

Archaeology Southwest

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Preserving Archaeology on an Unprecedented Scale

William H. Doelle, Center for Desert Archaeology

HOLD THE PRESSES! Another monument is coming! To ensure a full count, I am doing my final writing for this issue of *Archaeology Southwest* on January 20, inauguration day.

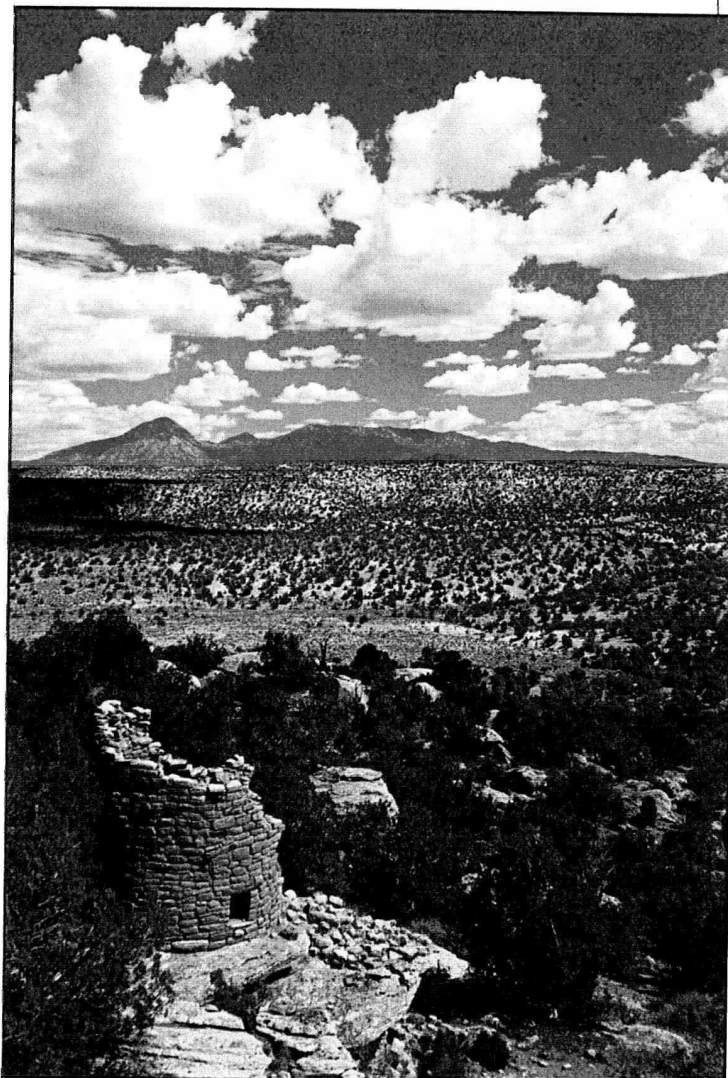
Since 1996, President Clinton has proclaimed 18 new national monuments under the authority of the Antiquities Act of 1906. This issue of *Archaeology Southwest* explores the archaeology of six out of seven new monuments located in the Southwest. The seventh – Sonoran Desert National Monument – arrived too late for an article, but is on our map (see pages 10-11).

Some of the new national monuments are only known from very limited previous study, whereas others have had numerous surveys and excavations. A reasonable estimate is that several hundred thousand archaeological sites are present within the 4-million-plus acres of the new monuments. What is even more significant, however, is that entire ancient landscapes are set aside in these monuments.

The result is that places of remarkable natural beauty and tremendous scientific value have been given added protection from the pressures of increased population and more intensive land use. Effective protection does not come about simply by presidential proclamation, however. There needs to be an inventory of what resources are present and positive measures must be taken to manage them for the long term.

The lead responsibility for those tasks falls on the Bureau of Land Management (BLM). Previously, most national monuments were administered by the National Park Service, but these large new monuments are all administered by the BLM. On June 19, 2000, the BLM announced the creation of a new National Landscape Conservation System. Its purpose is to provide "more intensive management" of the national monuments and national conservation areas that are the agency's responsibility.

This issue of *Archaeology Southwest* is an introduction to the archaeological values of the new southwestern monuments. We have solicited articles from the archaeologists who know these areas the best, and through photographs, we try to convey the natural and archaeological diversity of these new monuments. Our final pages provide additional context and commentary regarding these monuments. It is still very early in the process of creating these monuments. It promises to be a very interesting story.



A thirteenth century tower now part of the new Canyons of the Ancients National Monument in southwestern Colorado.

Courtesy of the Bureau of Land Management. Photo by Robert Jensen.

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Grand Staircase-Escalante

Doug McFadden, Bureau of Land Management

A VAST TRACT OF HIGH DESERT makes up the Grand Staircase-Escalante National Monument in south-central Utah. The monument encompasses several physiographic areas – entire landscapes – and an archaeological record that spans from at least 6000 B.C. to the Historic period. It is the effect that these varied, and sometimes marginal, landscapes had on its occupants that makes the monument's prehistory of interest. There are no great kivas, massive cliff-houses, or spectacular ballcourts. The artifacts are generally mundane – created for function rather than effect – and the social history was simple and egalitarian. What is special is the *wholeness* of the archaeological record on the monument and our ability to study it in its natural setting.

From west to east, the monument includes three major landforms:

- The Grand Staircase: a series of “steps” defined by cliff-lines and benches that ascend from about 5,000 to 8,000 feet.
- The Kaiparowits Plateau: rugged tablelands dissected by countless, mostly dry, canyons.
- The Escalante Canyons: an entrenched permanent stream whose tributaries head at over 10,000 feet on the Aquarius Plateau and flow through the desert to its confluence with the Colorado River.

These contrasting natural settings presented very different opportunities and constraints for their occupants.

Research to date has focused on the history of use for each area and on sketching in the basic adaptations employed. This approach highlights the many different ways to make a living in these sometimes harsh environments. Perhaps the most intriguing example is the simultaneous occupation of the Grand Staircase by the Virgin Anasazi, and of the Escalante Canyons and eastern Kaiparowits Plateau by the Fremont. While each group had access to the same basic technologies and agricultural methods, they employed them in very different ways. A brief review of the monument's culture history will put the Fremont/Anasazi (circa A.D. 500-1200) relationship in context.

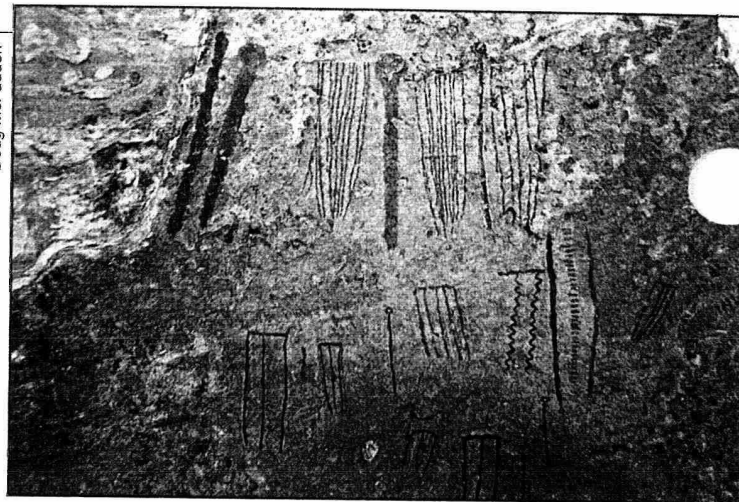
The earliest Archaic period dates in the area come from Broken Arrow Cave, located a few miles south of the monument boundary. The lowest stratum of a test excavation in the cave yielded radiocarbon dates of 6000 B.C. The occupants appear to have used the site as a base forage for native grasses and small game during the spring. A type of sandal known as “plain weave” found in

the cave suggests an affiliation with other early sites on the Colorado Plateau. Inventories conduct-

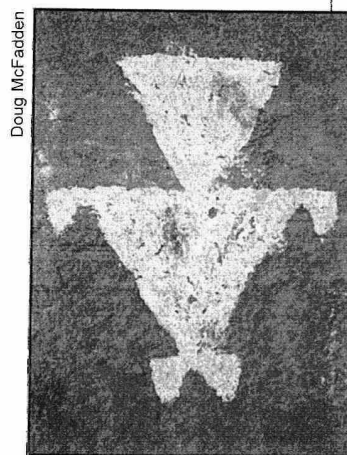
ed on each of the monument's landscapes have documented Archaic open sites. These are identified by a great variety of diagnostic projectile points ranging from early Archaic Pinto style through late Archaic Gypsum dart points.

