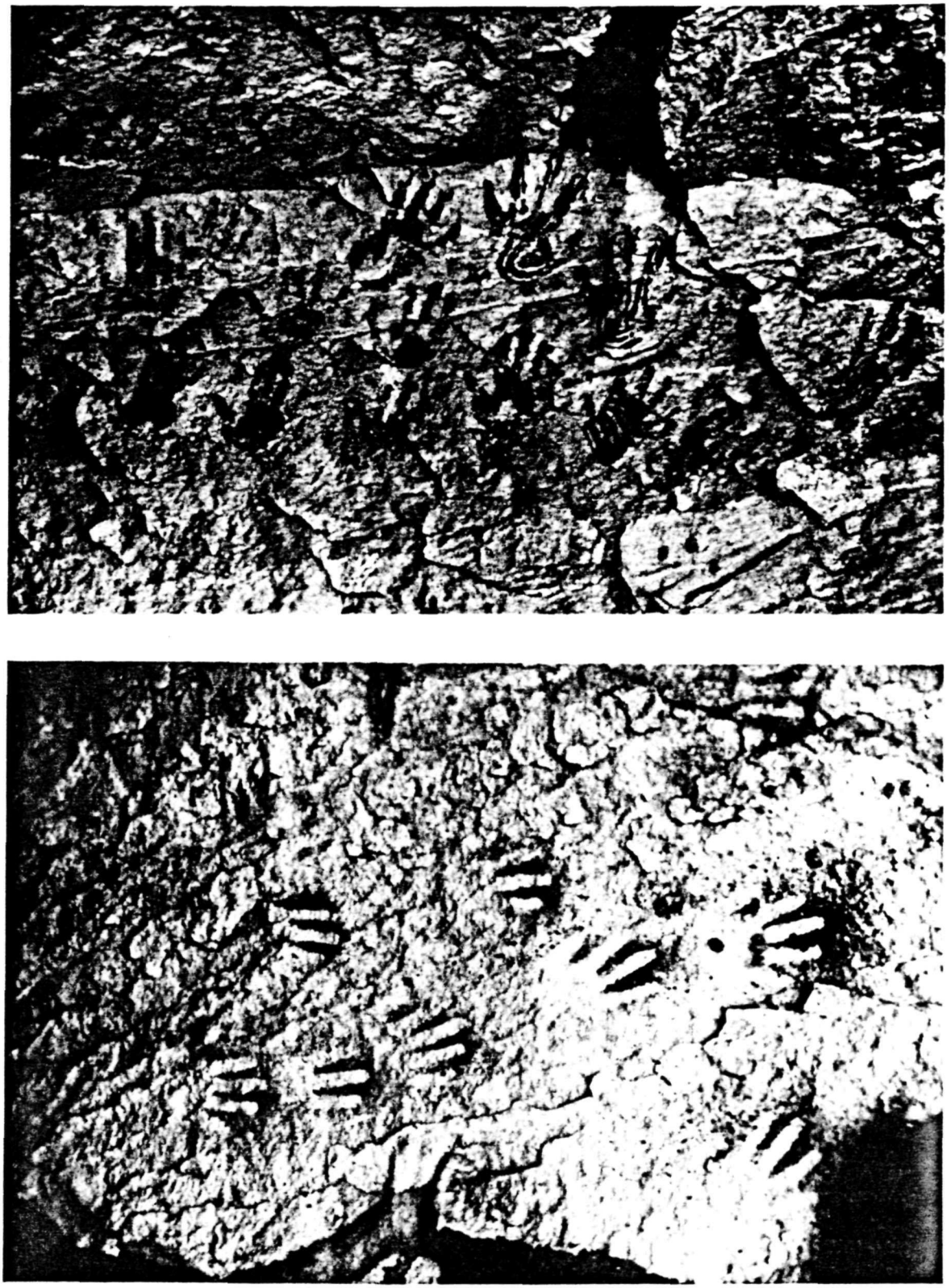


Figure 13. Anasazi Style hand pictographs, 42WN717, the Maze District. top, positive prints; bottom, negative prints.

site location on the small scale U.S. Geological Survey topographic maps for the area impossible, particularly without detailed knowledge of the region. Today, with enlarged topographic maps and aerial photography, more accurate site location is feasible. However, precise control of Sharrock's and others' site locations is so poor that without substantial field work to relocate and check all reported remains, reliable plotting of most sites in the Salt Creek Archeological District is impossible.

Nonetheless, it is very obvious that these two drainages reflect significant, agriculturally-oriented occupation during late Pueblo II-early Pueblo III times, A.D. 1050-1150. Because of the area's site density, unique and fairly discrete environmental situation, fairly well-preserved archeological remains and integral nature of the drainage as a whole, it was listed in the National Register of Historic Places in 1975. Therefore, while the actual number of sites in the district is unknown and precise site locations are, in many cases, indeterminate all remains should be managed in a fashion to avoid their destruction.

Colorado River Sites

While not necessarily the most spectacular sites in the Needles District, those along the Colorado River are among the most heavily visited. Pueblo period storage structures, temporary camps of several types and Southern San Rafael Fremont style rock art panels located near the banks of the river should be protected because of their proximity to overnight campsites used by the various river concessionaires. Furthermore, their high visibility is a factor

supporting some type of interpretive management. Because these sites are not discussed elsewhere in the archeological literature, they are covered here in considerable detail so that the information is available for potential interpretation.

Site 42SA4974--Opposite Lathrop Canyon. This is a Pueblo period alcove camp site located in the Needles District opposite the mouth of Lathrop Canyon. It consists of three Southern San Rafael Fremont style pictograph panels, two granaries, a larger storage structure and a small shelter with slight evidence of a masonry wall (Fig. 14). It is located an estimated 75-100 feet up the cliff forming the left bank of the Colorado in a ledge in the Organ Rock Tongue member of the Cutler Formation.

The main Southern San Rafael Fremont style pictograph panel consists of three large, white Fremont anthropomorphs. They have Fremont style headdresses, necklaces, trapezoidal bodies, etc. The other major panel consists of the same three figures except these are drawn in red as well as white and are not quite as badly faded (Fig. 14 top). These figures are very similar to those in the Thirteen Faces pictograph panel (42SA1652) in the Salt Creek Archeological District (Fig. 12). The most southern anthropomorph in this second panel is holding something, which may be a sickle. However, it is not like the "sickle" held by one of the anthropomorphs in the Harvest Scene (42SN665)--also known as the Bird Site--in the Maze District. Furthermore, this latter panel is of typical Barrier Canyon style.

The large granaries overlooking the Colorado River were built under an overhang and constructed with adobe mortar and pieces of

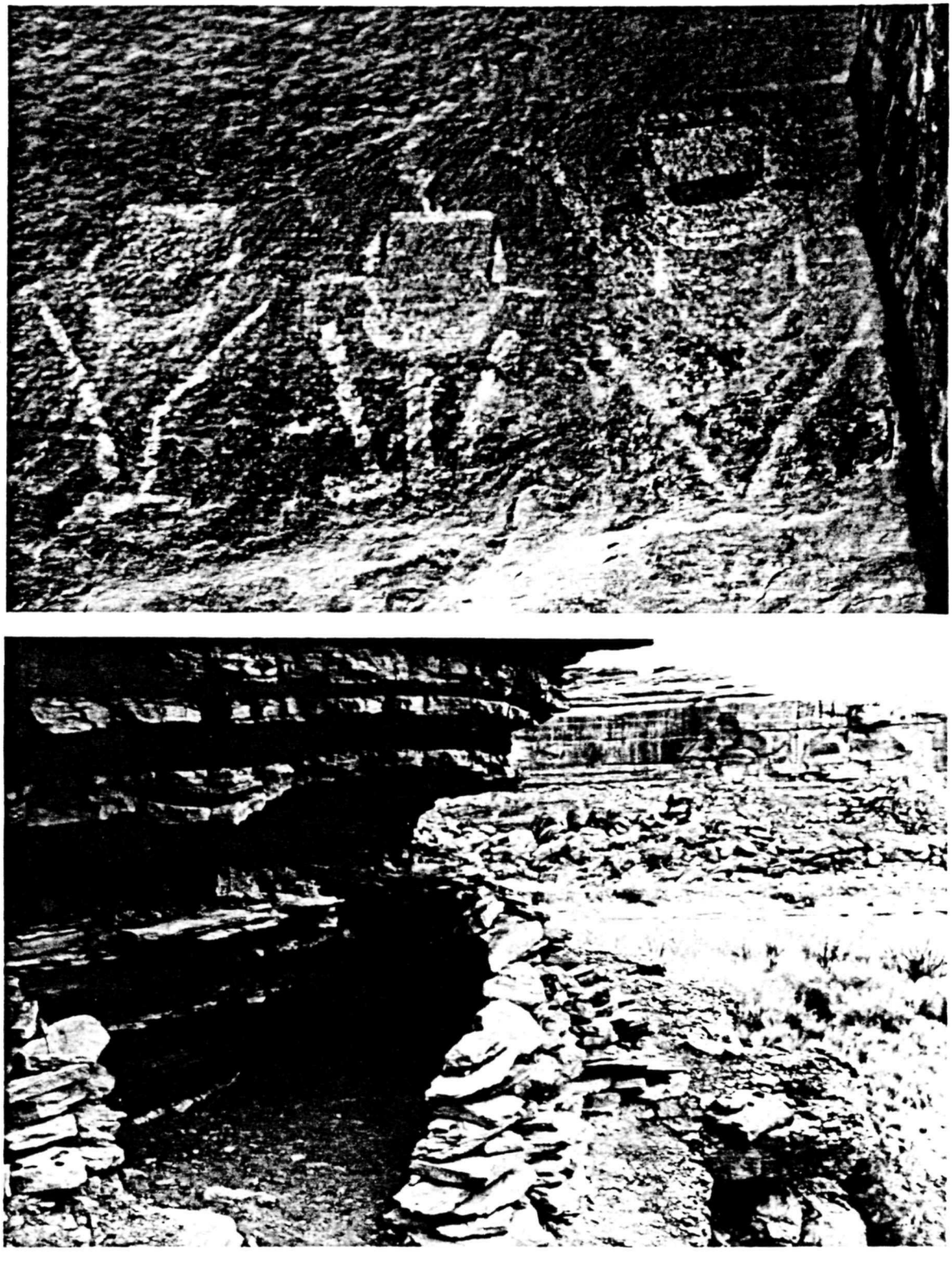


Figure 14. Colorado River site 42SA4974, opposite Lathrop Canyon. top, Southern San Rafael Fremont style pictograph panel; bottom, storage structure overlooking Colorado River.

locally available sandstone (Fig. 14 bottom). The site is in the Cutler Formation, and the sandstone blocks used are remnants of the White Rim Sandstone or the Organ Rock Tongue members. Unfortunately, these granaries have been partially "rebuilt" by individuals who have piled up stones to follow the original foundation lines. Also, parts of the roofs have been rebuilt. Only small sections of what appears to be the original roofing of twigs and adobe remain. Each of these structures is approximately 4' x 6'.

Further upstream (east) there is another, larger storage structure also built right into the ledge (Fig. 15). It has substantial standing walls constructed out of the same mortar and sandstone blocks as the granaries. At the very top of this structure, which has an approximately 5-6' standing wall, sandstone blocks have been relaid in attempted reconstruction. There is also some evidence of modern graffiti and defamation in the back wall; this has a 1951 date. There are footprints in the bottom of this granary. Unfortunately, in crawling into the structure one has to hang onto the doorsill and the walls on either side of the door. This is damaging and will lead to the structure's destruction.

Further still to the east (upstream) there is another pictograph panel. However, the aboriginal art here is minimal and most of the panel consists of modern graffiti. There are some "modern" hand prints that look like they have been spray painted with white paint. Their cant is wrong, the spray is too even, the fingers are too wide spread, they are very white and there is a faint outline around the hands. These factors suggest the hands are not aboriginal. Also, there is an obviously recent mountain goat. However,

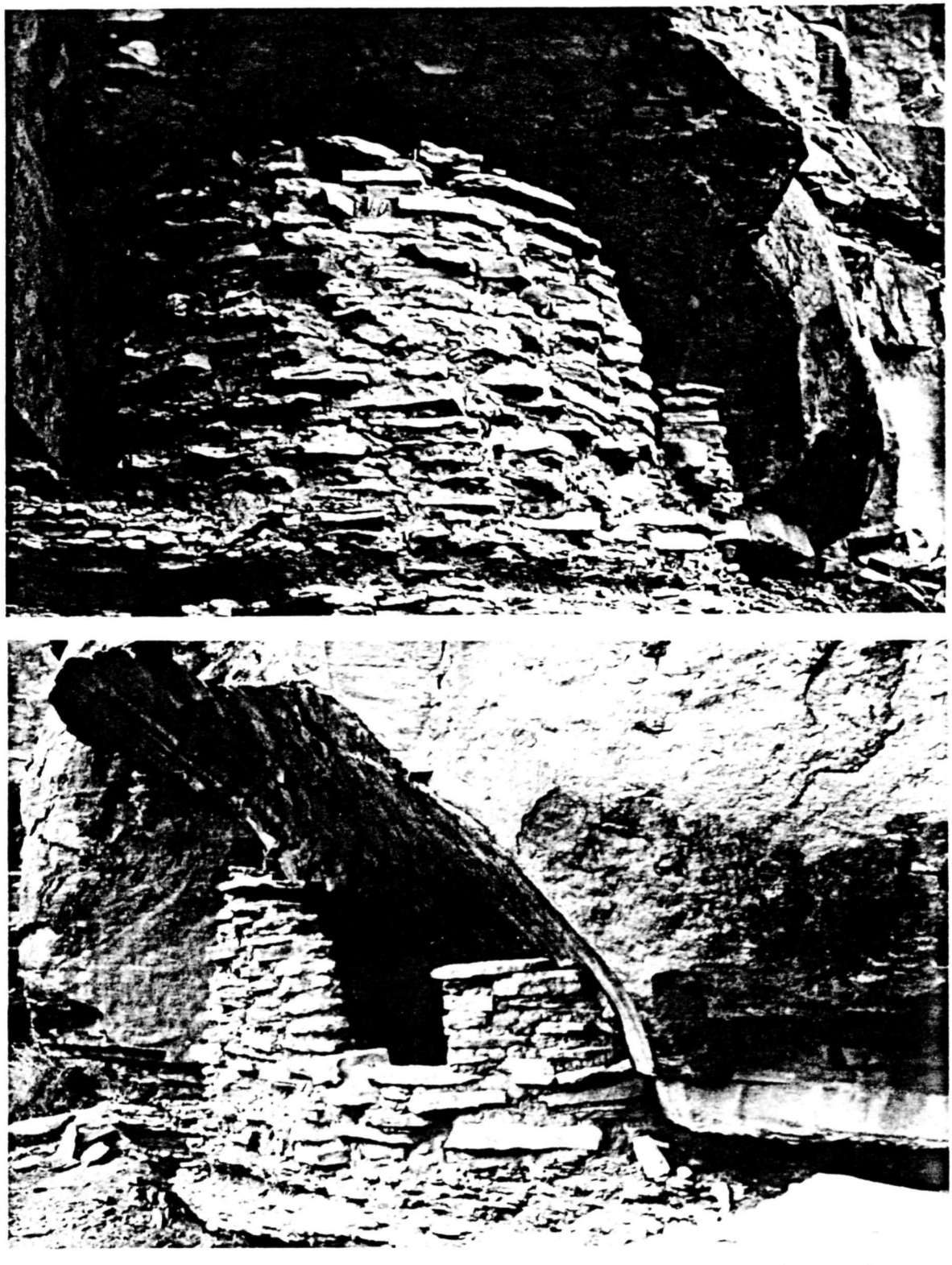


Figure 15. Large storage structure at site 42SA4974, opposite Lathrop Canyon. top, east side of structure; bottom, west side of structure showing doorsill.

at the top of this panel there is a Fremont style headdress or rainbow arc with two circles on either side of it. Below the headdress there is some evidence suggestive of a figure. There are slight remains of the headdress and, at the base of the panel and just to the left of the headdress, there is some red paint that may or may not date from the original drawings--it "looks like" it is original. However, much of the sandstone wall has exfoliated and has been scratched over by modern pictograph makers.

Further yet to the east (upstream) there is a small overhang with slight evidence suggestive of habitation. The site has been picked clean; there is absolutely no material culture remaining other than the architecture. There is some evidence of fire blackening on the wall of this last structure. The roof, however, is exfoliating so evidence of fire blackening there no longer remains. Most of the wall under the overhang has been "rebuilt," but there is aboriginal adobe mortar holding the very basal layer. On the back wall of the overhang there is some modern graffiti drawn in what appears to be charcoal. There is a scattering of charcoal flakes among the floor debris and fallen rock.

There is also evidence that a fourth structure once existed between the granaries and the larger storage room previously discussed. Here, there are some remains of a "reconstructed" rock wall under an overhang. This "room" is approximately 10' x 8', however, its existence is hypothetical.

Site 42SA4975. Along the north side of an unnamed tributary drainage to the Colorado River in the Needles District approximately

20 miles above the confluence of the Green and Colorado rivers (Belknap and Belknap 1974) there are two fairly intact granaries. These are just across the tributary drainage from the Coffeepot Ruin (42SA4976) and are nestled underneath a sandstone ledge approximately 50 feet above the floor of the arroyo. These granaries are roughly 3' x 3'. They are circular and, based on its color, the mortar that was used in their construction was obviously brought in, probably from the creek below. There are fingerprints in the mortar. The building blocks are irregular, unshaped sandstone slabs; and the structures are crudely made.

There is some evidence of vandalism; names and 1932 are scratched in the roof of the overhang. The roof of the upstream granary is made of what are probably willow sticks cemented with sandstone slabs and capped with adobe mortar. There is a small space between the roof of the granary and the overhanging cliff. This is different from the Coffeepot Ruin across the drainage where the sandstone overhang serves as the roof of the structure. There is no evidence of material culture.

Just downstream from these two granaries, still on the north side of the arroyo, are the probable remains of a third granary. These are under a very low overhang in the same ledge and consist of mud and what may be the remains of a masonry wall adhering to the floor. However, there is a tributary drainage entering the main arroyo here, which may have washed the materials in. This should be further explored.

Figure 16. The Coffeepot Ruin, 42SA4976. Granary located in a Rico Formation remnant called the Coffeepot.

Site 42SA4976--Coffeepot Ruin. This site is a single granary located halfway up an erosional remnant called the Coffeepot, overlooking the Colorado River (Fig. 16). The formation is not obvious on the U.S. Geological Survey topographical map, but it is a small tower of Rico beds (sandstone) capped by gray limestone. The granary is in the area above the sandstones and below the light-colored marine beds. The site is just south of the unnamed drainage approximately 20 miles above the confluence (Belknap and Belknap 1974). However, in the Belknaps' river guidebook the Coffeepot's location is mismarked at mile 28.5.

It is a very precarious climb up the column and ropes are recommended for the last twenty feet. The granary itself runs parallel to the ledge and is estimated 3.5' x 4.5' x 3'. Its ceiling and floor are both of bedrock. There is also a bedrock shelf inside that forms a little bench. The structure is in fairly good condition,

although all evidence of what was stored is gone. A sandstone slab serves as a doorsill and a large stick across the top of the opening is a lentil. The rest is well-mortared.

There are scattered jasper debris around the base of the column. These are not worked flakes and many have eroded from a lens in the Cutler Formation above the granary. There is no unquestionable evidence of portable material culture.

Site 42SA4977--Indian Creek Ruin. This alcove camp site is located in a ledge on the right bank of Indian Creek where it joins the Colorado River (Fig. 17). It consists of at least three and possibly four contiguous dwelling rooms, two granaries and some rock art. The westernmost room might have been for storage.

These structures are in fairly stable condition. The floors and roofs are bedrock; the walls are constructed of sandstone blocks and adobe mortar carried up from Indian Creek approximately 50 ft. below. In some cases, however, the walls have been "rebuilt" and it is very obvious that they are not aboriginal. The largest room is approximately 12' x 6', although because it has been reconstructed it is difficult to determine if these are the original dimensions. The other rooms are smaller.

There are remains of two granaries approximately 50 ft. to the west of the contiguous habitation rooms (Fig. 17 top). One of these is nestled back in the ledge. The other is located at the edge of the precipice, and most of it has fallen onto the rocks below. These are also built of mud mortar and small sandstone slabs. No lintels or doorsills remain in these granaries.

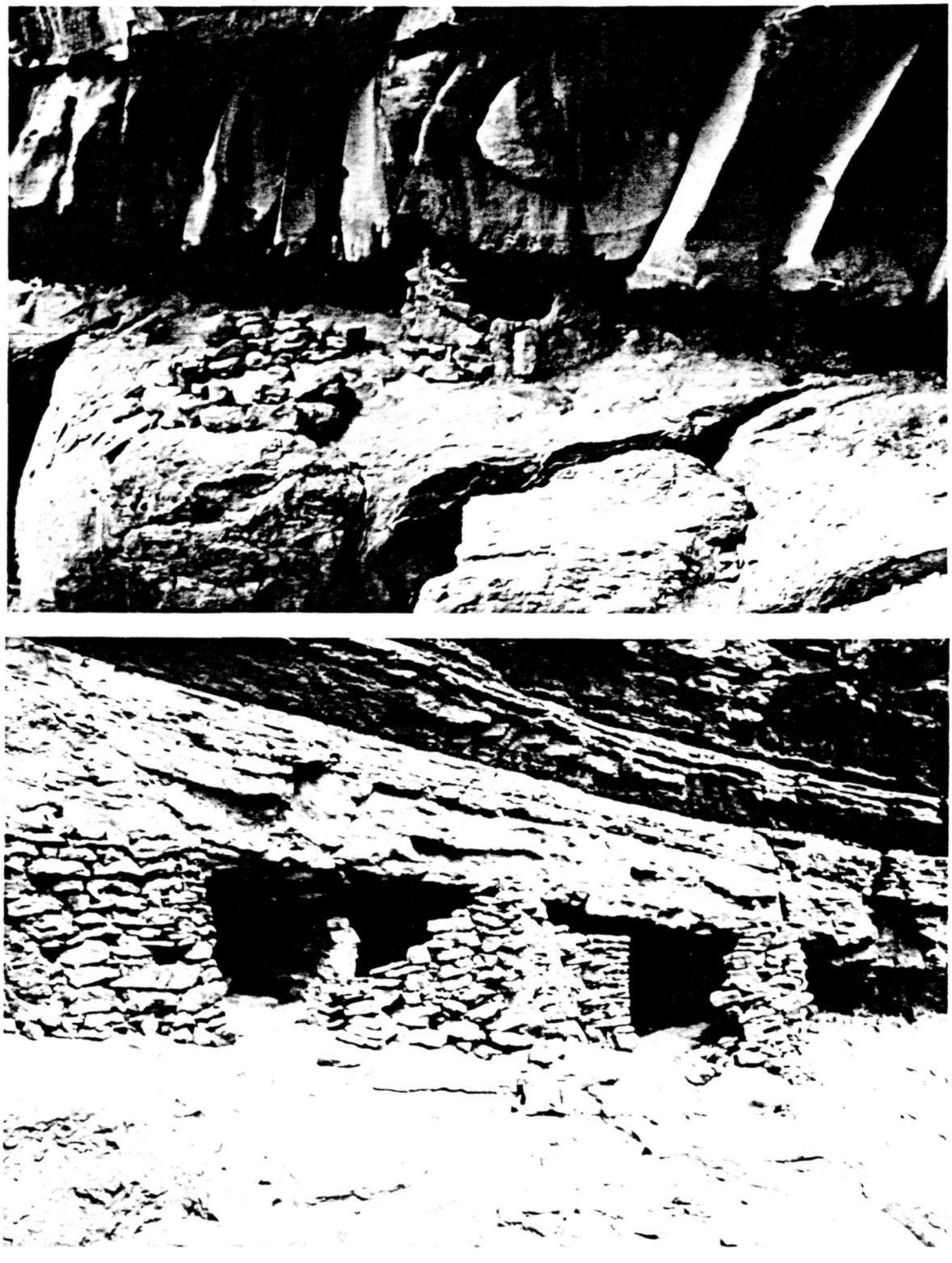


Figure 17. Indian Creek Ruin, 42SA4977. top, granary remains; bottom, contiguous storage/habitation structures.

On the sandstone face just east of the granaries there is evidence of some faint, white pictographs. These are almost completely covered by mud that has washed down the cliff face from above and are difficult to see. They consist of an estimated 12 vertical and five horizontal white lines crossing the cliff face.

CULTURAL AFFILIATION AND DATING

All sites studied by Sharrock (1966:61-63) that could be identified by diagnostic material remains--ceramics, ground stone and architectural styles--are Mesa Verde Anasazi, with the possible exception of the Southern San Rafael Fremont style and Barrier Canyon style rock art panels. Strangely, these latter usually occur at unquestionably Anasazi sites. No Fremont ceramics, other portable artifacts or Fremont architectural styles and techniques were observed. While the majority of sites could not actually be identified as to cultural affiliation (Sharrock 1966:62), the large habitation sites, all of which are located in the Salt Creek drainage, are undeniably Anasazi--with the exception of the associate rock art.

Sharrock (1966:72) explains the presence of Southern San Rafael Fremont style rock art as the result of borrowing because of its occurrence at sites that are clearly Mesa Verde Anasazi in affiliation. As explained above, he lumps Fremont and Barrier Canyon styles. He believes that there are no clearly identifiable Fremont culture sites in the Needles District (Sharrock 1966:61). However, the problem of Fremont presence south of the Colorado River is very poorly understood and requires a great deal more study before

statements such as Sharrock's can be accepted without qualification. For example, Ross (n.d.:8) mentions what he considers unusual materials from Skylight Cave located somewhere in the north wall of what he called the "East Alcove" of Horse Canyon:

> The odd, shovel-like implement found in the cave has no known counterpart in Anasazi material culture; neither is the 'storage bin,' just outside the cave, typical of Anasazi structures. It is possible that another people, whose culture sprang from a source other than Anasazi, occupied the cave.

Later, in writing to C. Melvin Aikens, University of Utah, Ross (1966) discusses these items, "which. . .may have special interest to students of the Fremont culture" and mentions the "pecularities in the general picture. . .of the Salt Creek area archeology. . . ." During Rudy's (1952b:7-8) 1952 trip down the Green River, he noted the presence of San Juan Anasazi Pueblo II black-on-white and corrugated ceramics in association with architecture having ". . .a general similarity to the archeological material from the Fremont River. . . ." Given (1) the problems inherent in distinguishing between Mesa Verde Anasazi and Fremont, particularly in this boundary area; (2) the presence of sites containing Southern San Rafael Fremont style and/or Barrier Canyon style rock art and no distinguishing characteristics, such as architecture or ceramics; (3) the known presence of unreported and unstudied sites; (4) the miscellaneous, "strange" materials, such as those reported by Ross, and (5) the apparent association of Anasazi ceramics with Fremont architecture along the Green (Rudy 1952b); there are grounds to suspect that Fremont peoples themselves may have produced the Fremont style rock art, perhaps coexisting with the Anasazi. The Barrier Canyon

style art needs to be assessed. Hogan, Losee and Dodge (1975; Lucius 1976:85) as well as Rudy (1952b) have demonstrated that Mesa Verde peoples probably inhabited the areas north of the Colorado River; there is no valid reason, at this time, for unquestionably believing that Fremont groups could not have, similarly, crossed the river and taken advantage of the agriculture potential of the Salt Creek drainage system. They may have actually borrowed Mesa Verde architectural styles or inhabited Mesa Verde structures.

All identifiable sites do indicate that the Mesa Verde Anasazi expansion during late Pueblo II-early Pueblo III times extended at least to the Colorado River and probably somewhat beyond. These peoples were more than likely the only permanent occupants of the area. However, Mesa Verde habitation of the Needles District and vicinity does not appear to antedate Pueblo II times. Evidence for earlier occupation is sparse, although the numerous, unidentifiable chipping sites and transient camps may have been left by earlier hunters and gatherers.

Dates for the identifiable sites in the Needles District are based on ceramic cross-dating. The 114 ceramic sites recorded by Sharrock (1966:70) yielded four Kayenta Anasazi sherds, four Fremont sherds and 106 Mesa Verde Anasazi sherds; consisting of Mesa Verde White wares, San Juan White wares and Mesa Verde Gray wares. Dates assigned by Sharrock to these wares are: Mesa Verde Black-on-White, A.D. 1200-1300; McElmo Black-on-White, A.D. 1130-1200 and Mancos Black-on-White, A.D. 950-1150. Breternitz, Rohn and Morris (1974) have more recently dated these pottery types: Mesa Verde Black-on-White, A.D. 1200-1300; McElmo Black-on-White, A.D. 1075-1275 and

Mancos Black-on-White, A.D. 900-1150. The architectural styles present fall into this time range. These dates suggest that major habitation of the area falls roughly in the A.D. 1000-1250 period. Tree-ring dates from the Beef Basin area just south of the Needles District range between A.D. 1213-1233 (Bannister 1964:174). It is doubtful if significant occupation began much earlier. However, complete abandonment of the area may not have occurred until A.D. 1300.

Sharrock (1966:63) indicates that there is abundant material for dendrochronological and radiocarbon age determination at many of the sites, and the organic materials with good provenience data that were collected during the Peabody Museum's expeditions (Gunnerson 1969:38-47) are also available. However, no studies using these materials have yet been carried out. In-place roof and other support beams are plentiful and could provide valuable chronological control for future studies.

Evidence for significant aboriginal use of the region after the late 13th century withdrawal by the Pueblo agriculturalists is lacking. There is tenuous evidence of Ute or Southern Paiute habitation (after A.D. 1540) in horseback petroglyph figures and historical documents. More than likely other remains left by these transient groups can not be distinguished from those sites resulting from Archaic period or specific function Pueblo activities.

Sharrock (1966:63) reports a single cribbed Navajo hogan (42SA1661) from the Needles; if it is a hogan it must postdate the mid-nineteenth century arrival of the railroad. While Navajo sites

are known from further south in Natural Bridges National Monument and vicinity (Farmer 1952; Schroeder 1964a), Canyonlands is just beyond the northern edge of Navajo range. Any Navajo sites are probably the result of seasonal pinyon nut harvesting.

DISCUSSION AND RECOMMENDATIONS

Much additional, detailed work should be carried out in the Needles District. The entire area, like much of Canyonlands National Park, has not received a thorough, systematic inventory or evaluation in accord with Executive Order 11593. Sharrock's (1966) work, carried out with limited time and funding, concentrated on the more densely occupied drainages and more obvious remains. The many subsequent discoveries of unrecorded sites underscores the lack of thorough knowledge and confusion that exists in the available site data.

The region adjacent to the Colorado River, in both the Needles and the Island-in-the-Sky districts, should receive thorough survey; and thought should be given to site interpretation as well as protection. Unfortunately, most of the sites known represent only the most obvious, spectacular remains and have been heavily collected; a skewed picture of aboriginal lifeways in Canyonlands has resulted.

Information about the Salt Creek Archeological District is the most confusing of any area in the park. Attempts should be made to clarify its long history of description and collection. Many sites need stabilization, and evaluation of the district from a preservation standpoint should receive fairly high priority even though its National Register status provides some protection.

Developments in the Squaw Flat and Cave Spring area should be carefully placed to avoid affecting, either directly or indirectly, any cultural remains.

Island-in-the-Sky District

HISTORY OF ARCHEOLOGICAL RESEARCH

Knowledge of archeological sites in the Island-in-the-Sky District and surrounding area is based on limited survey by Gunnerson (1958); Hogan, Losee and Dodge (1975); Hunt and Tanner (1960); Lindsay and Madsen (1973); Sharrock (1966) and park personnel plus sporadic reporting of individual sites by others (Anderson 1976; Gunnerson 1969:46-47; Rudy 1952b). Fifty-eight sites are documented, plus those isolated remains reported by Hunt and Tanner (1960). All major sites, with the exception of the Folsom finds (Hunt and Tanner 1960), probably date from the Pueblo period. Furthermore, Sharrock (1966:61) indicates that his brief work in the district revealed no identifiable Fremont agricultural sites. However, for most of these sites descriptions are extremely inadequate; many have not been recorded in the Utah State system and actually lack formal site desginations. In some cases, even when sites have been recorded on official forms, the data are too incomplete to permit either plotting on a map or relocation in the field without considerable search. Therefore, only 35 sites could actually be plotted on the accompanying base map.

The Claflin-Emerson's 1930 expedition down the Green River was probably the first time a professional archeological party traveled the river. The earliest-known description of the Fort Bottom Ruin

(42SA78--duplicated as 42SA423) stems from this reconnaissance (Gunnerson 1969:46-47). In 1951 during a quick trip down the Green and Colorado rivers to Hite, Jack Rudy (1952b:4-9) visited at least five river bank sites. While no site numbers were assigned, photographic comparisons indicate that his brief reconnaissance included 42SA78, "The Fort" (Fig. 18), and associated storage sites (42SA1752) at Fort Bottom; several sites along Bonito Bend that cannot be identified without field checking and a few sites in the Maze District. He recorded surface structures, storage sites and chipping sites and noted the presence of San Juan Anasazi Pueblo II ceramics and corn cobs along the Green River. However, he indicates that the architectural styles and structure locations are more like those of the Fremont area (Rudy 1952b:7-8).

In 1958 Gunnerson surveyed the areas then proposed for Dead Horse Point and Junction Butte, Utah State Parks (now the Island-in-the-Sky area, Canyonlands National Park) and recorded sixteen sites. Ten of these are in the Island-in-the-Sky District. In his summary, which is the only detailed discussion of sites in the area, Gunnerson (1958:2-3) indicates that (1) most of the sites were occupied by Pueblo peoples between A.D. 900-1200 and that (2) four sites have the potential for inclusion in an interpretive program: "The Fort" at Fort Bottom (42SA78, duplicated as 42SA423) on the Green River, the structures on Aztec Butte (42SA418), structures on an adjacent butte (42SA414) and a petroglyph panel along Seven Mile Wash (42GR307). Further, he recommends stabilization and protection of these structures, a recommendation reiterated in 1975 (Hogan,

Figure 18. The Fort, site 42SA78 (duplicated as 42SA423) at Fort Bottom, Island-in-the-Sky District. Photos courtesy of Canyonlands National Park, 1976.