Gypsum points are also found during the early agricultural period known as Basketmaker II on the Grand Staircase. This may indicate that agriculture here was adopted by the local population rather than introduced by migrants from the south. One important research question is whether or not the processes that led to the adoption of agriculture on the Grand Staircase, which eventually became Virgin Anasazi, were the same as those in the Escalante, which eventually emerged as Fremont?

Anasazi sites of the Agricultural period (A.D. 1-1250) are the most visible on the monument and have received the most attention from scholars. Several notable early archaeologists worked in the Grand Staircase region during the early twentieth century. Neil Judd conducted fieldwork in Cottonwood Canyon in 1919, and in 1920, Jesse Nusbaum excavated



Top: Archaic pictograph, Escalante Canyons. Middle: Fremont pictograph. Bottom: Virgin Anasazi pictograph (Cave Valley style), Grand Staircase.



the famous Basketmaker II site, Cave du Pont. In the 1930s, Julian Steward conducted an extensive survey and several excavations on the Grand Staircase portion of the monument.

The recent intensive inventory of large tracts of land by Bureau of Land Management (BLM) archaeologists has focused on understanding the distribution of different types of sites over the Grand Staircase landscape. Dispersed communities of agricultural farmsteads, with densities of up to 40 sites per square mile, occur in a variety of settings conducive to dry farming. The presence of both houses and large storage structures indicates a sedentary, year-round occupation. Careful documentation of architectural styles, site layouts, and ceramic types indicates these patterns of occupation spanned over 1,000 years – a remarkably long-lived adaptation that also suggests continuity between generations of local descent groups.

While the Virgin Anasazi were living in these dispersed communities, dry farming in the uplands, people of the Fremont culture were adapting to the well-watered canyon settings of the Escalante drainage. Unlike the sedentary Anasazi, the Fremont strategy appears to have been seasonally mobile. Clusters of pithouses best situated for big game hunting and winter residence, rather than farming, have been identified by recent inventories in the uplands. Inventories in the canyons have identified camps along arable segments suitable for summer occupation. Isolated storage granaries, concealed in the canyon walls, facilitated seasonal mobility between the two locations. These allowed the Fremont to secure seed corn for the following year and also provided short-term storage during their absence.

The Virgin Anasazi and Escalante Fremont sequences paralleled each other for several hundred years. Each was adapted to an exclusive setting and a way of life which involved virtually no interaction. About A.D. 1070, both areas were affected by the “Pueblo II expansion” – a sudden influx of traits from the Kayenta culture area of northeastern Arizona. These traits include linear masonry forms, Bull Creek projectile points, corrugated ceramics, and varied white ware designs, red wares, and orange wares.

These changes are most apparent on the eastern margin of the Kaiparowits Plateau, known as Fiftymile Mountain. Here, at about 7,400 feet, a small Fremont

Doug McFadden



Julian Steward's excavations at "Site 2" on the Grand Staircase revealed an adobe "pit lodge." These structures have recently been dated to the Pueblo I period and are now recognized as an architectural type unique to the Virgin Anasazi culture area.

occupation, evidenced by scattered pithouse rock alignments and small granaries concealed off-site, is replaced by a large Pueblo II occupation involving a new settlement pattern with diverse architectural styles and site layouts. In 1961, 11 Anasazi sites were excavated by the University of Utah (as part of the Glen Canyon salvage project). The excavators believed the occupants migrated from the Tsegi Canyon region of the Kayenta heartland. They also

assumed, based on mixing of ceramics, that the Fremont and Anasazi sites were contemporaneous. Recent tree-ring and radiocarbon dates indicate, however, that the Fremont and Anasazi occupations may have been sequential.

The nature of the Fremont/Anasazi relationship remains elusive: Did the Anasazi/Fremont form a “sociocultural continuum” as has been suggested? Did they reside together – for at least a while? Did the populations

University of Utah



Three Forks Pueblo, Kaiparowits Plateau (excavated by the University of Utah in 1960).

simply “blend” as Jesse Jennings suggested for the nearby Coombs Site? Or does the unique settlement pattern on Fiftymile Mountain – neither Kayenta, Virgin, nor Fremont – suggest that some or all of these people “reinvented” themselves by combining knowledge and traditions to form a new, more suitable adaptation?

Sometime during the thirteenth century, puebloan occupation of the monument ceases. Following a hiatus of perhaps a century or less, the distinctive projectile points and ceramics of the Southern Paiute appear in the archaeological record. Considered the "Neo-Archaic" by

tion water, expanded into south-central Utah during the 1860s. Apart from the historic Paria town site, there are only light traces of Mormon use of the monument. The most intensive use of the landscape was grazing, which put severe pressure on the traditional Paiute foraging way

while conducting his historic triangulation surveys during the 1870s (triangulation cairns occur on the monument). During the 1930s, ethnographer Isabel Kelly described traditional uses on the monument by both the Kaibab and Kaiparowits Paiute bands.

Regarding the fate of the Paiute way of life, Kelly says:

This kaleidoscope of experiences and of exposure to culture change can only be described as dramatic. It must also have been traumatic.

Clearly, there are tremendous opportunities for researching all forms of culture change on the monument. During the past 8,000 years, major adaptive changes occurred due to external social influences, climatic shifts, and environmental change. In contrast, there was a *lack* of significant change and interaction during some periods. In fact, the long-term stability of the puebloan occupation seems particularly remarkable. Building upon a foundation of previous research, the monument's cultural resource program will not only protect these cultural resource values, but will encourage archaeological inquiry to develop and enhance them.

Doug McFadden



Fremont granaries (ca. A.D. 900) built under a rock ledge.

and gathering. Indeed, the widespread distribution of camps and activity areas over a variety of environmental settings evidences a highly mobile way of life with little or no agriculture. Paiute culture seems to have been stable until the mid-nineteenth century.

Mormon settlement, which was characterized by a village pattern along streams capable of providing irriga-

The New National Monuments of the Southwest

Name	Acres	Date of Proclamation
Grand Staircase-Escalante	1,900,000	September 18, 1996
Agua Fria	71,100	January 11, 2000
Grand Canyon-Parashant	1,014,000	January 11, 2000
Canyons of the Ancients	164,000	June 9, 2000
Ironwood Forest	134,750	June 9, 2000
Vermilion Cliffs	293,000	November 9, 2000
Sonoran Desert	487,000	January 17, 2001

Vermilion Cliffs

Diana Hawks, Bureau of Land Management

ONE OF THE MOST SCENIC AREAS in northern Arizona is now the Vermilion Cliffs National Monument. The majestic Paria Plateau is a large geologic terrace lying between two great geologic structures, the East Kaibab and the Echo Cliffs monoclines. The lower Paria River Canyon defines the north-eastern and eastern edges of the Paria Plateau. The Vermilion Cliffs, which encompass most of the plateau and define some of the walls of the canyon, are the south-east, south, and southwest sides of the plateau. Access to the Paria Plateau is from the west only, on one of three dirt tracks that require 4-wheel drive.