Losee and Dodge 1975:50). Interestingly enough, Gunnerson (1958:3) also recommended that ". . .once the area has been established as a park. . .personnel be directed to watch for and record archeological sites in the course of their other activities." This is precisely what has happened, and some of the more complete site descriptions are those provided by area personnel.

During the later portion of his 1965-66 survey of the Needles District, Floyd Sharrock (1966) conducted a cursory inventory of the more accessible areas in the Island-in-the-Sky District. In 1973 Lindsay and Madson (1973:17-27) surveyed the proposed right-of-way for the Grandview Point road from Utah State Highway 160 to Grandview Point. Unfortunately, while they recorded six sites in the Island-in-the-Sky no attempt was made to correlate their discoveries with those of previous investigators. For example, they located four chipping sites in Gray's Pasture. Gunnerson (1958), Sharrock (1966) and park personnel have also reported sites from Gray's Pasture. Because of the poor locational data available, cursory site descriptions and nondistinctive nature of the sites, correlation among the sites recorded by the four investigators is impossible without field checking.

As part of their 1975 survey work in the Maze District, University of Utah personnel traveled down the Green River and reported eight sites in the Upheaval Bottom and Fort Bottom areas of the Island-in-the-Sky District: 42SA4747, 42SA4748, 42SA4749, 42SA422, 42SA4150, 42SA4751, 42SA4752 and 42SA78. Nine additional previously unrecorded sites were located along the Green by park personnel in 1976.

ARCHEOLOGICAL REMAINS IN THE ISLAND-IN-THE-SKY DISTRICT

"The Fort" (42SA78, 42SA423) at Fort Bottom on the Green River was described by Gunnerson (1958:5) as "the largest and most spectacular structure visited. . . ." It is an unusual, two circular-roomed structure with a second story on top of one of the round rooms (Fig. 18). The Claflin-Emerson's 1930 party reported that the Fort Bottom Ruin (site LS 9-1) was the northernmost Mesa Verde structure known, based on the Mesa Verde types of pottery recovered.

> The site is on a small 120 m. high butte in a hairpin bend of the Colorado (must mean Green) River and is connected with the east wall of the canyon by a very narrow knife-edge ridge about 60 m. high and perhaps 300 m. long. There are two rooms in the 3.4 m. high main structure or "fort." The first room built is about 2.5 m. in diameter and 2 m. high. A second room of about the same size was later built against the first. A ground-level doorway about 75 cm. high and 45 cm. wide, with a stick lintel, connects the two rooms. On top of the second room had been added a second story that had a doorway (later walled up) leading to the roof of the first room. The walls are of dry-laid, unshaped sandstone-slab masonry and had been plastered on the inside. Some of the plaster remaining in place is slightly reddened, probably from burning. Surrounding the main structure are the ruins of two or possibly three smaller structures, possibly storage rooms (Gunnerson 1969:46).

In 1952 the Fort Ruin was at least 12 feet high (Rudy 1952b:5) and had been extensively looted. There are several smaller storage structures nearby. In the fall of 1977, essential stabilization, which had long been recommended (Gunnerson 1958; Hogan, Losee and Dodge 1975) was carried out. It is heavily visited by people traveling the Green River and, as a result, artifactual materials are extremely scarce. Lucius and Losee (1976:44-45) recommended test excavation and evaluation for nomination to the National Register of Historic Places.

A diffuse site on Aztec Butte (42SA418) consists of six clusters of structures, five of which are in alcoves directly beneath the lip of the butte. The sixth group is located on the top of the butte. This area, too, has been picked clean of artifactual materials. Gunnerson (1958:8) indicates that, based on the architectural style, the site was built during the Pueblo period.

Approximately half a mile up Monument Creek from its juncture with the Colorado River, there is a tremendous plunge pool where the canyon makes a sharp turn toward the northwest. Here, on the right bank of the canyon there is a shelter with a large row of rock-fall along its drip-line. Behind this detritus there is a series of six to nine small, buried masonry storage structures (42SA4978). All except one have been completely filled with drifting sand. The one that is somewhat exposed is a well-built sandstone and adobe masonry structure. It is circular, approximately two feet in diameter and has a wooden roof. These structures normally would be considered excavated into the ground instead of being buried; however, in order to build a masonry structure, one must be able to get to all sides. They are not slab-lined cists or storage pits dug into the ground. There is some charcoal, a few corncobs and faunal remains on the surface. The latter may or may not be aboriginal in origin.

The extensive rockfall in the front of the shelter is an estimated 50-60 ft. in length. There is no midden to speak of, although remnant alluvial deposits indicate that at one time the floor of Monument Creek was higher, and any midden material may have been washed away as downcutting occurred.

Excavation at this site would probably be profitable. It seems to be less well-known than any of the other sites along the river and, until early in the summer of 1977, was not vandalized. At least one of the cists has been "potted." If these storage structures are buried and have not been extensively looted, there is a very good chance of recovering in-context information pertinent to their use.

Site 42WN4979 is located on the right bank of Monument Creek where it joins the Colorado and consists of four structures overlooking the river. These are dry-laid masonry granaries that are not as well finished as the ones up Monument Creek at 42WN4978 or those at the Coffeepot (42WN4975 and 42WN4976) along the Colorado in the Needles District. There is evidence of fire blackening on the roof of one of the structures and suggestions that the entire granary may have been burned.

The one structure that is easily accessible is approximately 4' x 3'. The adobe mortar was obviously brought up from Monument Creek below; it is lighter in color than the Elephant Canyon Formation materials at the small ledge where the structures are located.

Two of these storage structures are on the corner overlooking both Monument Creek and the Colorado River. A third granary is approximately 50 yards downstream on the Colorado and the fourth is up Monument Creek. The latter are inaccessible, but appear to be in decent condition. River runners have on various occasions observed mountain sheep playing around the granaries.

The remaining reported sites in the district consist of storage structures that may or may not have associated evidence of temporary

habitation, such as one or two rooms or debris suggesting limited occupation, and chipping sites. The latter more than likely represent hunting camps.

DISCUSSION AND RECOMMENDATIONS

As the accompanying base map suggests, overall knowledge of prehistoric occupation--including subsistence/settlement patterns--of the Island-in-the-Sky District is the poorest of any area in the park. Virtually nothing is known about many of the sites; and, contrary to prevailing opinion, sites do exist in the region. It is true that the critical factors for agricultural occupancy, arable land and reliable water in appropriate combination, are limited in the district, but horticulture/agriculture was practiced in restricted areas. Permanent occupation was probably impossible; evidence of such is nonexistent. The major sites are restricted to areas near springs, along the river bottoms and where the Colorado and Green rivers are joined by tributary canyons, making water control and agriculture feasible. Furthermore, the cliff-forming Wingate sandstone and the White Rim member of the Cutler Formation have made access to the Island-in-the-Sky itself extremely difficult, except via the Neck. Nonetheless, known sites in this interior part of the district, particularly the large Aztec Butte area (42SA418), indicate that occupation of that region, for whatever purpose, was not impossible.

Thorough archeological inventory and site evaluation must be carried out in the district; one research goal should be to reconcile the confusion inherent in the existing data.

The Maze District

HISTORY OF ARCHEOLOGICAL RESEARCH

While archeological remains in the Maze District have received far less attention than those located in other areas of Canyonlands National Park, this is the only portion of the park that has received a fairly thorough, systematic resource inventory and site evaluation in terms of Executive Order 11593 (Hogan, Losee and Dodge 1975; Losee and Lucius 1975; Lucius 1976).

The earilest records of archeological remains in the area resulted from Donald Scott's interest in the rock art of southern Utah. During the 1920's Scott made numerous forays into the canyon country; he noted the Bird site (42WN665), frequently called the Harvest Scene, deep within the Maze itself and was aware of the spectacular rock art in Horseshoe (Barrier) Canyon. Through his association with the Peabody Museum of Archaeology and Ethnology, he combined interest and, occasionally, forces with the Museum's Claflin-Emerson Expeditions into the Fremont River country. The 1930 expedition yielded the first records and evaluation of the sites in the vicinity of the Maze District (Gunnerson 1969: vii, 23; Morss 1931: iii-iv; Schaafsma 1971:xvii-xix).

During his 1951 reconnaissance trip down the Green and Colorado rivers, Jack Rudy (1952b:4-9) visited what probably is site 42WN4 in Water Canyon and several granaries and chipping sites below Bonito Bend as well as a few sites in the Island-in-the-Sky District. At these river bottom sites he noted San Juan Anasazi ceramics in

association with Fremont-like architecture and Fremont site locations (Rudy 1952b:7-8).

In 1971 the Maze District and Horseshoe Canyon Detached Unit were added to Canyonlands National Park; district personnel immediately initiated a program of recording the archeological sites in the area and developed a fairly accurate field record of site locations.

Responding to proposed road realignment, Marvin Kay (1973) carried out archeological site inventory and evaluation along the roadway from Utah Highway 24 eastward through Robbers' Roost Flats to Hans Flat, which is the location of the Maze District headquarters, and to the Horseshoe Canyon Overlook. Kay located 40 sites along the right-of-way that would be directly affected by road improvement. He also visited Horseshoe Canyon Detached Unit and discussed five of the thirteen sites recorded in the canyon. While the 40 sites reported by Kay, other than those in Barrier (Horseshoe) Canyon, are not technically in Canyonlands National Park--many are in Glen Canyon National Recreation Area--they are critical to management of the Maze District because the road is the only way into the area. Furthermore, all traffic to the Horseshoe Canyon Detached Unit is over this roadway.

In 1975, using the Maze District records as a base, University of Utah personnel under contract with the National Park Service implemented systematic archeological inventory and site evaluation of the aboriginal remains in the district (Hogan, Losee and Dodge 1975; Losee and Lucius 1976; Lucius 1976). This work yielded 248

sites and covered all lands in the district except the nearly inaccessible uplands just west of the Green River, the inaccessible slickrock canyon areas west of South Fork in the Maze itself and the Teapot Canyon area in the southwest corner of the park (Lucius 1976:80).

ARCHEOLOGICAL RESOURCES IN THE MAZE DISTRICT

With the exception of the areas along the Green River where horticulture/agriculture was possible; such as Spanish Bottom, Anderson Bottom, Valentine Bottom and the mouth of Water Canyon; the sites in the Maze District suggest intermittent, transient occupation based on simple resource collection during late Pueblo II and early Pueblo III times (A.D. 1050-1150). The harvesting of wild grasses and acquiring of lithic raw materials appear to have been the major attractions of the region (Losee and Lucius 1976:41). Losee and Lucius (1976:41) suggest that, as in the Needles District, scarcity of water and general accessibility of an area were the major determinants of aboriginal occupational patterns.

The areas of highest site density were those where travel from the uplands to the river was possible: Horse Canyon and the benches north of it, the Standing Rock-Doll House area, the Wide Valley-Main Flat area and Range Canyon. Based on clusterings of particular types of sites, Kay (1973:36-40) was also able to demonstrate the effect of topography on site location and site function.

Rudy (1952b:7-8), during his brief 1952 trip down the Green and Colorado rivers, first noted the presence of associated Anasazi and Fremont materials. The subsequent work by Hogan, Dodge, Losee and Lucius (Losee and Lucius 1976:41) clearly established occupation of the district by both groups, as well as suggested the possibility of Archaic or early Basketmaker use.

Deep within Range Canyon, Losee and Lucius (1976:46) noted a large, previously unrecorded Barrier Canyon style pictograph panel (42GA1063) that is comparable in nature to the other massive Barrier Canyon style rock art panels in the vicinity (Fig. 19). The site is easily accessible and readily visible, but its remote location has precluded other than rare visitation.

The Bird site (42WN665), better known as the Harvest Scene because it includes the fairly well-known depiction of harvesting activities, is located on the middle fork of Horse Canyon in the Maze itself (Fig. 20). This site was listed on the National Register of Historic Places in 1976.

Kay's 1973 survey of the upland areas away from the river yielded a total of 50 sites: 16 chipping sites, 13 transient camps, three alcove camps, four rockshelters, three rock art sites and 11 sites that could not be clearly categorized. With slight modification, Kay (1973:35) placed these remains into the categories developed by Sharrock (1966:64-66) for the Needles District. The category "chipping site" was subdivided by Kay into three classes that reflect the type of stone tool working carried out at the site: (1) quarry/primary lithic reduction station, (2) primary

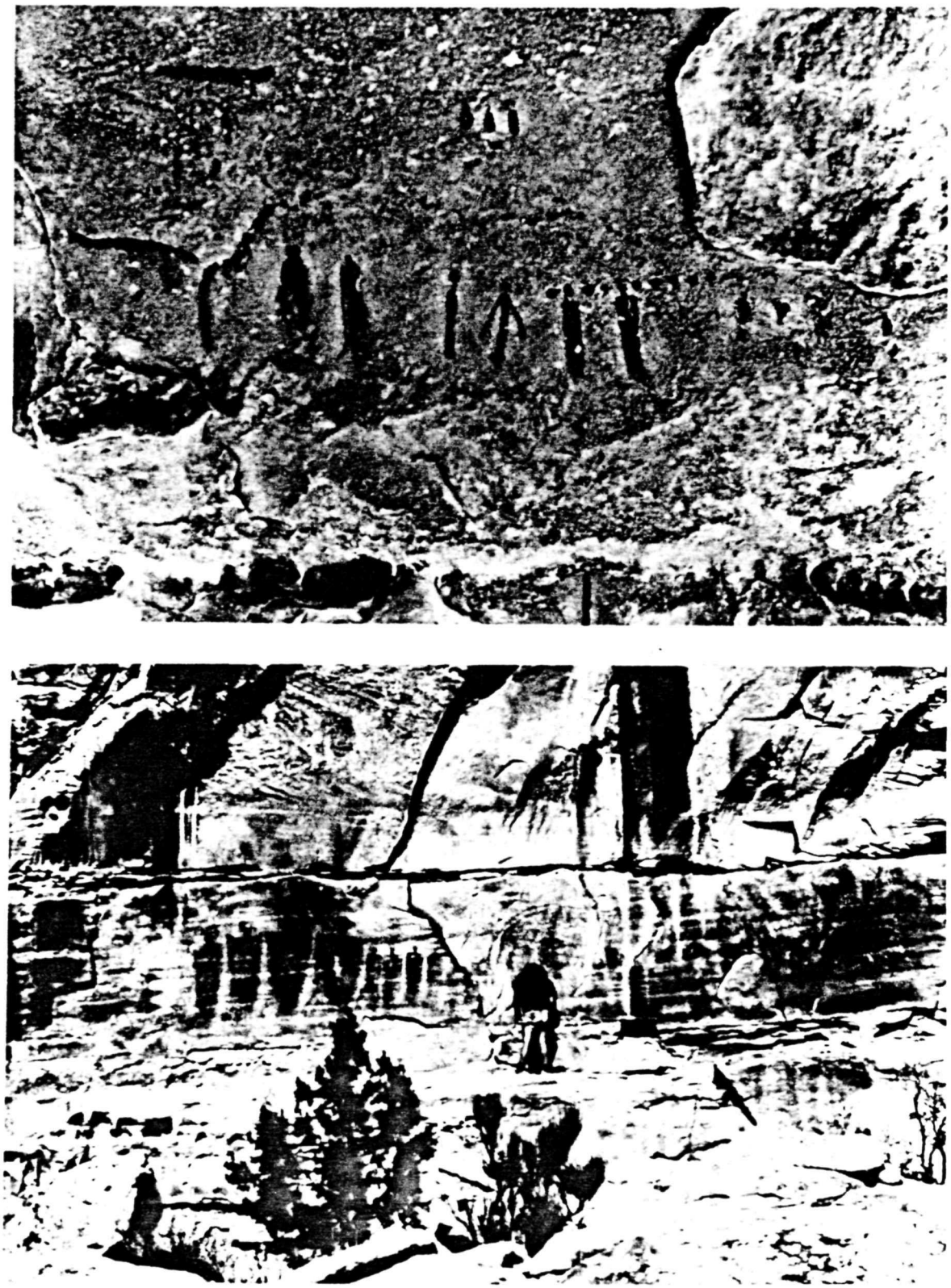


Figure 19. Barrier Canyon style rock art in the Maze District. top, site 42WN767, pictograph panel in the Land of the Standing Rocks; bottom, site 42GA1063, pictograph panel in Range Canyon.