Work conducted by the Museum of Northern Arizona (MNA) beginning in 1967 located hundreds of prehistoric sites in House Rock Valley, the western third of the Paria Plateau, and in the Paria Canyon. At that time, the majority of sites appeared to date to the Pueblo II and early Pueblo III time periods. More recently, BLM inventories using Sierra Club Service Group volunteers have re-evaluated some of the sites located by MNA in the Paria Canyon. A large portion of the rock art in the canyon appears to date stylistically to Archaic and Basketmaker times and is very similar to rock art found in the San Juan drainage system northeast of the Paria Canyon. However, later Pueblo II and Pueblo III rock art styles also appear in the canyon.

Sites in the Paria Canyon are primarily rock art with a few rockshelters also found. This suggests that the canyon served mainly as a travel corridor or was used for the water, plant, and animal resources it contained.

On the Paria Plateau and in House Rock Valley, the presence of larger sites that may have been occupied longer suggests a slightly less mobile population. Both Kayenta and Virgin Anasazi ceramics and architecture are found in these areas. No sites have been excavated within this new monument; therefore, details of the Ancestral Puebloan occupation are simply not available.

Southern Paiute were living in the monument when the first European explorers arrived. On October 22, 1776, Father Escalante says:

Night overtook us while we were descending on the other side along a very high ridge, steep and full of rubble [Buckskin Mountain due west of the monument]. From it we saw several fires below, beyond a short plain . . . we came to the fires where there were three tiny camps of Indians.

Descendants of these Indians live on the Kaibab Paiute Indian Reservation at Pipe Springs, Arizona.

Bureau of Land Management



View across Marble Canyon of Paria Plateau.

Several hogans and sweat lodges on the Paria Plateau attest that the Navajo had at least a limited presence here. These sites are believed to date to the early or mid-twentieth century.

Historic travelers through the monument include the Dominguez-Escalante expedition of 1776, Mormon exploring parties led by Jacob Hamblin in the 1860s and 1870s, and John Wesley Powell's mapping endeavors of the 1870s. A portion of the Old Arizona Road/Honeymoon Wagon Trail traverses House Rock Valley to cross the Colorado River at Lee's Ferry, just south of the new monument.

In 1911, Sharlot Hall came to the Arizona Strip to see if the land north of the Grand Canyon should be included in the new state of Arizona. The high Vermilion Cliffs caught her attention.

We crossed a rough divide and turned down toward the Colorado River. Far across the rim the Pahreah Plateau stood huge and gorgeously colored. This great cliff wall . . . is wilder and grander than anything we have seen so far . . . They are so wonderful that I can hardly take my eyes off them . . . They are the brightest and deepest red of anything in the way of earth that I have ever seen and a purple mist fills all the little clefts and canyons.

As Hall left House Rock Valley heading west, she wrote:

Now we had the most tremendous mountain panorama before us; we were climbing every hour and could look out over the top of the Pahreah Plateau on the right hand—a semi-mesa covered in wildest confusion with cones and saw-toothed peaks [Coyote Buttes] of rich-tinted sandstone and overgrown with cedar and pinon trees. The red land seemed to grow redder every mile and the sunset brought masses of purple and gold in the sky and deep smoke-drifts of lavender haze in the canyons.

The scenery and history so admired by Sharlot Hall remains today for visitors to discover and enjoy.

Grand Canyon-Parashant

Diana Hawks, Bureau of Land Management

A HELICOPTER LANDED AT TUWEEP AIRSTRIP in barren Toroweap Valley. It left President Clinton and Secretary Babbitt near the north rim of the Grand Canyon. A table and chair, hastily borrowed from Tuweep Ranger Claire Robert's home several miles away, were the only props as the President signed a proclamation creating the Grand Canyon-Parashant National Monument. This million-acre monument will be managed jointly by the Arizona Strip Bureau of Land Management (BLM) and Lake Mead National Recreation Area of the National Park Service (Lake Mead). Two hundred thousand acres are on lands administered by Lake Mead and 800,000 are on lands administered by the BLM. The monument was created for its geological, archaeological, and historical resources, as well as for the traditional western ranching and Native American life ways associated with it.

The area is remote and rugged. The closest towns are St. George, Utah, and Bunkerville, Nevada, each a full hour from the monument's nearest edge. There are no paved roads or services in the monument. Generally, the roads become progressively worse the farther south one drives. This truly feels like a "land that time forgot." As such, it fits well within the BLM's new National Landscape Conservation System.

The monument includes portions of the Colorado Plateau and the Great Basin physiographic provinces.

Elevations range from 1,500 feet to over 8,000 feet. Vegetation of the lower Mohave Desert region includes Joshua tree forests; the mesas and plateaus support pinyon and juniper; the highest mountains have forests of Ponderosa pine.

Just as the topography and environment of this new national monument are diverse, so too were

past human occupations and uses. To date, archaeological research on the monument has been extremely limited. A number of small surveys have been conducted, and Lake Mead completed some larger inventories on the Shivwits Plateau. Approximately two percent of the Grand Canyon-Parashant National Monument has been inventoried for cultural resources – which leaves about 980,000 acres left to walk. No archaeological excavations have been conducted in the monument.

People occupied this landscape for thousands of years, with Archaic sites the earliest sites known thus far. These are represented primarily by points and large, open sites. More research would almost certainly increase the count of early sites.

The majority of sites recorded thus far relate to the Ancestral Puebloan (Anasazi) occupation, perhaps beginning as early as several hundred years B.C., and lasting until at least A.D. 1250. Nearby Ancestral Puebloan sites that have been excavated and dated, at Colorado City and at the Pinenut Site on the Kanab Plateau, show occupation to at least A.D. 1250. The diverse sites include artifact scatters, rock art, villages, fieldhouses, and trails, indicating that puebloan occupation and use of the monument was extensive.

The monument is located within the heartland of the Virgin Anasazi. This westernmost branch of the Anasazi (Ancestral Puebloan) culture area stretches from Las Vegas, Nevada, east along the Virgin River and south to the Colorado River and the Grand Canyon. It is possible that the monument area was a production zone for several of the ceramic types found in the Virgin Anasazi

area. Olivine (peridot) temper has long been recognized as a distinguishing characteristic of the Moapa plain and corrugated wares of the Virgin Anasazi. To date, source areas for such olivine have been found only on the southern Uinkaret Plateau at Vulcan's Throne, Mt. Trumbull, and Mt. Emma. Olivine-tempered wares are found west,

Bureau of Land Management



Only a few rock art sites have been recorded within the monument. The largest is at Nampaweap, easily accessible from Mt. Trumbull. Rock art styles at this site reflect Archaic, Ancestral Puebloan, and Paiute use.

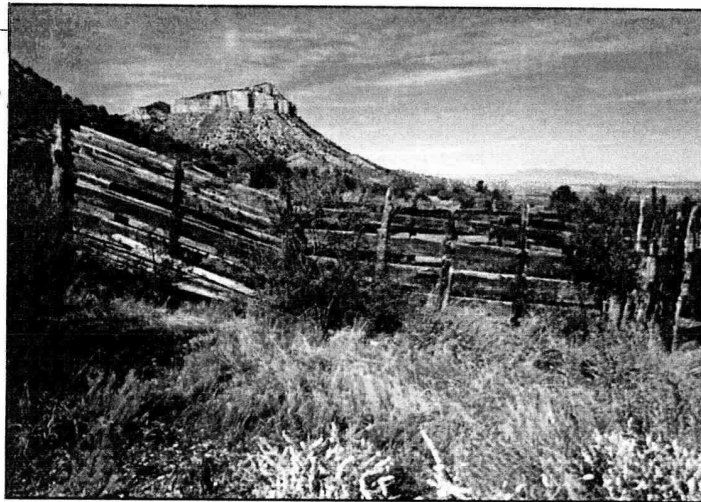
north, and northwest of Mt. Trumbull wherever Virgin Anasazi sites occur. Future research on the monument may explore evidence for where this pottery was produced and how it was distributed.

Oral migration histories from several clans of the Hopi Tribe, living descendants of the Ancestral Puebloan people, tell us they lived within the Grand Canyon-Parashant National Monument.

Linguistic evidence suggests the Southern Paiute may have arrived in northern Arizona around A.D. 1100-1150, which implies an overlap with the Ancestral Puebloan occupation. This is a major archaeological question still to be answered.

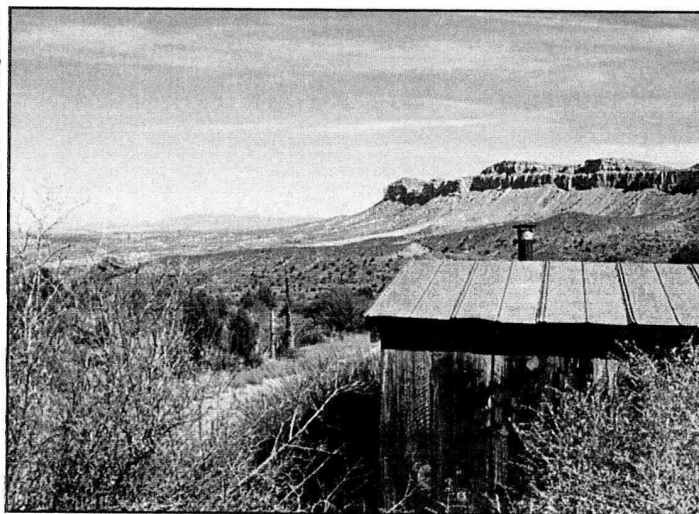
It is certain that Southern Paiute were on the landscape when the first EuroAmericans arrived. The expeditions of Spanish explorers Dominguez and Escalante in 1776, and later Antonio Armijo in 1829, all occurred immediately north of the monument. Mormon settlers arrived in the 1850s and began to occupy and explore the area. Southern Paiute families living on and near the limited water resources of the region were probably immediately displaced. Southern Paiute response to the EuroAmerican occupation was mixed. Some were baptized and joined the Mormon settlements; some remained in remote and isolated portions of the Arizona Strip as late as the 1920s. The first ethnographies of the Southern Paiute resulted from John Wesley Powell's expeditions to map and study the region in the 1870s. Living descendants of these early Southern Paiutes can be found today at the Kaibab Paiute Reservation at Pipe Springs, Arizona; the Shivwits Reservation, west of St. George, Utah; the Moapa Reservation at Moapa, Nevada; and scattered among the Paiute Indian tribes of Utah.

Bureau of Land Management



In the past, people lived within and near the monument in isolated farmsteads, ranches, and small communities. Today, only a handful of people live year-round on land just outside the monument.

Bureau of Land Management



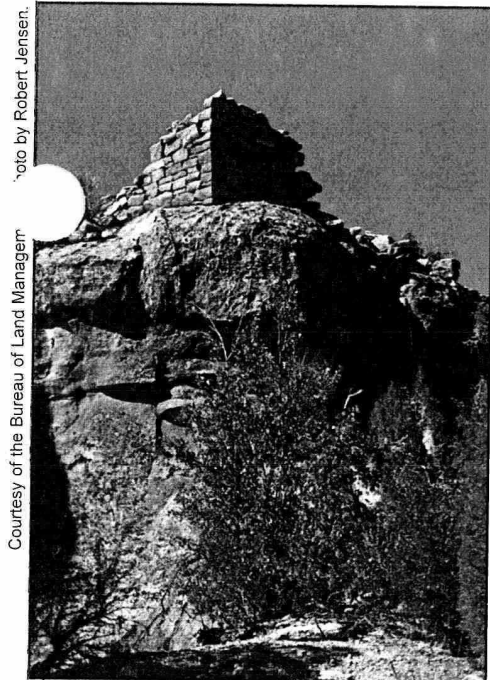
A young Southern Paiute man from the Shivwits Reservation approached me during a field trip to the Grand Canyon-Parashant National Monument last February and asked if I knew where Sanup Mountain was. He said it was where his grandfather had lived. I had never heard of it, so we looked on the Arizona Strip map and found Sanup Plateau. It is located within the present boundaries of Grand Canyon National Park, immediately south of the monument. During the course of that one-day field trip, several other Paiutes quietly asked us to show them other landmarks they had heard about their entire lives from their grandparents. Place names like Parashant Wash, the Pagoon, Toroweap Valley, Shivwits Plateau, Uinkaret Plateau, and Mociac all tell

us the Southern Paiute were here before any English or Spanish-speaking person arrived.

Making a living on the land has always been difficult within the monument and on the Arizona Strip. A few ranchers and dry land farmers homesteaded on remote family ranches. The Grand Gulch Copper Mine operated from the 1880s to the 1920s and then intermittently until the 1960s. In the 1870s, large Ponderosa pine logs were hauled to St. George, Utah, by wagon to construct the Mormon Temple. Today, that wagon road is called the Temple Trail, and it stretches some 70 miles from Mt. Trumbull along the top of the Hurricane Cliffs and down into the St. George Basin.

Alfonzo Ortiz's characterization of the entire Southwest seems particularly apt for the Grand Canyon-Parashant National Monument:

Here, truly, the imagination soars and the very spirit is set free.



Courtesy of the Bureau of Land Management. Photo by Robert Jensen.

Scenic canyon is capped by ancient walls.

Canyons of the Ancients

Mark D. Varien, Crow Canyon Archaeological Center, and
LouAnn Jacobson, Bureau of Land Management

IN THE HEART OF one of the world's best known archaeological areas, the Mesa Verde region of the northern San Juan River drainage, lies Canyons of the Ancients National Monument. The area is famous for the

spectacular cliff dwellings found in Mesa Verde National Park, but the park is less than one percent of the larger region.

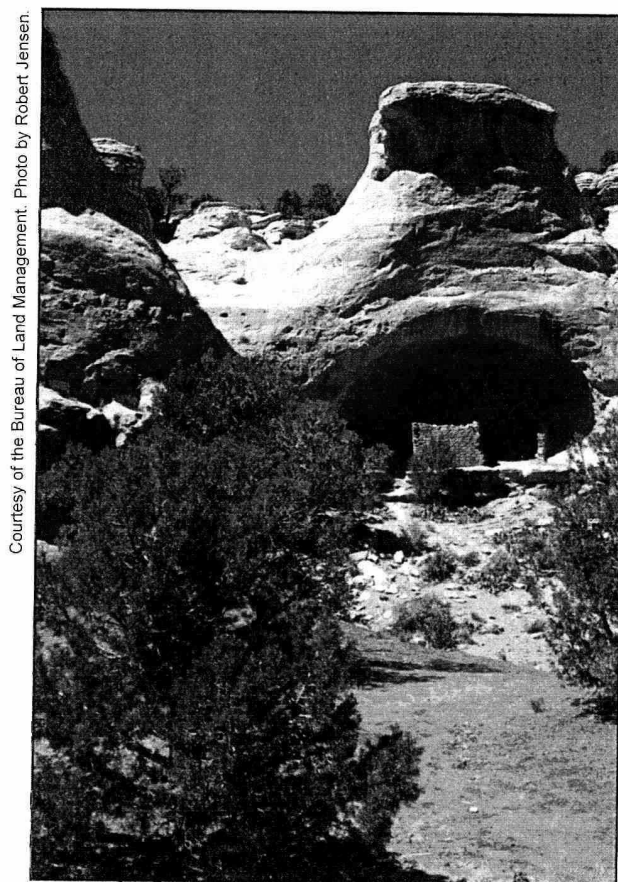
Canyons of the Ancients lies to the northwest of Mesa Verde National Park in an area early European explorers called, "The Great Sage Plain." That plain, so deceptively featureless from a distance, is composed of nearly level uplands, capped with fertile soils, dissected by hundreds of deep, rocky canyons. The new monument encompasses an area shaped roughly like a right triangle. The (southern) base of the triangle lies just north of McElmo Creek, the western edge is the Colorado-Utah border, and the diagonal that forms the east side of the triangle is a jagged interface of public and private land that lies just west of Highway 666 between Cortez and Dove Creek, Colorado.