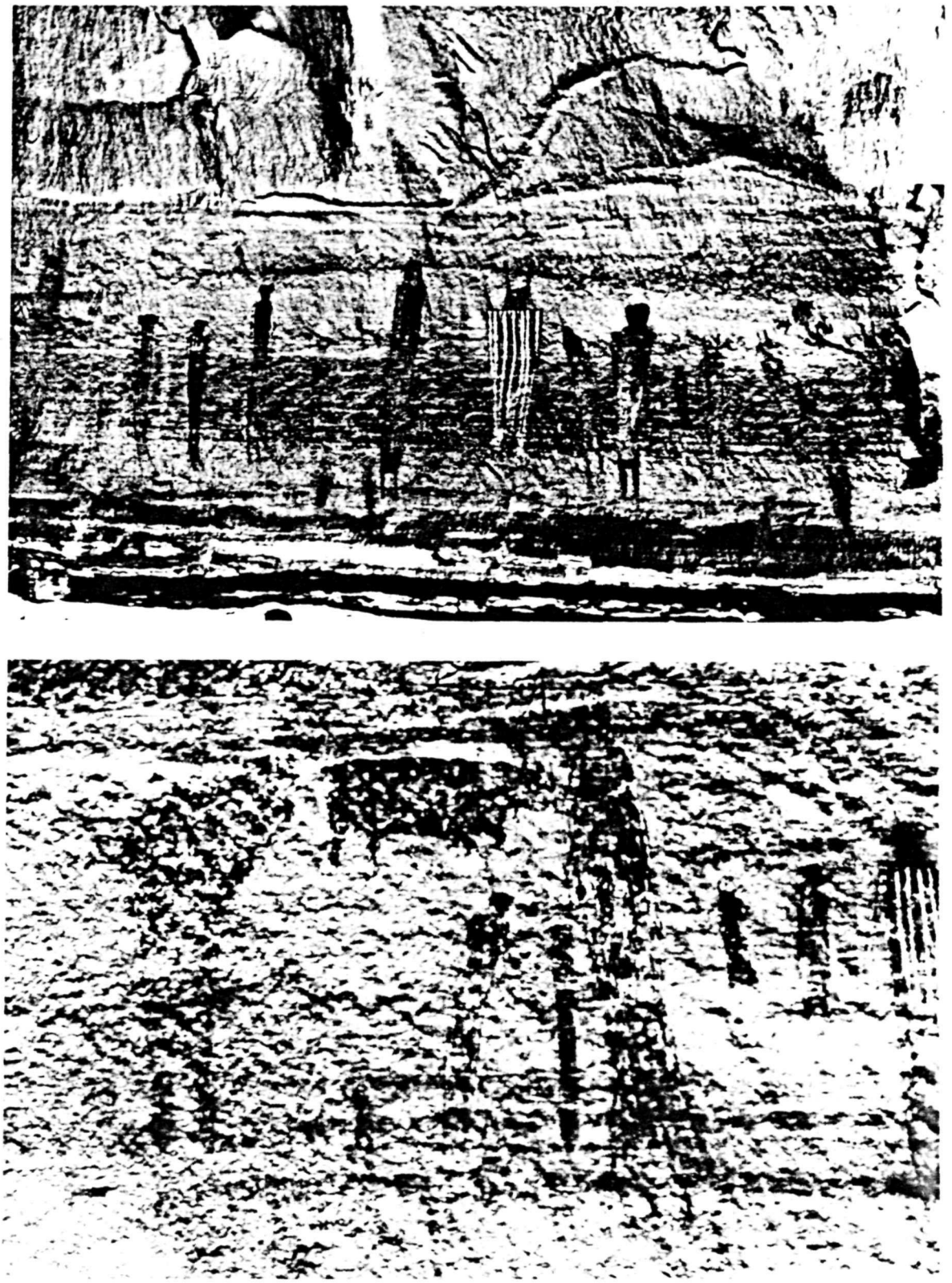


Figure 20. The Bird site, 42WN655, Barrier Canyon style pictograph panel in the Maze. top, Panel A, the harvest scene; bottom, large and small anthropomorphs and possible bear.

lithic reduction station and (3) secondary manufacturing station. Use of the category of "transient camp" was restricted to open sites; it did not include Sharrock's "transient alcove camps" defined for the Needles District. Kay's use of "alcove camp" includes all transient and permanent alcove camps defined by Sharrock.

DISCUSSION AND RECOMMENDATIONS

Although the Maze District has received the most systematic and thorough inventory carried out in the park, some areas have not been investigated and not all known sites have been recorded. The survey work carried out by Lucius, Hogan, Losee and Dodge (Hogan, Losee and Dodge 1975; Losee and Lucius 1976; Lucius 1976) demonstrated that the district was occupied by both Fremont and Anasazi groups and Archaic period or early Basketmaker populations. Their work also raised a number of questions: (1) explanation of the previously unknown Archaic/early Basketmaker use of the area; (2) the cultural affiliation, age and function of the "open camps" containing large, slab-lined fire basins; (3) the cultural affiliation of the unusual upright slab and mud granaries and the nature of the material stored in them; (4) the nature of Fremont/Anasazi interaction and (5) the age and cultural affiliation of the large, Barrier Canyon style pictograph panels (Losee and Lucius 1976).

Recommendations

Losee and Lucius (1976:42-46) point out a number of specific, well-thought-out needs for more effective management of some sites in the Maze District. In spite of National Park Service intentions,

archeological site vandalism and resultant data loss continues. Site 42GA1042 showed evidence of recent, extensive looting, and many sites suffer from irresponsible surface collections. The readily accessible sites along the Green and Colorado rivers are, for all practical purposes, denuded of portable artifacts. Their structural remains are being destroyed.

42WN805. Immediate excavation is recommended for this site. It is located approximately 50 meters from the Spanish Trail, a well-used connecting trail between Spanish Bottom and the Doll House. The site consists of a shallow rock shelter with at least two slab-lined cists. One cist has been emptied, but the second cist and remainder of the site are undisturbed. Proximity to the Spanish trail suggests that immediate action is essential if the site is to be salvaged before vandalism occurs.

42GA1063. Special protection and interpretation are suggested for 42GA1063, a large Barrier Canyon style rock art panel located in Range Canyon (Fig. 19). It is comparable to other large Barrier Canyon rock art panels in the park. The fragile, yet impressive, nature of the site suggests that it should be treated in the same fashion as the Great Gallery panel (42WN418) in Horseshoe (Barrier) Canyon and the Bird site (42WN665) in the Maze.

National Register of Historic Places

National Register nomination is recommended for three prehistoric sites recorded during the 1975-1976 survey. All sites are highly visible and; with the exception of 42WN712, which is located

high on a partially collapsed ledge; are easily approached and subject to visitor abuse. All but 42GA1063 are located on the Green River and, as such, are especially subject to intense visitor impact.

42WN712. This site is a combination of structures and rock art located in Valentine Bottom along the Green River. It has not been adequately explored because it is located high on a partially fallen ledge that precludes safe access without specialized climbing gear. The site is visible from the river. No cultural deposits were found adjacent to the site, and its remaining structures appear to be well preserved granaries. There is an adjacent rock art panel. Further exploration is necessary, and the possibility of the ledge spalling further and destroying the site should be investigated.

42WN727. This is a well-known site located at Turks Head Bottom on the Green River. The site consists of several granaries and indistinct petroglyphs. It is a heavily visited, favorite stop for river runners and shows disturbance of the structural remains and adjacent chert workshops. Protection of the site should be an immediate goal.

42GA1063. This site is the previously unrecorded Barrier Canyon style rock art panel in Range Canyon (Fig. 19). It is easily accessible and readily visible, but its remote location in Range Canyon has precluded heavy visitation; the site is not near established trails or roads. Consisting of large anthropomorphs much like the Horseshoe (Barrier) Canyon and Bird site (42WN665)

panels, this site will attract visitors and should, therefore, receive appropriate recognition and protection. It should be nominated to the National Register of Historic Places.

Horseshoe Canyon Detached Unit

Horseshoe (Barrier) Canyon is a deep and striking drainage that runs northeast from the uplands of Robbers' Roost into the Green River (Fig. 1). Its sheer Navajo sandstone walls drop a maximum of 800 feet to the narrow channel of Barrier Creek. The very nature of these vertical, varnished walls, while making travel across the area extremely difficult, was apparently appealing to prehistoric artisans. Today the canyon walls display some of the most spectacular rock art known in North America. Because of the high concentration and unique style of these pictographs and petroglyphs, the area has become the type locale for what is known as the Barrier Canyon rock art style (Schaafsma 1971:65-83).

In 1971 this outstanding area was added as a detached unit to Canyonlands National Park. Because of its significance in management terms, uniqueness as an interpretive area and lack of prior comprehensive archeological summary, the rock art of Horseshoe (Barrier) Canyon is treated in some detail here.

There is significant enough conflict in the archeological literature concerning the use of "Barrier" as opposed to "Horseshoe" Canyon to warrant some discussion. In his 1931 report Nöel Morss refers to the area as Barrier Canyon. However, by 1940, "This Canyon is called both 'Barrier' and 'Horseshoe' depending on

which map you are looking" (Bird 1964:2). Furthermore, in 1941 Malouf writes, "Barrier cañon, better known to neighboring ranchers as Horseshoe cañon because of the peculiar form of its mouth, . . ." (1941:151). Then he proceeds to point out that the canyon has always been a formidable barrier to north-south travel in the area (1951:151). Gunnerson (1969:62) refers to the area as Barrier Canyon, saying, "Barrier Canyon, also known as Horseshoe Canyon, . . ." In his 1957 Desert Magazine article, Henderson calls the area Horseshoe Canyon. Schaafsma (1971) also calls the drainage Barrier Canyon, while recognizing its alternative designation. Siegrist (1972) refers to it as Barrier Canyon. However, Kay writes ". . . Horseshoe Canyon, eroded by Barrier Creek. . ." (1973:28).

The most recent U.S. Geological Survey topographic maps for the area (Canyonlands National Park and Vicinity, Utah 1968 and 1969; The Spur, Utah 1970; Orange Cliffs 1SW, Utah 1953; Tidwell 4SE, Utah 1952) use the name Horseshoe Canyon. Nonetheless, I, like Schaafsma and Gunnerson, prefer the earlier designation based on its priority use. Many local residents of the vicinity still refer to the area as Barrier Canyon, and it was called that historically (Baker 1971; Kelley 1959). The evolution from "Barrier" to "Horseshoe" may be the result of the latter term having been picked up by U.S. Geological Survey personnel and used on the area topographic maps. Subsequent use of "Horseshoe" instead of "Barrier" by the public and the National Park Service has supported this designation. Fortunately, all are agreed that Barrier Creek runs through the canyon.

HISTORY OF ARCHEOLOGICAL RESEARCH

Until this synthesis, Horseshoe Canyon had neither been systematically inventoried nor received comprehensive archeological description even though the quality and quantity of its rock art has been widely known since members of the Peabody Museum of Archaeology and Ethnology's Claflin-Emerson Expedition under Henry B. Roberts visited the canyon in 1929-1930 (Morss 1931:iii-iv; Gunnerson 1969:viii, 23). Sites that were excavated, tested or otherwise noted by this group were finally reported by Gunnerson in 1969. In 1940 Carling Malouf from the University of Utah's Department of Anthropology went into the canyon with members of Utah's W.P.A. Art Project (Bird 1964). The latter had been commissioned to make a life-sized canvas mural of the Great Gallery (42WN418). After numerous peregrinations, segments of this mural are now on display at the Utah Museum of Natural History, University of Utah and in the College of Eastern Utah's Prehistoric Museum, Price, Utah.

During Malouf's visit six sites were numbered and described in some detail and the existence of a seventh, the Great Gallery (42WN418), was noted (Malouf 1940, 1941).

Schaafsma's 1971 work, The Rock Art of Utah, contains the most detailed discussion that is available of the major rock art sites recorded by these groups. However, she describes only those rock art sites recorded by Donald Scott and does not discuss associated camps or material remains found in the canyon. These materials are thoroughly described and reported by Gunnerson (1969). Unfortunately,

not all of the rock art sites now known in Horseshoe Canyon are included in these reports (Table 2).

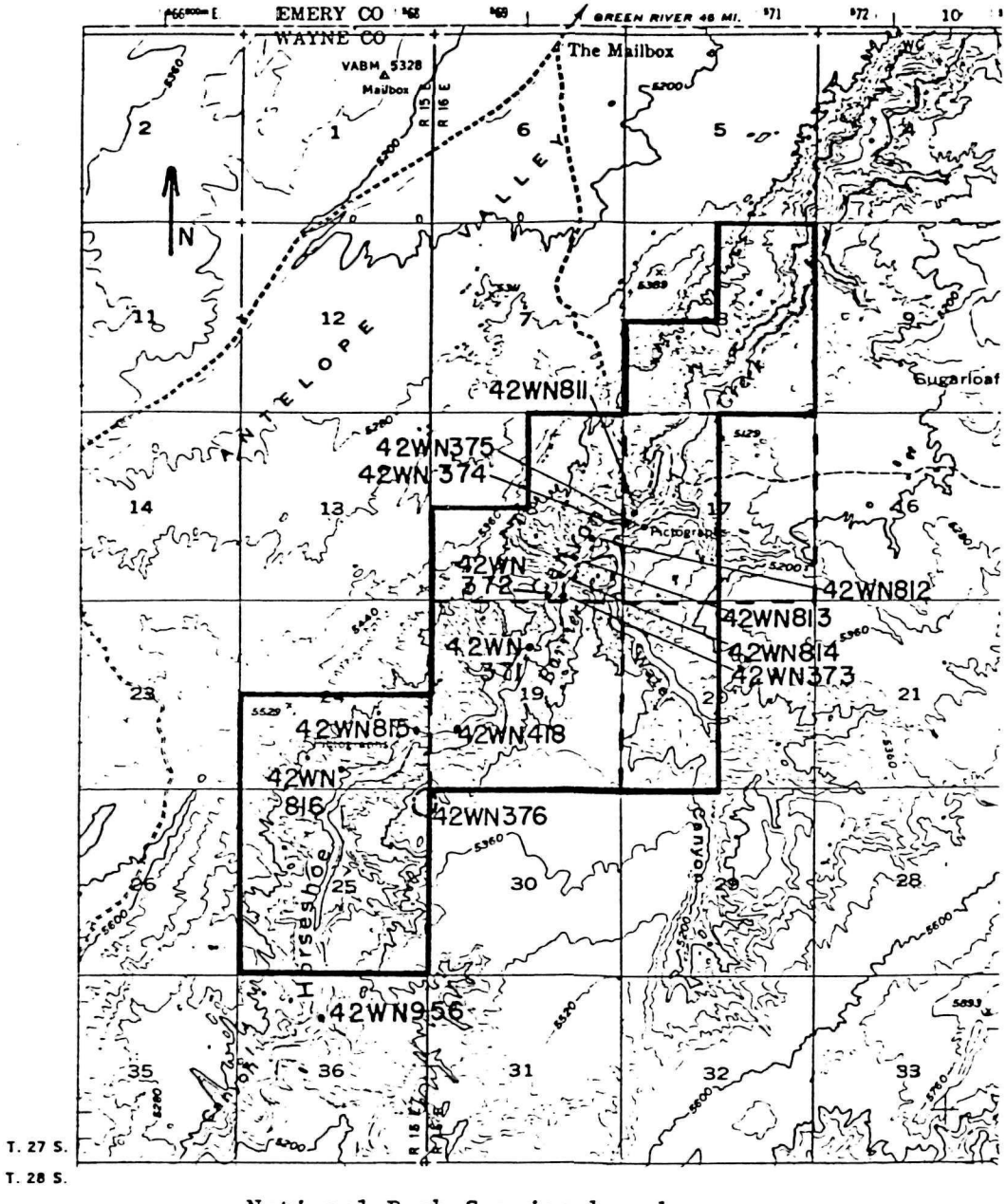
When the area was added as a detached unit to Canyonlands National Park in 1971 an effort was begun by park personnel to accurately locate and record all archeological sites found. To date, three previously unknown petroglyph sites have been discovered. Marvin Kay (1973) briefly visited the new area in 1973 during his preconstruction survey in the Maze District, Canyonlands.

As suggested above, the sporadic reporting of sites by a variety of persons as well as by Maze District personnel resulted in conflicting site designations, locations, descriptions, etc. For purposes of reconciling these differences and evaluating the importance and present condition of the sites a four day trip was made into Horseshoe Canyon (Anderson 1976).

At this time all of the known rock art sites in the Horseshoe Canyon Detached Unit were recorded, correlated (Table 2) and accurately located (Fig. 21). There are other known rock art sites in the upper tributaries of the canyon, but they are not within Canyonlands National Park. These latter are the Bluejohn Panel (42WN956), located where Bluejohn Canyon joins Barrier Creek; a petroglyph site (42WN817) in Spur Fork Canyon just downstream from Cowboy and Jim Walters caves (42WN420 and 42WN421) and the Blue-eyed Princess (42WN369). Gunnerson (1969) reports two sites near the mouth of Horseshoe Canyon, which are also outside of Canyonlands National Park (Fig. 4).

Table 2. Archeological site correlation, Horseshoe Canyon Detached Unit, Canyonlands National Park.