The purpose of the monument, as stated in the proclamation, is to protect the cultural and natural resources located within its boundaries — an area with the highest known density of archaeological sites in the United States. The State Historic Preservation Office data base reveals some 6,000 recorded sites within the monument, with site densities as high as 100 sites per square mile in some areas. Only a portion of the monument has been surveyed. Thousands of additional sites would undoubtedly be identified with a full inventory.

Humans were present in the monument as early as the Paleoindian period; however, evidence of occupation during this period is limited to three sites. Archaic period hunter-gatherers also occupied the monument, and 80 sites dating to this interval have been recorded. The vast majority of sites within the monument were created by

ancient puebloan farmers. The introduction of corn farming to the area likely occurred sometime in the first millennium B.C., although population was sparse until the seventh century A.D. Puebloan occupation of the monument increased dramatically at this time and flourished until the end of the thirteenth century. During this interval, puebloan people constructed thousands of homes and left behind a myriad of sites, including large villages, small hamlets, fieldhouses, granaries, shrines, and rock art panels.

These seven centuries of intensive use occurred during two distinct cycles of occupation, the first dating between approximately A.D. 600 and 900 and the second between A.D. 950 and 1300. Remarkably, the two occupational cycles share many characteristics. Both began with low population density and ended with high population density; they began with dispersed settlement and ended with the formation of large, aggregated villages;



Courtesy of the Bureau of Land Management. Photo by Robert Jensen.

A small site representative of the many cliff dwellings in Sand and East Rock canyons.

and both cycles ended with migrations that left the region largely or completely depopulated.

The archaeological sites most visible today are those dating to the thirteenth century. A shift in the location of residential settlement from upland settings to canyon environments occurred during this time. Communities also changed at this time from clusters of small farmsteads scattered over several square kilometers, to villages where hundreds of people lived cheek by jowl. The largest villages in the region, some containing more than 500 structures, are found

within the Canyons of the Ancients National Monument. The preservation at these villages is extraordinary, often including standing buildings that are several stories in height. Well-preserved cliff dwellings – sometimes with intact walls, doorways, and roofs – are found where suitable alcoves are present. Most numerous by far are the thousands of small sites found in open

settings. At all of these sites the ground surface is littered with broken pieces of corrugated gray ware cooking pots, broken pieces of white ware bowls and jars that are decorated with elaborate designs executed in black paint, and a variety of stone tools.

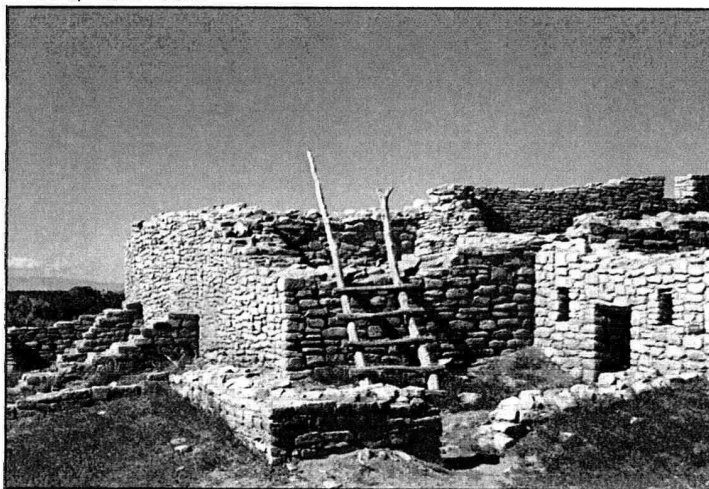
This wealth of material culture has attracted scholars to the monument for over a century. Their research has played an important role in the development of American archaeology as a professional discipline and in the creation of an enhanced awareness of archaeology among the general public. The earliest scientific study of the area's archaeology was by William H. Holmes and William H. Jackson in the 1870s. Lewis Henry Morgan visited the McElmo valley in 1878, and his maps and interpretations appeared in the 1881 publication, *Houses and House-Life of the American Aborigines*. At the turn of the century, T. Mitchell Prudden conducted archaeological investigations that documented the basic residential unit used by puebloan households. In 1907, Sylvanus Griswold Morley, Alfred Vincent Kidder, and John Gould Fletcher were recruited by Edgar Lee Hewett to conduct a survey in the McElmo drainage, and Morley returned in 1908 to excavate Cannonball Ruin. Jesse Walter Fewkes also conducted a reconnaissance of the area, reporting his findings in 1919. Collectively, this

early research did a great deal to raise public awareness about the need to preserve and study archaeological sites. As a result, the General Land Office set aside the Goodman Point ruins in 1889. This was followed by the adoption of the Antiquities Act and the creation of Mesa Verde National Park in 1906.

The work of Paul Martin in the 1920s and 1930s signaled a new era for archaeological research in the area. His report on the excavations at Lowry Ruin set a new standard for archaeological documentation and interpretation.

However, it is the research of recent decades that has exponentially increased our knowledge of the ancient history of the monument. Most of this research has been cultural resource management projects conducted in conjunction with energy development within the monument. In addition, long-term research in the monument by the Crow Canyon Archaeological

Photo by Robert Jensen.



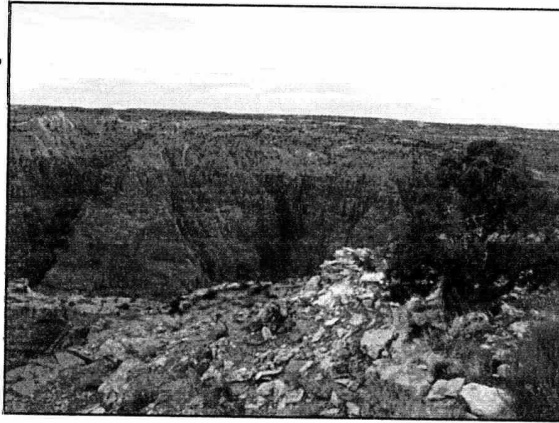
Lowry Pueblo National Historic Landmark.

Center was initiated in 1983, and continues to the present. Among the many achievements, this collective research has outlined the basics of household and community organization, documented the presence of conflict and warfare, reconstructed the general configuration of the regional settlement system, and produced detailed reconstructions of both the paleoenvironment and the subsistence economy.

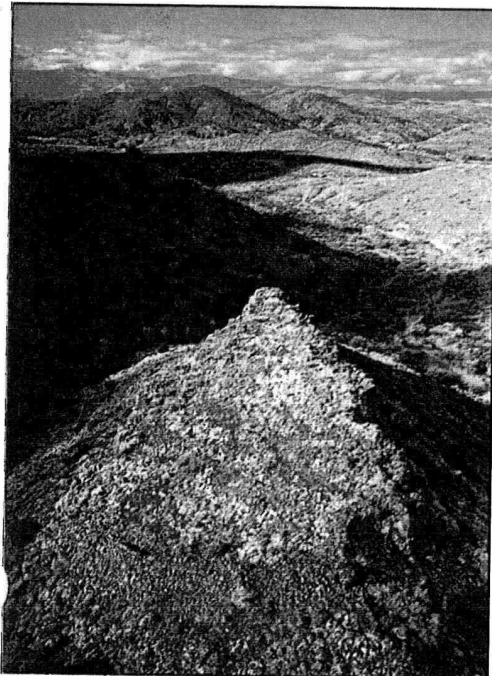
The Bureau of Land Management (BLM) will begin working on a long-term management plan for the monument sometime in 2001 and will ensure participation by Native Americans and members of the local community. Ultimately, this plan will guide activities such as conducting site assessments, identifying preservation needs, and addressing any impacts to the archaeological resources. The monument designation should provide better funding for protecting and interpreting the irreplaceable cultural and natural resources located within the monument. In 2001, expanded funding will include the establishment of several new positions, including a manager, an archaeologist, and a law enforcement officer. The BLM's Anasazi Heritage Center, near Dolores, Colorado, will provide information to visitors and researchers interested in learning more about the monument.



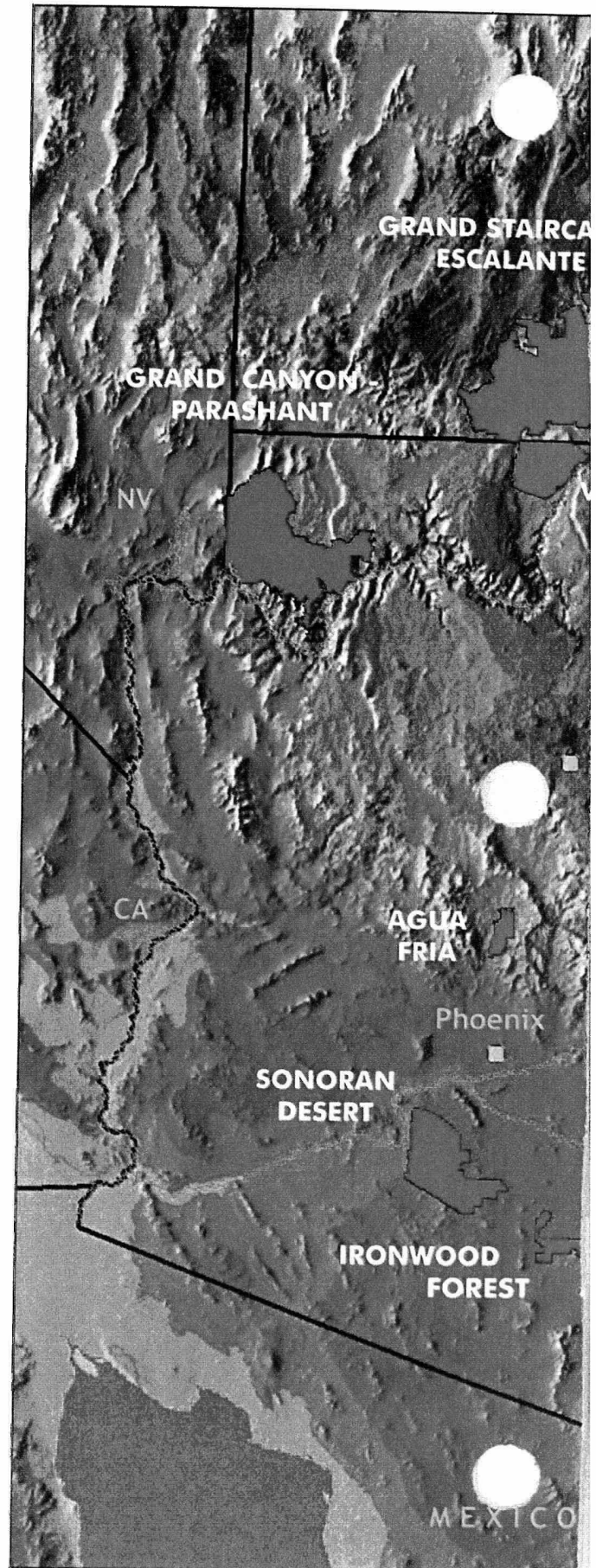
GRAND CANYON-PARASHANT, Nampawcap site petroglyphs.

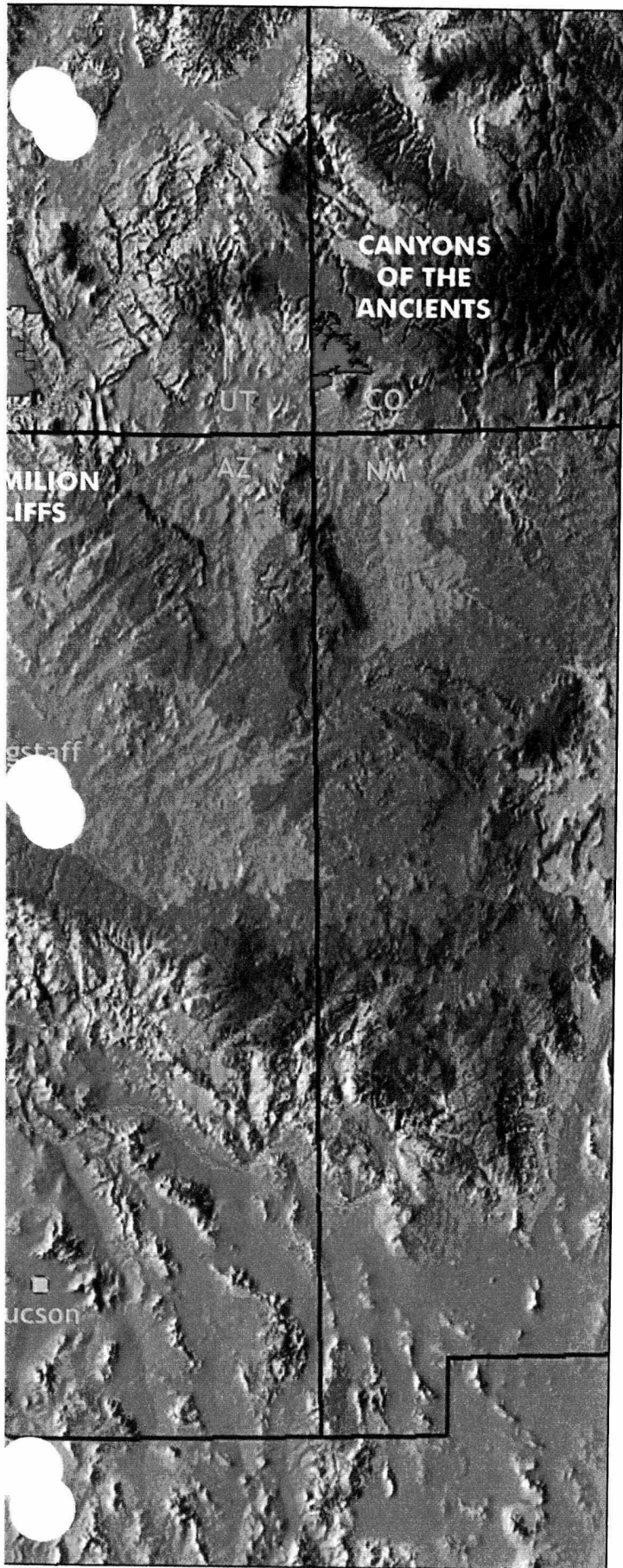


VERMILION CLIFFS, general view.