MAZE DISTRICT DESIGNATION (RESOURCE BASE MAP "A")	UTAH STATE SITE NO. (KAY 1973; ANDERSON, THIS REPORT)	PEABODY MUSEUM CLAFLIN-EMERSON EXPEDITION (GUNNERSON 1969; SCHAAFSMA 1971)	UNIVERSITY OF UTAH (MALOUF 1940, 1941)	COMMON NAME
PETROGLYPH SITE #3	42WN811		SITE #3	
PICTOGRAPH SITE #1	42WN374	SR-12-5	SITE #2	HORSESHOE SHELTER OR FIRST GALLERY
PICTOGRAPH SITE #2	42WN375		SITE #1	HIGH GALLERY.
PETROGLYPH SITE #1	42WN812			BARRICADE SITE.
PICTOGRAPH SITE #3	42WN813		SITE #4	HAND SITE
PETROGLYPH SITE #4	42WN814			
PICTOGRAPH SITE #4	42WN372	SR-12-3	SITE #6	ALCOVE SITE, INCLUDES THE GROTTO PANEL
"ANASAZI" STRUCTURE SITE #1	42WN373		SITE #5	
	42WN371			
PICTOGRAPH SITE #5	42WN418	SR-12-4	LARGE PICTOGRAPHS	GREAT GALLERY, INCLUDES THE GHOST PANEL
PETROGLYPH SITE #5	42WN815			
PICTOGRAPH SITE #6	42WN816			
PICTOGRAPH SITE #7 (LIES JUST OUTSIDE PARK)	42WN957			BLUEJOHN PANEL.



——— National Park Service boundary

— — — 1972 National Register of Historic Places boundary

•42WN816 archeological site

Figure 21. Archeological base map, Horseshoe Canyon Detached Unit, Canyonlands National Park. Adapted from U.S. Geological Survey 15 minute topographic map; The Spur, Utah 1970. Scale 1:62500. Site 42WN376 is a large workshop area on the southern rim of Barrier Canyon.

Sites were plotted in the field by using a combination of aerial photographs (stereo-pairs) and an enlarged topographic map for the Horseshoe Canyon Detached Unit area. They were further field checked by Maze District personnel. In several cases rock art sites indicated on the U.S. Geological Survey topographic maps were found to be in error. In addition to the documentary information listed below, sources of site locations included park personnel most familiar with the area.

NATIONAL REGISTER OF HISTORIC PLACES

In 1972 select portions of the canyon (T27S R16E S17, 19) were listed on the National Register of Historic Places (Fig. 21). Nomination to the Register was affected by the Bureau of Land Management who had jurisdiction of the area before the National Park Service. Unfortunately, the land listed on the Register includes only five of the sites in the canyon (Fig. 21). Nonetheless, for management and planning purposes, the entire Horseshoe Canyon Detached Unit should be treated as if it were, in fact, on the National Register (Section 2b, Executive Order 11593). For any planned action that may in any way, either positively or negatively, affect the canyon, the criteria set forth under Section 106, National Historic Preservation Act must be considered. Because the spectacular rock art sites in the canyon are non-renewable resources, it behooves the Park Service to employ every effort to insure their preservation.

ARCHEOLOGICAL REMAINS IN BARRIER CANYON

Thirteen sites are known in the Canyonlands National Park portion of Horseshoe Canyon (Fig. 21). Seven are significant pictograph sites and four are petroglyph sites (Table 2). However, in nearly every site both types of rock art are found. One site not containing any rock art (42WN373) was probably a storage area for domestic crops or wild grasses obtained in the canyon. The other non-rock art site (42WN371), if indeed it is a site, may have been a temporary camp. Site 42WN376 is a lithic workshop on the rim of Barrier Canyon.

The following brief descriptions are not meant to be exhaustive discussions of the sites in Horseshoe Canyon. Appropriate references are provided for more detailed information. These discussions are guides to site significance, research potential, professional recommendations and interpretive potential.

Site 42WN811

This is the northernmost known rock art site in the Canyonlands Detached Unit portion of Horseshoe Canyon. It is a petroglyph panel on a Navajo Sandstone face approximately 50 yards west of Barrier Creek (Fig. 22). A good portion of the 70 foot long panel has disappeared through exfoliation of the sandstone wall. The rock art consists of a variety of interesting but non-diagnostic sheep, snakes, zigzags, circles, centipede-like figures and other zoomorphic and geometric designs. Malouf (1940:6) believes these petroglyphs are Pueblo in origin. However, they contain elements common to many styles and are non-diagnostic in nature.

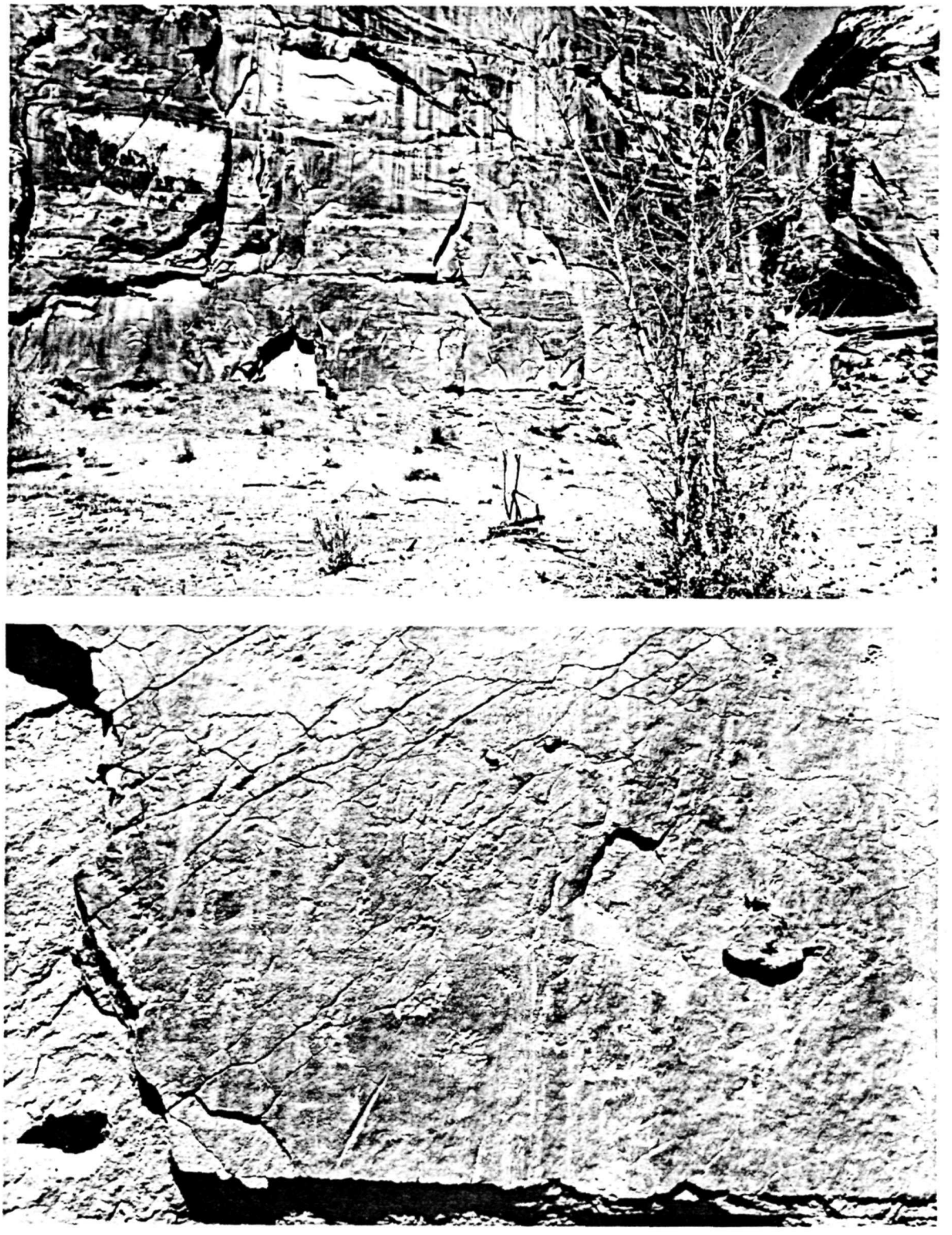


Figure 22. Horseshoe Canyon petroglyph site 42WN811. top, view west towards site from Barrier Creek; bottom, detail of rock art.

There is no evidence of occupation at the site--neither artifactual material nor structural remains. This is not surprising because the site is in an exposed location at the base of the Navajo Sandstone cliff. There are no shrubbery, trees, overhang or large slumpage rocks for protection from the elements.

Excavation or testing would be unproductive.

Site 42WN374--Horseshoe Shelter

Horseshoe Shelter is an extensive pictograph/petroglyph site with the largest associated campsite in the canyon. Most of the rock art is classic Barrier Canyon style although there is an interesting Fremont style hunting scene (Fig. 23). The estimated length of the site is 435 feet. The rock art panel itself is 180 feet long--at least that much of the panel still remains. There is some indication that at one time there was more rock art, but the sandstone face has simply sluffed away and the drawings have been lost.

The Barrier Canyon style art here consists of a series of variously decorated mud trapezoidal figures and the typical Barrier Canyon dog with a recurved tail (Fig. 23 top, left). The Fremont style hunting scene consists of what are probably elk with many-pronged horns, a buffalo and a hunter shooting at them with a bow and arrow (Fig. 23 bottom).

In addition to the rock art, there are numerous ground "bedrock" abraders (Fig. 24 top). The latter are probably associated with the multi-component campsite that occurs below the pictograph

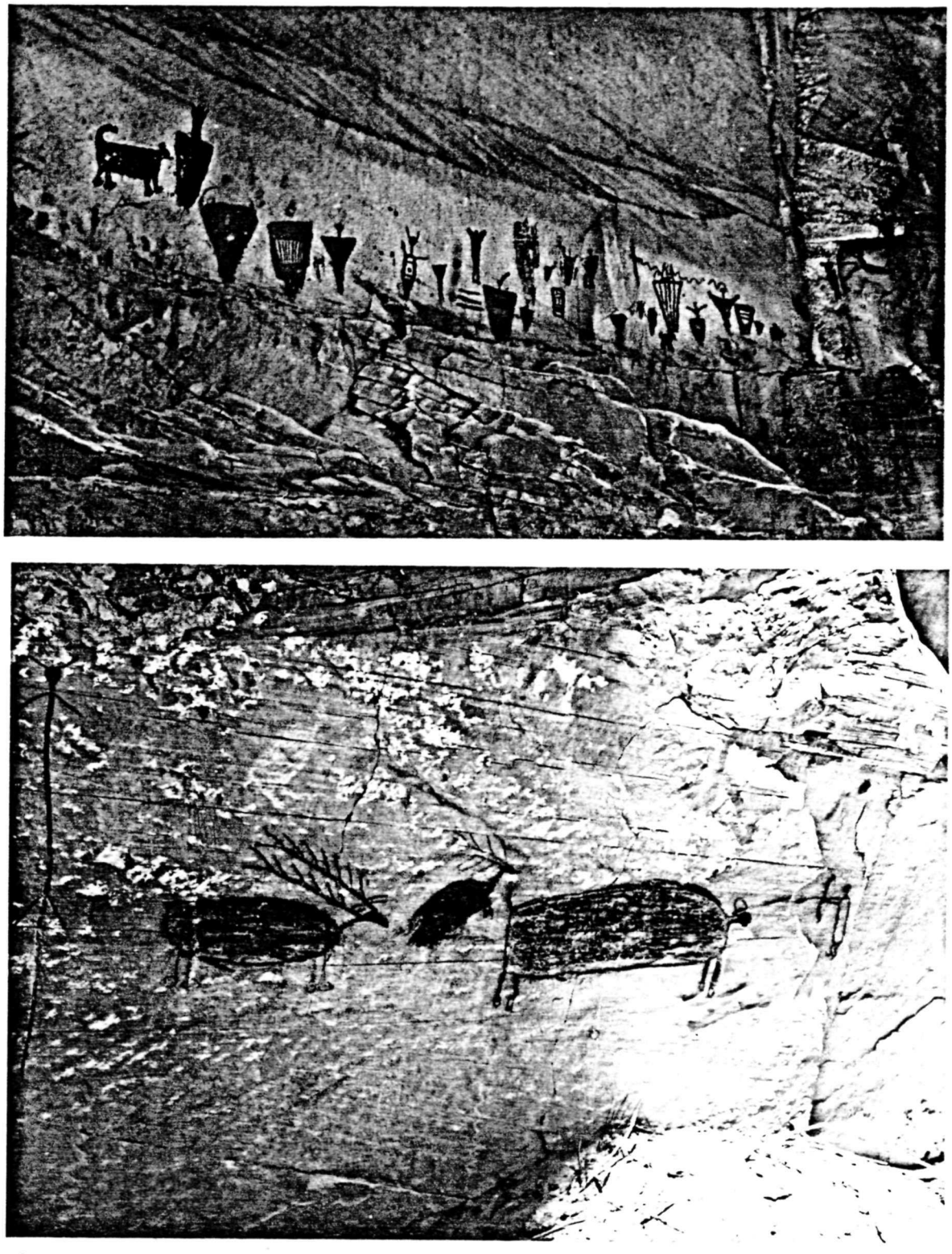


Figure 23. Horseshoe Canyon site 42WN374. top, Barrier Canyon style pictograph panel; bottom, Fremont style hunting scene.

Figure 24. Horseshoe Canyon site 42WN374. top, bedrock abraders; bottom; incised mountain sheep petroglyphs.

and petroglyph panels (Gunnerson 1969:69-73). In 1929-30 members of the Peabody Museum's Claflin-Emerson Expedition excavated portions of the site. There is a plan drawing of the earliest occupation and a good discussion of subsequent habitation in Gunnerson's (1969:69-73) report on the Fremont Culture. In 1940 Carling Malouf (1940:4-6, 1941) also tested this site and recovered a burial previously exposed by Ralph Wolf (Malouf 1940:5). The disposition of this burial is unknown. Today from the remaining evidence it is impossible to determine exactly where these excavations took place, although from Malouf's description the probable location of the burial can be ascertained.

There are no ceramics observable today. Jasper and chalcedony chipping debris and small pieces of charcoal and fire-cracked rock are randomly scattered about the site.

To the east (downstream) of the Fremont panel there are a series of faint petroglyphs that have been rough-pecked into the wall. These are mainly zoomorphic in nature. There are also tic-tac-toe grids and other "chicken" scratches--it looks like a grade school blackboard at the end of the day. There are several interesting bighorn sheep in this area that have tremendous horns recurving almost to the middle of their backs (Fig. 24 bottom). The bodies are faint, but they have very deeply grooved feet and horns.

Several areas of the site do not appear to have been excavated, although because of the fine windblown sand and silt and the runoff from the cliff above it is difficult to determine with certainty where there has been extensive excavation or looting. Future

excavation should prove profitable, particularly in light of the more refined dating techniques available and types of archeological query now undertaken.

Site 42WN375--High Gallery

This site, on the east wall of Horseshoe Canyon across from Horseshoe Shelter (42WN374), is an interesting Barrier Canyon style pictograph/petroglyph panel about 150 feet above the canyon floor. It is high on a sandstone cliff and totally inaccessible today. Malouf (1940, 1941) and Kay (1973) both provide excellent descriptions of the panel, and the former may have actually used a ladder or scaffolding to see the drawings. Dean Brimhall used a ladder to see the site in 1952. One gets a skewed perspective from the ground, and it is difficult to accurately describe the figures.

No material culture has been reported from the site and none is observable today.

There is some Historic period graffiti on the wall; "1928, August 1" below the name "LEE Tidwell." The Tidwells are a local ranching family, and Lee Tidwell himself guided Bird's (1964) 1940 W.P.A. party and Carling Malouf into the canyon. In 1928-1929 Lee Tidwell was involved in the oil exploration project that built the "road" that crosses Horseshoe Canyon.

Neither Gunnerson (1969) nor Schaafsma (1971) discuss this site, which is listed as a pictograph site on the U.S. Geological Survey topographic maps. Excavation would be unprofitable.

Site 42WN812--Barricade Site

This site along the west wall extends approximately 20-85 yards upstream from the park's barricade across Barrier Creek. It consists of a series of small, faint petroglyphs of more or less geometric design, "chicken" scratches, several faint bighorn sheep and one faint anthropomorphic figure located approximately ten feet above the others. This appears to be a stylized anthropomorph shooting a bow and arrow--possibly Fremont in origin. The petroglyphs designs are common in many styles. A series of faint anthropomorphs have more recently been reported by park personnel from the upstream end of the site.

The site also has definite evidence of temporary occupation. This is contrary to what Malouf reported (1940, 1941) and Gunnerson's statement that only one occupation site occurs in the canyon (1969: 69). Below the petroglyphs there is a fire hearth area with a thick lens of ash and charcoal, calcined bone and fire-cracked rock. This extensive lens is in an alluvial deposit along the edge of the canyon and is gradually eroding away. In fact, the quantities of burned sandstone and other debris below the lens suggest that there was more extensive fire activity than is now evident. There are quantities of chipped stone debris--cores and large flakes--but no evidence of ceramics or structural features.

The Barricade site does not look as if it has been vandalized. In fact, the rock art was only recently located by Maze District personnel and not even they reported the hearth area. Because the hearth contains in-place charcoal sufficient for radiocarbon dating,

it is probably the most important site in the canyon today in terms of providing concrete data for further understanding Horseshoe Canyon occupation. Its excavation is highly recommended because the ash and charcoal lens is being eroded through natural causes.