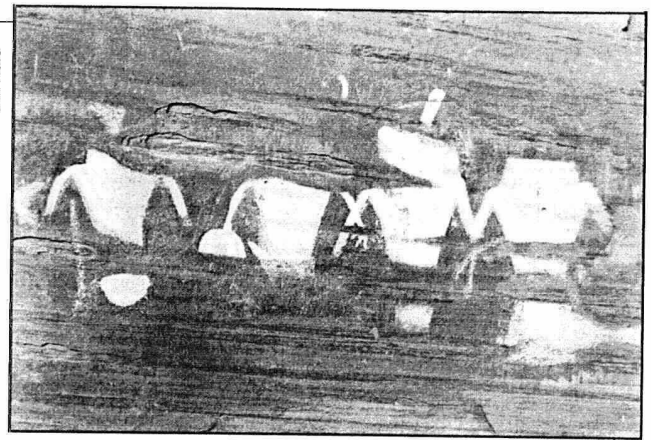


AGUA FRIA, Fort Silver site.





Bill Hale



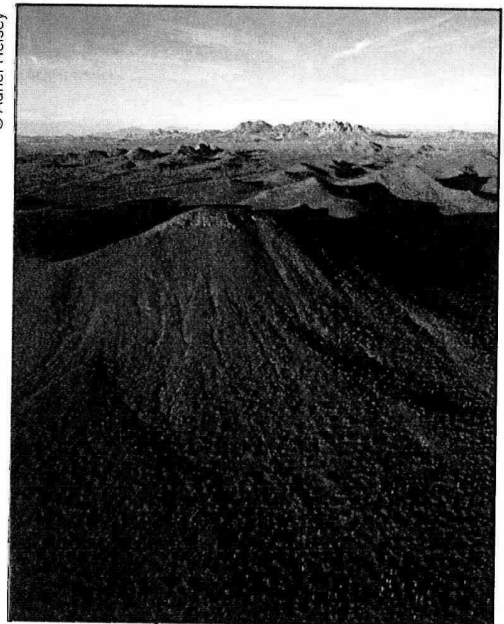
GRAND STAIRCASE-ESCALANTE,
life-size Fremont pictograph.

Bureau of Land Management



CANYONS OF
THE
ANCIENTS, painted,
plastered wall inside
cliff-dwelling.

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IRONWOOD FOREST, site of
Cerro Prieto.

Agua Fria

J. Scott Wood, Tonto National Forest, and David R. Wilcox, Museum of Northern Arizona

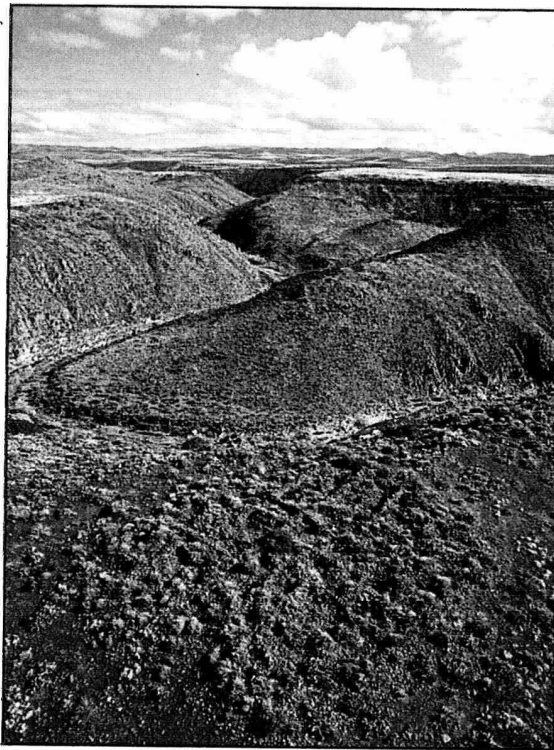
TWO MESAS RISE MAJESTICALLY out of the desert, a shield wall at the northern boundary of the Phoenix Basin. Capped with basalt from an ancient volcano, the sheer cliffs of Black Mesa and Perry Mesa soar a thousand feet above the Agua Fria River, reaching elevations as high as 4,000 feet. Black Mesa is familiar to Arizona travelers, as it carries the twin ribbons of asphalt designated as Interstate 17.

The Agua Fria National Monument straddles the Agua Fria River and contains more than 450 archaeological sites. Two-thirds of these sites, including the entire late prehistoric occupation, are concentrated at the south end on Black Mesa, and especially, Perry Mesa. Together, the mesas cover nearly 50,000 acres; however, only about 38,000 acres are included in the national monument. About one-third of Perry Mesa is located within the Cave Creek Ranger District of the Tonto National Forest.

Perry Mesa looks foreboding and inaccessible on the east side of the river. Deep, narrow canyons slash the western edge. Towering cliffs mark the northern and southern boundaries overlooking Silver Creek and Squaw Creek. Dense vegetation runs up these drainages, framing the grasslands with riparian forest.

The few who actually reach Perry Mesa find a gently undulating surface awash in a sea of bright tobosa grassland and juniper savannah. It is home to deer, antelope, mountain lions, and a few cows, but has no permanent human population. This was not always so. Well over 300 archaeological sites have been identified on Perry Mesa, situated on an essentially intact fourteenth century landscape. Seven major residential clusters, averaging about 200 rooms each, are the core of an ancient settlement system. The residential clusters, composed of multiple massed room blocks, are arrayed in defensive positions around the perimeter of the mesa, while small farmsteads and fieldhouses dot the interior.

© Adriel Heisey



Badger Springs Ruin is part of a well-preserved, fourteenth century landscape.

The Perry Mesa population and cultural tradition appear to have originated from the same sources as the Hohokam of the Salt River Basin. However, the Perry Mesa inhabitants had developed their own distinctive cultural tradition by the late Classic period. Their trade, cultural influence, and alliances extended well to the east across the distant Verde River.

The earliest residents of Perry Mesa, aside from occasional Archaic hunters and gatherers, were a few pioneering Hohokam homesteaders who established several small pithouse villages on the broad, grass flats of the mesa top. By late pre-Classic times, settlement locations had shifted to the edges of the mesa.

This pattern was consolidated in the early Classic period with the construction of surface masonry versions of the pithouse sites and the introduction of the modular compound site layout. These features became popular throughout the uplands between the Agua Fria and lower Verde rivers. During the late thirteenth century, a network of fortifications was built along the southern and western edges of the mesa. By the fourteenth century, the growing population had absorbed at least some of the groups who abandoned the Prescott Highlands in the late 1200s. Nearly all of these people were living in massive, multi-room, masonry structures.

After the area was abandoned near the end of the fourteenth century, it remained largely unoccupied with the exception of relatively mobile groups such as the Tonto Apache, Yavapai, and Basque sheep herders. This lack of subsequent residential occupation has left the prehistoric landscape relatively undisturbed. Consequently, Perry Mesa is a natural laboratory for archaeological research, especially for settlement pattern analysis. Additionally, the basalt cliffs are decorated with abundant rock art – pecked and painted – and the mesa top itself is covered with extensive agricultural fields interspersed with large agave roasting pits and clusters of bedrock grinding features.

Research by professionals has been limited. As early as 1955, the larger ruins were visited by university professors and their students on field trips. In the late 1960s, Peter Pilles recorded several dozen sites on the eastern side of the mesa. In the 1970s, surveys and small excavations were conducted by Prescott College and Southern Illinois University (the Central Arizona Ecotone Project) and by the Museum of Northern Arizona. In 1990, the Bureau of Land Management (BLM) began a series of cooperative efforts with the United States Forest Service (USFS) to inventory, protect, and ultimately interpret, this unique area to the public. These efforts resulted in an assessment of vandalism to Perry Mesa sites, additional systematic survey, an archaeological overview, and establishment of one of the nation's largest National Register districts.

Vandalism has been a serious problem at Perry Mesa. By the early 1960s, most of the larger ruins and their cemeteries had been looted. A second wave of vandalism in the mid- to late-1970s thrust Perry Mesa onto the national stage. In 1977, three Utah men were caught digging on USFS land. Two years later, as a direct result of the judicial circumstances of that case, the Archaeological Resources Protection Act (ARPA) of 1979

was passed. Those same three men pleaded to ARPA violations as an alternative to the penalties awaiting them under the theft of government property statutes. They were the first to be convicted, fined, and imprisoned under the new law.