Site 42WN813--Hand Site

This site receives its name from the 34 stylized hands drawn in yellow and red mud along the wall of the small shelter (Fig. 25). These Anasazi style hands are either just slightly larger or slightly smaller than natural size and are the only type of art in evidence at the site. Schaafsma (1971:62) considers hands relatively rare outside of the Anasazi area; they are not uncommon in the Needles District.

Malouf tested and collected the site. He found ceramics as well as chipped stone debris, but considered his work to be unproductive (1940:8-9). Today there is scant evidence of ceramics, but fire-reddened and cracked rock, charcoal fragments and chipped stone occur. Seven grooves that may be abraders for smoothing or straightening arrow shafts and several shallow bedrock abraders (mortars or metates) occur on a sandstone slumpage block on the shelter floor.

There is no indication that excavation would be profitable.

Site 42WN814

This petroglyph site is probably the least spectacular in the entire canyon. The panel, approximately 20 feet long, is extremely

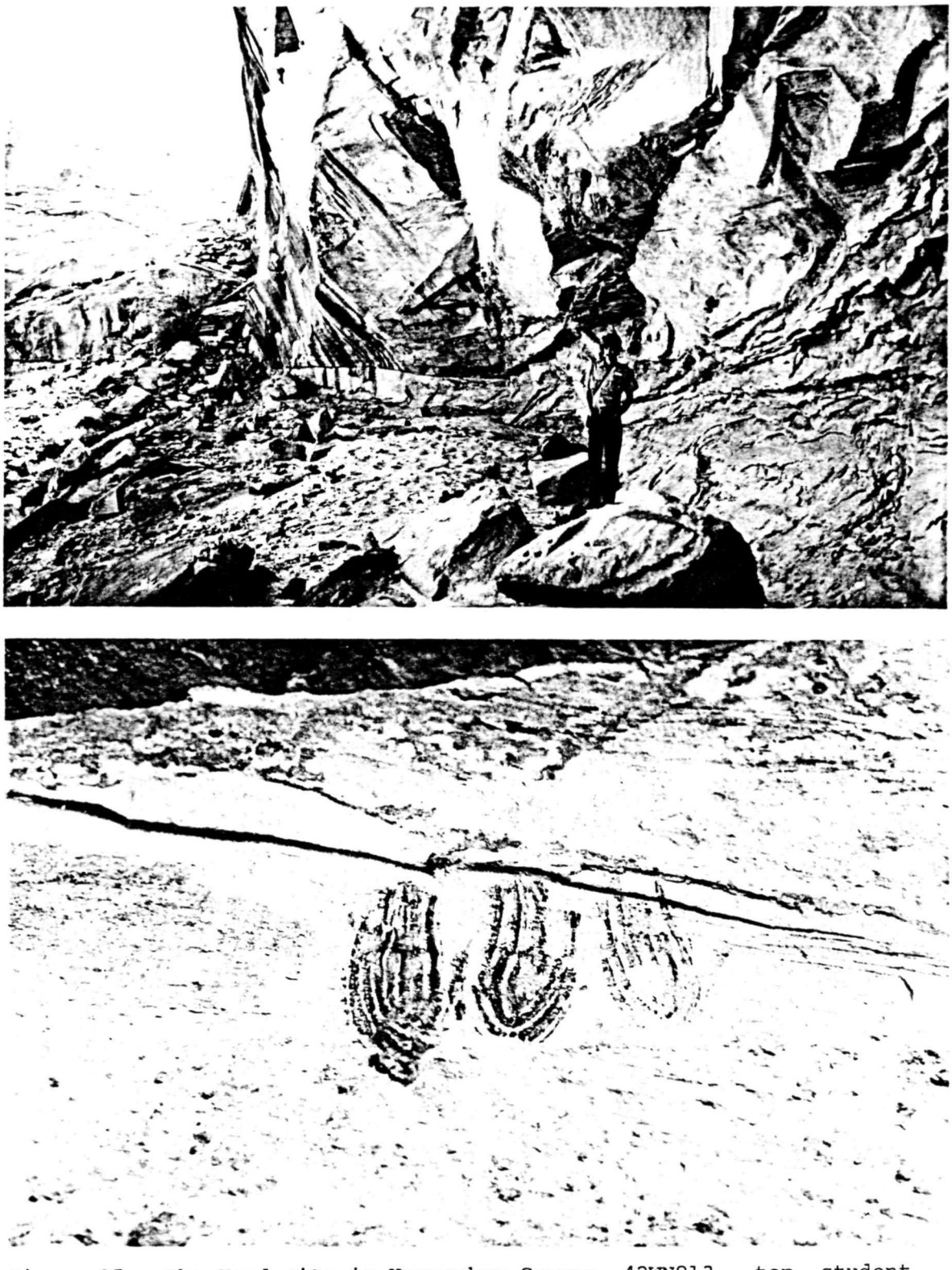


Figure 25. The Hand site in Horseshoe Canyon, 42WN813. top, student conservation aide Vincent Gartner in the Hand site alcove, 1976; bottom, positive hand prints.

faint and, therefore, difficult to find. It is recorded only in the Maze District records.

Most of the petroglyphs are at eye level and consist of scratches, grooves, geometric designs and smoothed places that look like bighorn sheep--they have faintly-incised horns and feet.

There is a packrat midden located in a deep crack in the Navajo sandstone on the upstream side of the panel. Charcoal and calcined bone occur in the midden. However, it is impossible to determine if these materials are prehistoric or historic. There is no indication of any material culture or cultural features. Excavation would be unprofitable.

Site 42WN372--Alcove Site

The Alcove site (Fig. 26) is a well-known Barrier Canyon style pictograph locale recorded by both the Claflin-Emerson party (Gunnerson 1959:65; Schaafsma 1971) and Malouf (1940). There is a southern and a northern panel, consisting mainly of anthromorphic figures (Fig. 26). Occasionally the area is referred to as the Grotto Panel (Table 2). Many of the pictographs appear to be residue of mud that has exfoliated off the wall and, originally, may well have been mud like the art at the Hand site (42WN813). Only the bare outlines are left. There is also some indication that behind a pile of fall-rock in the alcove the pictographs themselves extend below the modern ground level.

The southern panel is badly defaced and covered with scratches, names and other evidence of vandal activity (Fig. 26 bottom).

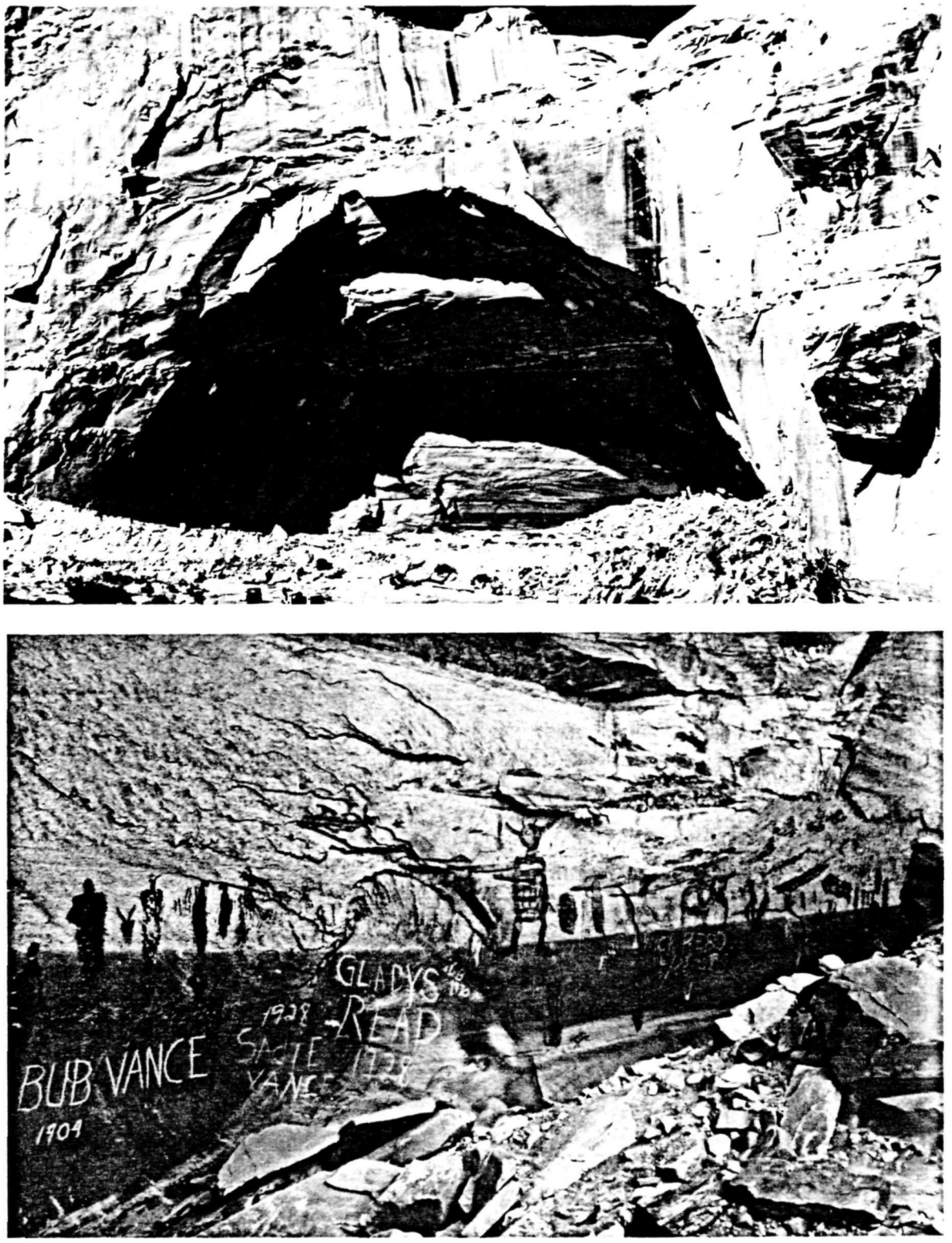


Figure 26. The Alcove site in Horseshoe Canyon, 42WN372. top, view north into the alcove; bottom, left panel showing vandalism.

There actually is as much Historic period graffiti as there is aboriginal rock art. The large alcove has been heavily used during Historic times, probably as camp sites by cowboys and visitors to the canyon. There is a lot of recent trash, charcoal and an Anglo fireplace.

Malouf (1940:12-13) describes and illustrates some dry-laid masonry work at the site, apparently a single-line rock wall. However, neither the masonry nor its probable location can be pinpointed today.

There appears to be very little remaining evidence of prehistoric occupation, and excavation is not recommended. In 1973 Kay suggested that the "sleeping areas" at the site be tested. However, after the large amount of disturbance that has occurred at this site; by professional archeologists, the variety of visitors to the canyon, by sheep and cattle and by the elements; it is doubtful if, in fact, these shallow depressions are really sleeping areas. They are more likely the result of animals bedding down in a sheltered location. Today there is scant evidence of chipped stone. There are no stone tools, ceramics or structural features remaining. It is impossible to determine if the charcoal is from recent or from aboriginal campfires.

Site 42WN373

This site is located on the east side of Horseshoe Canyon in a small shelter almost opposite the Alcove site. Malouf (1940:9) indicates that he observed at least two storage pits dug into the floor and assumed they had been excavated during the Claflin-Emerson

Expedition. However, there is no record of the latter; this work was not reported by Gunnerson (1969) or Schaafsma (1971). Today there is evidence of eight storage cists or pits that are filled with windblown sand. There is no way to determine from the surface evidence where, and if, excavation actually occurred.

There are no pictographs or petroglyphs in this little alcove and very little remaining cultural material. However, excavation of the pits and surrounding floor may be profitable.

Site 42WN371

Kay (1973) located this area on a sandstone bedrock ledge approximately 20 feet immediately above Barrier Creek and recorded it as a campsite. However, there is no unquestionable evidence of aboriginal occupation. Kay bases his determination on six, what appeared-to-be fire-blackened areas on the roof of the overhang. However, upon detailed examination it is obvious that areas are not fire-blackened. They are the result of water percolation through a series of cracks in the sandstone face. The black is either organic matter (lichen, moss) or a chemical deposit that is exposed when the overlying sandstone spalls away. There are several instances at this locale where the black can be observed continuing from the roof of the overhang into surrounding cracks--not in the manner of smoke blackening.

On the bedrock ledge there is evidence of charred or deteriorating wood (no small flecks of charcoal), a packrat midden and what looks like calcined bone. The burned materials could easily be from Historic period campfires. There are no other indications of cultural activities--no artifactual materials or structural features.

Because the area in question lies directly on a bedrock ledge there is no way to test for possible cultural remains.

Site 42WN418--The Great Gallery

The Great Gallery (Fig. 27), the type locality for the Barrier Canyon rock art style, has been extensively photographed, drawn and recorded (Gunnerson 1969; Kay 1973; Malouf 1940, 1941; Schaafsma 1971; Siegrist 1972). It is one of the most spectacular pictographs sites in North America. The panel itself is dominated by colossal anthropomorphs, some of which are elaborately decorated. The famous Ghost Panel (Fig. 28 top) is part of the site. There are also smaller anthropomorphs and zoomorphs, which appear to have been painted over smoothed, perhaps actually prepared, surfaces.

This is the panel mentioned above that was carefully copied in 1940 by the Utah Art Project of the W.P.A. (Fig. 28 bottom) and now is on display at the Utah Museum of Natural History, Salt Lake City and the College of Eastern Utah's Prehistoric Museum, Price.

There is no evidence of associated habitation, although much of the alluvial deposit underlying the site, which may have contained evidence of occupation, has eroded away. The presence of aboriginal occupation debris under the remaining deposits should not be discounted; however, excavation at this time is not recommended.

During the 1928-29 oil road construction across Horseshoe Canyon, an attempt was made to remove portions of the panel with dynamite. Fortunately, although minor damage was done, Lee Tidwell successfully halted the destruction.

Figure 27. The Great Gallery in Horseshoe Canyon, 42WN418. top, pictograph panel from a distance, 1963 Bureau of Land Management photograph; bottom, pictograph panel with ranger Gary Smith for scale, 1973.

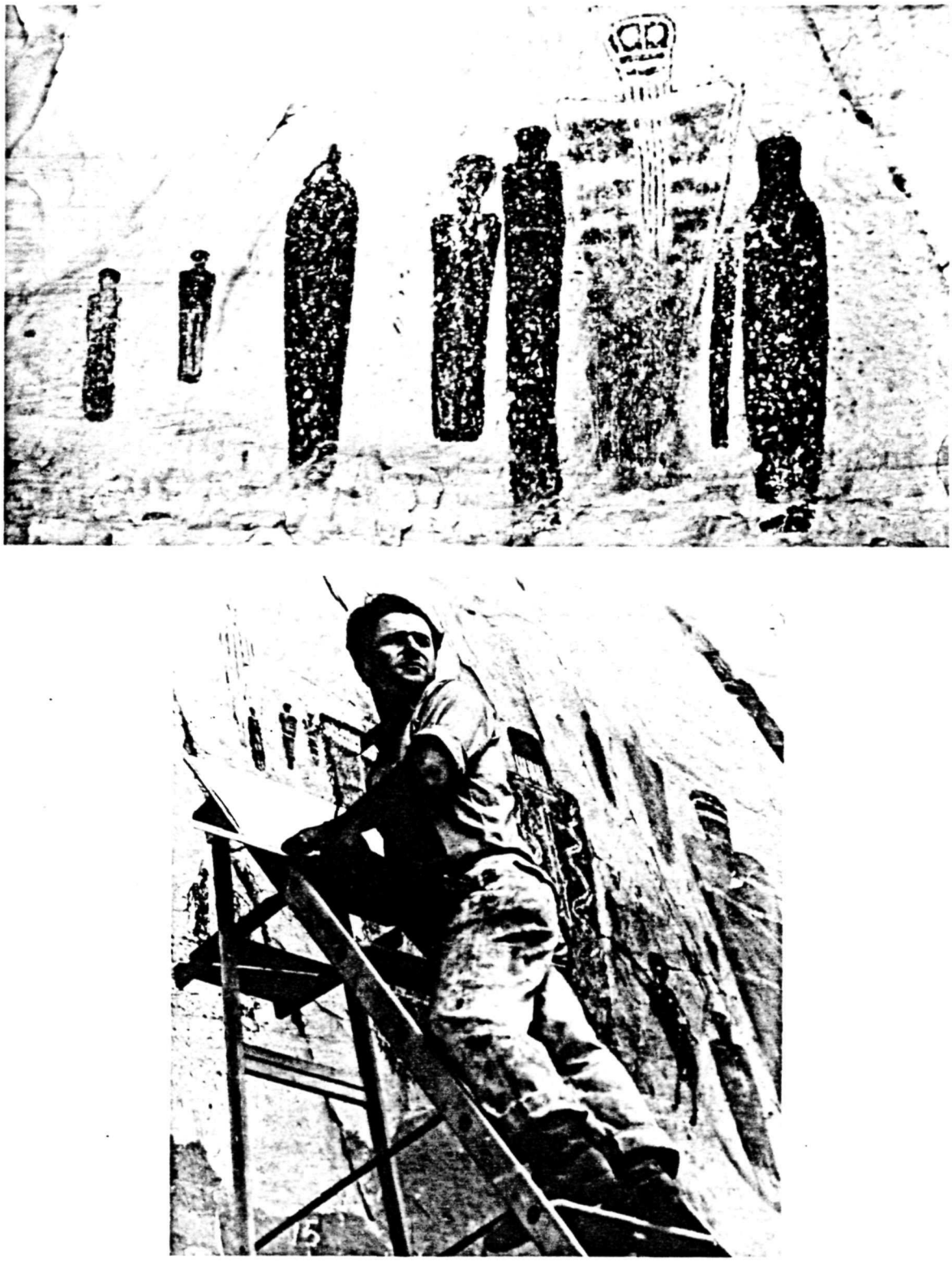


Figure 28. The Great Gallery, 42WN418. top, Ghost Panel; bottom, Ray Tolman of the W.P.A.'s Utah Art Project reproducing the pictograph panel (Malouf 1940).

The Great Gallery is not accurately located on the U.S. Geological Survey topographic maps, but its location has been corrected in this report. There is no site at the location indicated on the U.S. Geological Survey maps.

Site 42WN815

This site, recently located by Maze District personnel, is several hundred feet above Barrier Creek at the top of a high, rocky talus slope (Fig. 29). It is approximately 90 feet long and consists of a series of remarkable petroglyphs. There are Barrier Canyon style elongated, tapered anthropomorphs, bugs, something that looks like a human foot with deeply incised toes, snakes, zigzags, tic-tac-toe grids and a scratched bison that looks like the painted Fremont style bison at Horseshoe Shelter (42WN374). At the middle of the panel there are some bedrock abraders (both shaft smoothers and metates) on a flat sandstone shelf that projects directly out from underneath the panel (Fig. 30 top). There are pecked bighorn sheep, circles and a whole series of "snakes" that form a design very much like a pictograph in the High Gallery (42WN375) that suggests rain (Fig. 30 bottom). There is also a thunderbird-like petroglyph similar to the thunderbird pictograph incorporated into the High Gallery, three small (six-inch high) trapezoidal figures and something else that looks like a square. All four figures are extremely faint and it is difficult to describe them accurately.

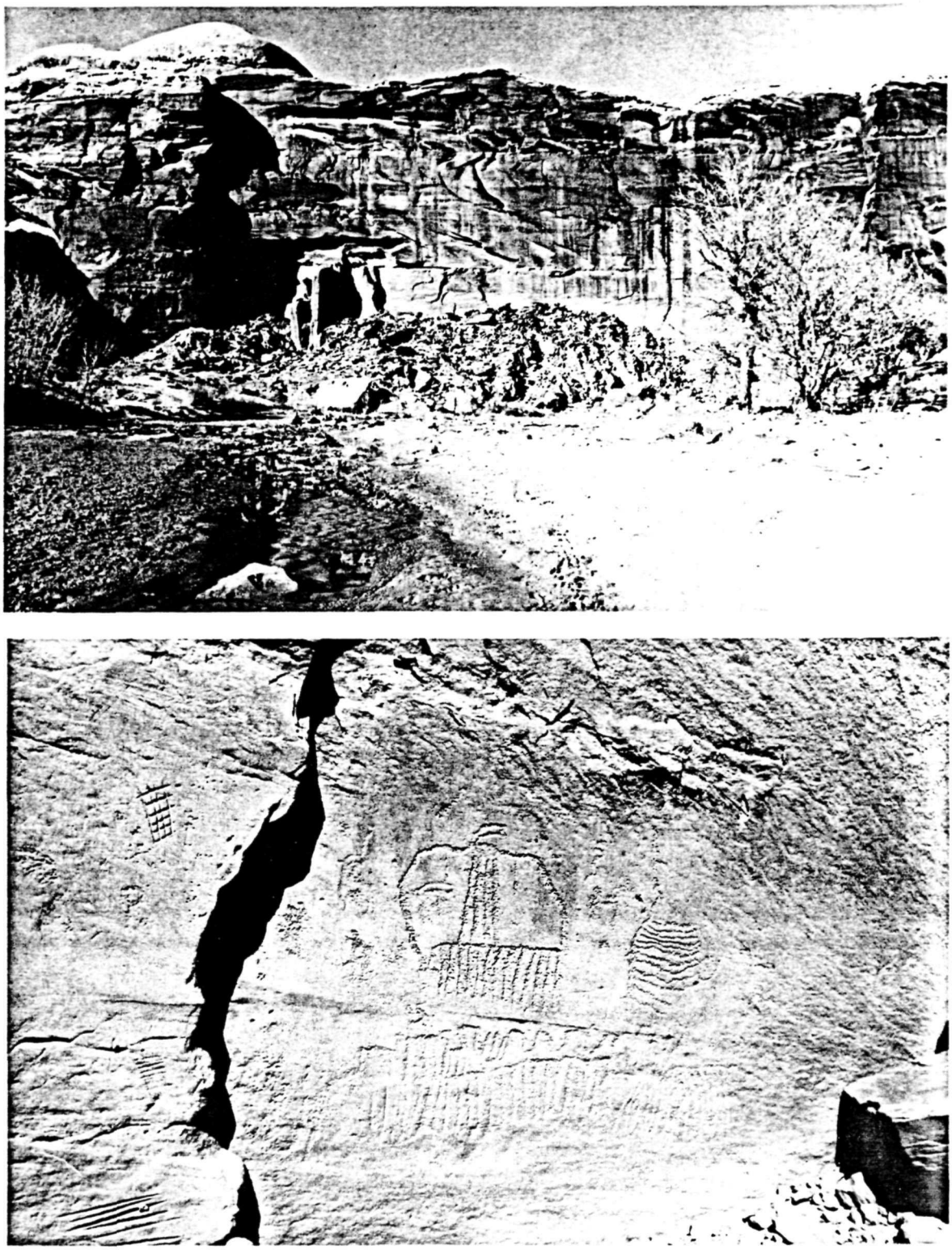


Figure 29. Horseshoe Canyon site 42WN815. top, view north to site at top of talus; bottom, petroglyph detail.

Figure 30. Horseshoe Canyon site 42WN815. top, bedrock abraders; bottom, sankes/rain petroglyph.

It is also obvious that this site has never been seriously collected or disturbed. Although there is not much standing room at the base of the panel, there is a quantity of charcoal and chipped stone debris. This is the heaviest concentration of cultural materials that now remains in Horseshoe Canyon. However, there is no evidence of ceramics or structural features of any kind-sleeping areas, cache pits, hearth areas, etc. Because of the obvious surface disturbance caused by wind blown sand and silt, excavation might expose specific activity areas and be profitable.

Site 42WN816

This small site is a combination of alternating Southern San Rafael Fremont style anthropomorphic pictographs and petroglyphs holding hands in paper doll fashion (Fig. 31). There are seven figures with rainbow-type arcs over the tops of their bucket-like heads that are decorated with headdresses, kilts, necklaces and waistbands and lack feet.

This is the southernmost site known in the Canyonlands National Park portion of Horseshoe Canyon. It is on a sandstone face located at the top of a low talus slope. There is no evidence of occupation at the site, although there are scattered chipped stone debris on the slope somewhat below the pictographs.

Gunnerson's 1969 report on the Fremont culture includes a photograph of this particular panel (1969: Fig. 31A). However, his report does not discuss the drawing. Schaafsma's Rock Art of Utah does mention the panel (1971:49) and refers to Gunnerson's photograph.

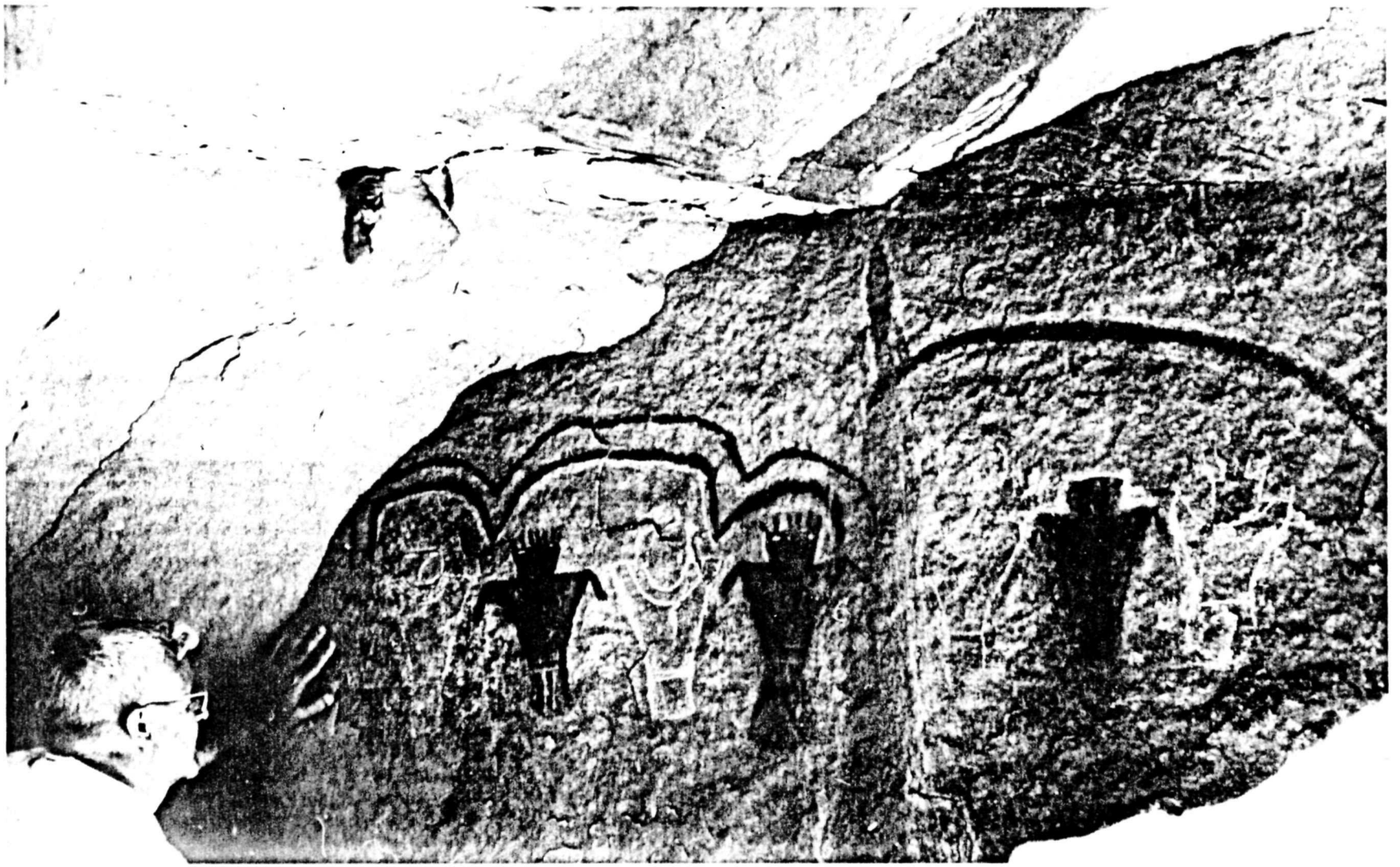


Figure 31. Fremont style art at Horseshoe Canyon site 42WN816, 1963 Bureau of Land Management photograph.

DISCUSSION AND RECOMMENDATIONS

Horseshoe Canyon Detached Unit contains five basically Barrier Canyon style sites, five generally Fremont style panels, one Anasazi style site and two sites whose rock art style is indeterminate. Some of these identifications are questionable because the diagnostic figure or figures are few and extremely faded. Furthermore, sites 42WN374 and 42WN815 (Great Gallery) have elements of both styles.

Barrier Canyon style rock art is characterized by elongated, rectangular or tapered anthropomorphs whose heads may be large and round, rectangular, bucket-shaped or missing altogether. Arms and hands are also frequently missing, but if present are generally holding wild grasses, other plants and possible gathering tools, such as at the Bird site (42WN665) in the Maze (Fig. 20). The number of small associated zoomorphs are relatively few: small birds, tiny mountain sheep clustered around the anthropomorph's head and shoulders and the Barrier Canyon style dog (Fig. 23 top). Abstract elements are rare (Schaafsma 1971:162).

In comparison, Southern San Rafael Fremont style rock art, while similar, is typified by trapezoidal or triangular figures with narrow waists and large bucket-shaped or rectangular heads and fancy headdresses (Figs. 12, 14, 31). Arms are nearly always present and are holding shields, heads, rakes, staffs and other implements. There are many small associated anthropomorphs, often hunters with bow and arrows, and many small zoomorphs; such as deer, elk, mountain sheep and bison. Abstract elements are prolific (Schaafsma 1971:162).

Based on several factors, including extreme similarity with the western Archaic Pecos River style in Texas and apparent overlap of Fremont figures on Barrier Canyon style art, Schaafsma (1971: 129-135) believes that the latter style is the oldest on the Colorado Plateau, pre-dating the A.D. 1050-1200 Fremont art. The recent excavations at nearby Cowboy and Jim Walters caves (42WN420 and 42WN421) appear to support this supposition. Here, unfired clay figurines and painted sandstone, which also occur in the Pecos River area of Texas, were found in a definite Archaic context (Schroedl 1977a:262-263).

Anasazi style art, which is rare north of the Colorado River, has many more abstract and geometric forms than the Barrier Canyon or Fremont style art. Zoomorphic figures, predominantly game animals, are emphasized while there is much less depiction of the human figure (Schaafsma 1971:147). Anasazi panels are nearly always associated with habitation sites, springs or heavily traveled routes.

As a result of this inventory work in Horseshoe Canyon, all of the known sites and all major sites in the Canyonlands Detached Unit portion of the drainage have been accurately recorded. However, in all likelihood as time goes by other sites will be discovered, probably small petroglyph sites that are very difficult to see. They are often in obscure locations and are only apparent when there is appropriate lighting or lack of foliage.

Future archeological research in Horseshoe Canyon is not a priority need. If additional sites are located they can simply be added to the inventory.

Of the several sites where problem oriented excavation would be profitable, only the Barricade site (42WN812) is in danger of becoming significantly less valuable as a resource over time. Here, the ash lens and fire area containing sufficient in-context charcoal for radiocarbon dating is being lost through erosion. This site needs to be excavated as a means of preserving irreplaceable data that are being lost through natural causes.

None of the Horseshoe Canyon sites are in danger of being disturbed by development activities; their major danger is from potential vandals. Just a few moments of destructive activity, epitomized by the 1928-1929 dynamiting incident at the Great Gallery (42WN418) and the defacement (Fig. 26 bottom) at the Alcove Site (42WN374), can forever destroy or irrepairably alter these remains that have lasted at least 900 years.

Visitor access to the sites is both desirable and unavoidable in terms of the Park Service's very purpose. However, effort should be made to educate all visitors in the need for utmost care and consideration of these sites. Active ranger patrols in the canyon, even more than are now being carried out, are a must.

Beef Basin

HISTORY OF ARCHEOLOGICAL RESEARCH

In addition to the numerous archeological areas located within Canyonlands National Park, there is an important region of extremely high site density just south of the Needles District outside the park (Fig. 1). This region is drained by Beef Basin Wash, Gypsum

Canyon and Cross Canyon. It includes Ruin Park, Middle Park and House Park; the Fable Valley region and all tributary drainages entering Beef Basin from the south (Sweet Alice Canyon, Ruin Canyon, Calf Canyon). These areas contain a significant number of high quality, unusual archeological remains. Beef Basin is roughly bounded on the west by Dark Canyon Plateau, on the south by Dark Canyon Plateau and North Long Point and on the east by Salt Creek Mesa. The most significant defining criterion, from an archeological standpoint, is the presence in a discrete and readily identifiable concentration of high quality, multi-story Mesa Verde style Pueblo ruins.

In 1909, as part or his rambling explorations of southeastern Utah, Bryon Cummings (1910a:10, 1910b; Turner 1962:1) spent three weeks in the general Beef Basin area. As far as can be ascertained, he described eight ruins in Beef Basin proper and two in Ruin Park. He may have excavated one of the latter (Pierson 1959:6). He favorably compares the multi-story circular and rectangular structures with those from the Hoyenweep vicinity, and briefly discusses a skeleton found in nearby Fable Valley (Cummings 1910a: 29-30, 43).

In 1930 the Peabody Museum of Archaeology and Ethnology's Claflin-Emerson Expedition visited the area and recorded site LS 13-2-13 in Ruin Park (Gunnerson 1969).

Somewhat later, as part of a 1945 recreational resource study of the Colorado River Basin carried out for the Bureau of Reclamation by the National Park Service, Gordon C. Baldwin (1946, 1949) recorded 18 sites in Beef Basin, 24 in the Fable Valley area and 12 in the

area between Beef Basin and the Needles. He emphasized both the limited nature of his survey and the high import of the region (Baldwin 1946:38-39). Gregory (1938:27-29) also has reported sites in Fable Valley.

The Carnegie Museum of Pittsburg's 1945-1947 San Juan Triangle expeditions recorded six sites in the Fable Valley area between Sweet Alice Spring and Fable Spring (42SA797, 42SA799, 42SA801, 42SA811, 42SA800 and 42SA798) and four just below the mouth of Gypsum Canyon (42SA787, 42SA791, 42SA793 and 42SA792). These were subsequently reported by Sharrock and Keane (1962) as part of the University of Utah's Glen Canyon Project.

In 1952 and 1953, under the University of Utah's Statewide Archeological Survey program, Jack R. Rudy (1952a:1, 1953) carried out intensive archeological survey of a small portion of the area and recorded a total of 76 sites. He also suggested that such a high number of sites in this small area was an excellent indication of the region's archeological potential. During the summer of 1953, nine of the more representative sites were excavated (Rudy 1953, 1955); Rudy's report is the only worthwhile study available for this area.

The most recent work of any consequence in Beef Basin was the short-term stabilization carried out by Gordon Keller in 1966.

The territory immediately surrounding Beef Basin, has, similarly, received very limited archeological work. Baldwin (1946:34-38, 1949:392) and Henderson (1946b) visited select sites in the Dark Canyon Plateau country. Indian Creek drainage to the east of both

Beef Basin and the Needles District, Canyonlands, although much more heavily traveled, has also received only sporadic consideration (Baldwin 1946, 1949; Gregory 1938:27-29; Henderson 1946a:11-15; Hunt 1952).

ARCHEOLOGICAL REMAINS IN THE BEEF BASIN AREA

Sites recorded in Beef Basin can be grouped into six general categories: (1) slab-lined cists or rooms that do not contain ceramics, (2) small masonry house units with little ceramic materials (3) cliff-face habitation and storage structures, (4) trash dumps without associated structures (5) one 25 room masonry pueblo (Rudy 1952a:2) and (6) rock art panels. These sites occur both in the open and as cliff dwellings and generally date from late Pueblo II through early Pueblo III times (Rudy 1955:95-96). Both pictograph and petroglyph sites are known in the region, but none are as spectacular as the major panels recorded in Canyonlands National Park, such as the Thirteen Faces (42SA1652), the Bird site (42WN665) or the Horseshoe Canyon rock art.

The Ruin Park area within Beef Basin is one of the more picturesque settings for site location. On nearly every rise there is a multi-story ruin or other large masonry structure--for open sites in unsheltered areas these remains are well-preserved and numerous. Both rectangular and circular multi-story masonry structures, a Mesa Verde Anasazi construction style, occur throughout the area. In Ruin Canyon two circular, three-story structures have been built against each other, much in the same fashion as the Fort (42SA78) at Fort Bottom on the Green River (Island-in-the-Sky District, Canyonlands) was constructed.

Rudy (1953, 1955) conducted his 1953 excavations at High House (42SA37), the Ridge site (42SA45), the Sweet Alice site (42SA197), L-House (42SA207), Knoll House (42SA209), the Stanley site (42SA218) and the Sandy sin Beef Basin and at the Pocket site (42SA71) and Flat House (42SA73) in Ruin Park. Except for the 25 room, multi-story structure at High House, these consisted of small surface masonry pueblos ranging from a single room at the Sandy site to a seven-room structure at L-House--all basically of rough-shaped sandstone blocks with occasional Mesa Verde style chinking (Rudy 1955:93). Tree-ring specimens from the Ridge site, L-House and the Sandy site yielded outside dates ranging between A.D. 1213-1233 (Bannister 1964:174).

The small size of most of these structures suggested to Rudy (1955:93) single-family dwellings, although the remains at High House imply multiple-family occupation. All major sites are located near arable land and yielded substantial evidence of farming activities.

DISCUSSIONS AND RECOMMENDATIONS

In review, the Beef Basin area, like the Salt Creek and Horse Canyon drainage listed on the National Register of Historic Places (Salt Creek Archeological District), appears to be a fertile and significant archeological area (Baldwin 1946:38-39; Rudy 1952a:3-4). This locale has yielded and certainly has the potential for providing further information on the relationship among the Mesa Verde and San Juan Anasazi and Fremont culture groups (Baldwin 1946:38; Rudy 1953:2-4, 1955:3, 96). This is one of the most northern areas where

classic Mesa Verde architecture (multi-story structures and specialized kiva features) and associated ceramics occur. And, the tall multi-story remains do not occur in such high density elsewhere in the entire region. They are distinct from the majority of nearby structural remains and form a discrete, clearly identifiable cluster of some import. On typological grounds, occupation seems to have occurred during late Pueblo II and early Pueblo III times (Baldwin 1946:38; Rudy 1955:96).

Without detailed, on-site inspection with site-specific data in hand, it is impossible to accurately correlate the various sites recorded for the area or evaluate the present condition of the cultural remains in Beef Basin. It is also evident, from working with the existing survey and report information, that only the more spectacular remains are recorded. Small chipping or limited-activity sites, known in nearby regions as a result of more recent archeological inventory work (Hogan, Losee and Dodge 1975; Losee and Lucius 1976), are glaringly absent from the records. For these reasons, specific needs in terms of research, mitigation and preservation cannot be adequately detailed.

Research

The limited work that has been carried out in the Beef Basin vicinity was done prior to (1) the extensive, pre-inundation survey and excavation in Glen Canyon National Recreation Area (Jennings 1966); (2) Sharrock's (1966) 1964 survey of the Needles District, Canyonlands; (3) recent evaluation of the Maze District's cultural

remains (Hogan, Losee and Dodge 1975; Losee and Lucius 1975; Lucius 1976) and (4) the many smaller archeological studies along the Colorado and Green rivers. This more recent work, coupled with a general shift in theoretical orientation from cultural history to functional, synchronic studies, has opened many new avenues for archeological inquiry. Remains in the Beef Basin area, specifically, are of a nature useful in approaching many of the research problems posed by the Southwestern Anthropological Research Group (SARG) for the greater southwest as a whole (Gummerman 1971).

The Beef Basin region and Fable Valley have yielded obviously contemporaneous Mesa Verde Anasazi, San Juan Anasazi and Fremont remains. Rudy (1955:3) has suggested that the Anasazi occupied the parks and basin areas while Fremont habitation was limited to the canyons. However, subsequent work in the Anasazi/Fremont borderlands indicates that this interpretation should be further evaluated, although there is little doubt of Fremont and Anasazi interaction. This relationship is little understood by southwestern archeologists and remains in the Beef Basin area are important to studying this problem.

Distribution throughout southeastern Utah of the Mesa Verde style multi-story structures is not thoroughly documented. In this regard Beef Basin appears to represent a specific enclave of Mesa Verde Anasazi traits--perhaps an actual movement of Mesa Verde peoples--into the northwestern extremes of San Juan Anasazi territory. This fairly unique aspect of Beef Basin should be further studied.

Protection

Without hesitation it can be said that cultural remains in the Beef Basin area warrant far greater protection than afforded by the currently infrequent patrols they now receive. During Baldwin's 1945 study (1946:12) he noted the occurrence of yandalism in the extremely remote area and indicated that the significance of the remains as well as their excellent condition warrants their protection. In 1952 (Rudy 1952a:2) standing walls ranged in height from 2.5 feet to 5 feet for the one-story structures and between 14 feet and 25 feet for the two and three-story remains. However, Rudy (1952a: 2, 4-7) also reported extensive vandalism, amateur "excavations" (pot hunting) and the high potential for further site destruction. He empahsized the "urgent need for an immediate intensive archeological survey throughout the region, followed by an excavation program before the sites are completely ruined by pot hunters and amateurs" (Rudy 1952a:6).

Because of the relatively spectacular appearance of these remains and their high potential for both research and interpretation they should be protected. It is apparent that adequate protective measures are not currently employed.

In order to insure appropriate care, the entire area should receive thorough cultural resource inventory and evalution as required by Executive Order 11593, and all sites, as well as the region as a whole, should be evaluated in terms of the National Register Criteria of Significance (36 CFR 800). The Bureau of Land

Management, which manages the Beef Basin area, is responsible for implementing this work in accord with existing Federal legislation.

Mitigation

Until site significance and current conditions are ascertained, appropriate mitigation needs cannot be accurately determined. However, based on what little information is available and on the known condition of similar sites in the region (specifically, those in Canyonlands National Park) it is highly probable that mitigation needs in terms of additional stabilization (Keller 1966), excavation and further protection from visitor impact will be necessary.

Summary

A systematic inventory and evaluation of the Beef Basin are badly needed in terms of (1) providing a more thorough, up-to-date and accurate picture of the area's prehistoric occupation, (2) detailing the current condition of these unique remains and (3) providing usable information for cultural resource management needs.

Discussions and Recommendations

Although the foregoing discussion concerning the archeological resources in Beef Basin and the Island-in-the-Sky, the Maze, Needles and Horseshoe Canyon Detached Unit areas of Canyonlands National Park indicates that considerable knowledge is available concerning the area's archeological resources, adequate data are missing. The very fact that considerable archeological information has accrued through the past 70 years has resulted in areas of conflict and

confusion in the archeological literature. Horseshoe Canyon Detached Unit (Anderson 1976) and the Maze District (Hogan, Losee and Dodge 1975; Losee and Lucius 1975 and Lucius 1976) have received the most thorough and systematic coverage of the entire park. While Sharrock (1966) carried out fairly extensive reconnaissance in the Needles District and a more general reconnaissance in the Island-in-the-Sky District, the specific information that is necessary for management and planning purposes, such as precise site locational data, is lacking. This information can only be determined by field checking and comparing charts, original site data and site forms with known archeological sites. As an aid to this clarification Sharrock, in a personal conversation, has indicated that at many of the sites his crew wrote the University of Utah's official site designation in some unobtrusive locale. Area personnel, particularly in the Needles and Maze districts, have undertaken a considerable amount of this field checking in conjunction with their other responsibilities. A particularly important need is clarification of the sites within the Salt Creek Archeological District.

RECOMMENDATIONS

In order to eliminate some of these problems and supply information critical to systematic and thoughtful management of these remains, the following projects are recommended. Their order does not imply priority needs;

1. An effort should be made to insure that the entire park is in compliance with Executive Order 11593. This is essential in

terms of the data needed for effective management. Archeological knowledge of the Island-in-the-Sky District and many segments of the Needles District is extremely poor. It should be recognized, however, that in terms of the intent of Executive Order 11593, Canyonlands personnel and the park's General Management Plan demonstrate appreciation of existing cultural resource legislation and make every attempt to insure that no cultural values are inadvertently lost.

2. A systematic evaluation of all known sites in terms of stabilization needs must be carried out. It is essential that a priority listing, which includes precise recommendations and cost estimates, be developed by experienced personnel in order to most appropriately utilize the stabilization monies already in the multi-year program (as of 7/22/77, FY79-83). In fact, if this evaluation is not done prior to the stabilization funds actually being in hand, a significant portion of the first year's money will have to go for evaluation of specific stabilization needs and development of cost estimates in order to carry out subsequent work. The first year's stabilization monies is greater than that programmed for subsequent years in anticipation of this need.

3. A detailed Cultural Resources Management Plan that discusses specific sites and areas, such as the Salt Creek Archeological District, should be prepared. A generalized

Cultural Resources Management Plan, which contains reference to the existing antiquities legislation (Antiquities Act of 1906, 1935 Historic Sites Act, Reservoir Salvage Act of 1960 and its 1974 amendment [Archeological Preservation Act], the National Historic Preservation Act of 1966 and Executive Order 11593) and documents the intent of the Park to adhere to this legislation, already exists. However, this type of document does not provide specific information usable by park managers and planners. Because of the significant amount of information that is available concerning the archeological resources of Canyonlands, a more comprehensive, detailed plan is essential. Such a document should include stabilization needs and priorities; an updated discussion of the steps being taken to insure compliance with Executive Order 11593; coverage of the methods being utilized, such as campfire programs, signing, etc., to interpret the area's archeological values; a list of measures being considered or actually taken, such as closing the west access road into Horseshoe Canyon Detached Unit, to protect the park's significant archeological values; the need for site-specific testing and/or excavation to add to the general archeological knowledge and interpretation of Canyonlands National Park; etc.

4. Steps should be continued towards reconciling the conflicting information that exists in the archeological literature and clarifying specific site locations.

5. Various investigators working in the general area of Canyonlands National Park have provided a series of research recommendations that should be considered:

a. Gunnerson (1958) indicates that thorough survey of the Island-in-the-Sky area is essential. He also recommends stabiliation of the Fort Ruin (42SA78) at Fort Bottom, which was done in 1977.

b. Sharrock (1966) and Hogan, Losee and Dodge (1975:27; Losee and Lucius 1975:47) recommend that further study be made of the relationship between the Pueblo period Fremont culture and the Mesa Verde Anasazi who occupied the Needles and Maze areas of Canyonlands. The relationship of these two groups has been of concern to archeologists for some time, and the most recent research has failed to clarify the situation (Lucius 1976:88-89).

c. Because of the nature of their surface remains, many of the sites in Canyonlands cannot be assigned to a temporal horizon or specific cultural group, and accurate control and interpretation of these variables is essential to any thorough study of prehistoric land use. There are indications that some sites in the area are earlier than heretofore thought (Lucius 1976:94). This and the lack of firm data control suggest a need for research in the form of test excavations--to both add to

the understanding of prehistoric use of the canyonlands country and provide background for an accurate interpretive program.

d. As a result of their recent work in the Maze District Hogan, Losee, Lucius and Dodge (Hogan, Lucius and Dodge 1975; Losee and Lucius 1975:46-49) made a series of recommendations, ranging from nomination of specific sites to the National Register of Historic Places to excavation in an attempt to preserve data before they are lost through vandalism.

6. The research and interpretive value of sites along the Green and Colorado rivers is deteriorating as recreation use of the rivers continues. Because these sites represent a unique zone of occupation, practically the only region where agriculture took place, they should be systematically studied and tested before all data are gone. The recent (1977) vandalism of site 42SA4978 on Monument Creek is a good example of the type of destruction that is occurring. The more obvious sites could be studied and visitors actually directed to them through interpretive signs and trails. Many of the less obvious remains are probably best protected by virtually ignoring them and channeling visitor interest elsewhere.

7. Today'd backcountry hikers and campers in the park frequently use alcoves and shelters, which have served as

campsites for thousands of years, thereby disturbing and seriously altering the evidence of prehistoric occupation. Many of these shelters are used simply because there is evidence of use, such as campfire circles, refuse, etc. It is recommended that at such locales evidence of modern use be eradicated and alternate campsites be made available.

8. Salvage and/or test excavation in response to visitor disturbance of specific sites having high information potential should be carried out. It has been recommended that sites 42WN663, 42WN678 (Hogan, Losee and Dodge 1975:30), 42WN773, 42WN796, 42WN805, 42GA1029 and 42GA1042 (Losee and Lucius 1975:50-65) be tested before their value is lost through visitor misuse.

CAPITOL REEF NATIONAL PARK

In 1937 Capitol Reef National Monument was set aside by President Franklin D. Roosevelt because of its ". . .unusual scientific values and other objects of geologic and scientific interest; . . ." (Presidential proclamation 2246, August 2, 1937). Additional lands were added to the monument in 1958 (Presidential proclamation 3249, July 7, 1958) and 1969 (Presidential proclamation 3888, January 22, 1969). The area became a National Park in 1971 (Public Law 92-207, December 18, 1971).

In 1937 the "objects of geologic and scientific interest" included the large rock art panels and the masonry sites recorded during the 1928-31 Peabody Museum of American Archaeology and Ethnology's Claflin-Emerson Expeditions into the Fremont River area. In 1931 Nöel Morss described these distinctive archeological remains from along the drainages in what is now Capitol Reef National Park and designated the Fremont Culture.

The easiest routes through Waterpocket Fold and across the park are along the Fremont River and the Oak, Sandy and Pleasant creek drainages. The density of temporary habitation sites and aboriginal art on the sheer rock walls and boulders along these drainages indicates that prehistoric groups made good use of these natural corridors.

The earliest recorded explorers in the area were in a party under John C. Fremont. In 1854 they crossed Rabbit Valley and discovered what is now appropriately named the Fremont River.

Gregory and Anderson (1939:1832) indicate that the party may have actually crossed Capitol Reef along the Fremont Gorge, or it may have crossed north of Thousand Lake Mountain and viewed Capitol Reef from the west. Fremont's expedition was the beginning of scientific exploration of the region and the first of many expeditions to record its wonders.

In 1870 Jacob Hamblin led the first Mormon expedition down the Fremont River, looking for potential agricultural sites (Smith, Huff, Hinrichs and Luedke 1963). By 1874 the town of Fremont had been established--the first settlement in the Capitol Reef area. During the next 10 years the nearby towns of Loa, Bicknell, Teasdale and Grover were also settled. In 1880 the first permanent settler, in what was to become the town of Fruita, homesteaded on the Fremont River near the mouth of Sulphur Creek. Utilizing the tillable land along the river to raise fruit orchards, a small group of inhabitants occupied the area until the 1940's. Charles Kelly (1945a, 1945b), in his "Writings on Capitol Reef," indicates that these early residents collected pots, baskets and other materials from the nearby archeological sites. The area was also visited during 1892-93 by personnel collecting for the Mormon Church Museum. As far as can be determined, they excavated and nearly completely destroyed a habitation site on the right bank of the Fremont River just south of Fruita (Kelly 1945a:2-3). The Fruita schoolhouse, probably constructed in 1892, is listed on the National Register of Historic Places.