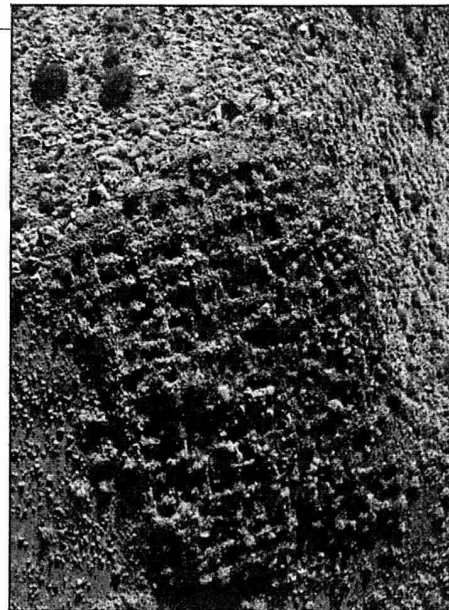
As a result of this notoriety, Perry Mesa was soon subject to a different kind of visitation – recreational tourism. By 1985, Perry Mesa had become one of the most popular field trips for the Arizona Archaeological Society (AAS). Since 1990, tours have been conducted on the mesa on a nearly annual basis by both BLM and the USFS.

In 1997, after a Perry Mesa site tour, Jerry Robertson proposed an innovative assessment of the pat-

tern of fourteenth century settlements. Jerry was an avid member of the Verde Valley Chapter of the AAS. Moreover, he was a veteran of the war in Vietnam who retired from the 101st Airborne Division of the U.S. Army. Jerry drew on his military training, and he observed that the entire mesa top had been organized as an integrated defensive system that served the whole population.

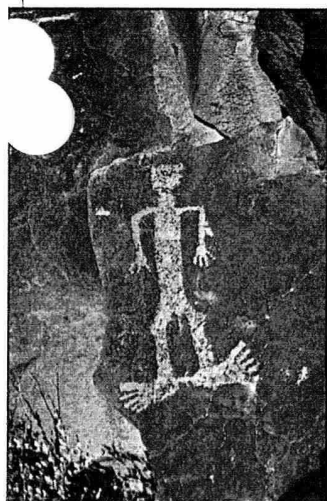
We began working with Jerry to develop these ideas. A little fieldwork documented the presence of a series of defensive sites on and around Perry Mesa that could have served as a "command and control" system. They included a sophisticated early warning system that covered the entire length of Squaw Creek and extended into Bloody Basin along an ancient trail system. This evidence from Perry Mesa became the center of a controversial proposal that suggested many of the shifts in settlement patterning during the Classic period throughout central Arizona were the direct result of regional warfare. Wilcox, Robertson, and Wood published this proposal in the Summer 1999 issue of *Plateau Journal*.

Bruce Babbitt, Secretary of the Interior for the Clinton administration, happened to read that *Plateau Journal* article. It caught his interest, encouraging him to explore ways with the BLM to protect and preserve the ruins. A public assessment process by the BLM and USFS focused on the Perry Mesa National Register District and led to a published management assessment. Ultimately, President Clinton's proclamation expanded the size of the national monument but was limited to lands under BLM jurisdiction. We see this as an exciting opportunity. The two agencies, working in cooperation, may be able to design complementary management strategies that would better enable each to provide a full range of recreational and research opportunities that might not be possible under a single jurisdiction. We need to ensure that both agencies receive the funding and staffing resources necessary to protect, preserve, and interpret these important and significant sites and their equally fascinating setting.

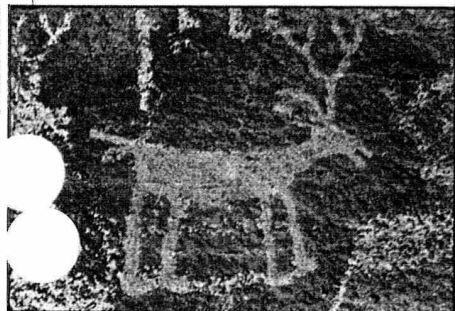


Squaw Creek Ruin.

Adriel Heisey



Top: Human figure from Pueblo Pato. Bottom: Red deer from Squaw Creek.



J. Scott Wood

Ironwood Forest

Paul R. Fish, Arizona State Museum

ONE OF THE RICHEST STANDS of ironwood trees in the Sonoran Desert has become Ironwood Forest National Monument. It lies along the northwest edge of Marana and Tucson in southern Arizona. Working with county officials and community members, Interior Secretary Bruce Babbitt initially defined the monument as 129,000 acres in north-central Pima County. Over 5,000 acres in neighboring Pinal County were added shortly thereafter, specifically with archaeological preservation in mind.

Although only a small portion of the new monument has been surveyed, numerous sites with preceramic, Hohokam, protohistoric, and historic occupations over a 5,000-year timespan are known within its boundaries. Two areas are listed on the National Register of Historic Places: Los Robles Archaeological District and Cocoraque Butte Archaeological District. Along with some of the most impressive displays of Hohokam rock art, these National Register districts contain some of southern Arizona's most visible archaeological sites.

The Cocoraque Butte Archaeological District is adjacent to the Tohono O'odham Reservation on the westernmost edge of Avra Valley. Artesian springs at the base of the butte have attracted people during both prehistoric and historic times. The Cocoraque Ranch, owned by Oscar Robles, is one of Arizona's oldest established ranches. It has been a working cattle operation since the late 1800s. The 300-acre National Register District and adjacent properties contain several long-term Hohokam residential sites which were occupied from Colonial (A.D. 700 or 800) to Classic times (ca. A.D. 1400). Cocoraque Butte stands out, however, because of the hun-

drreds of Archaic and Hohokam petroglyph panels. These have made it a well-known destination for rock art

enthusiasts. In addition to diverse human, animal, and geometric elements, a number of boulders show indications of continuous tapping by prehistoric hammerstones. When tapped, each produces a distinctively different ringing tone that, in combination, create an almost surreal musical atmosphere. These sounds have even been incorporated into commercial "New Age" recordings.

The other national register district encompasses the early Classic period (A.D. 1150 to 1300) Los Robles Platform Mound Community and includes over 100 his-

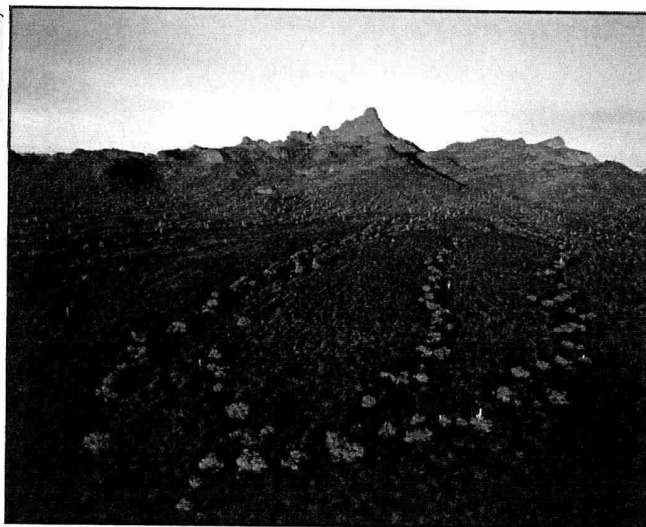
toric and prehistoric archaeological sites within an area of nearly 13,000 acres. Most of these sites were organized into an extensive Hohokam community along the west bank of Los Robles Wash and west into the Samaniego

Hills. The Los Robles Community included a series of dispersed small villages, a larger village with a platform mound for ceremonial and other public events, and the large, well-preserved *trincheras*, or terraced hillside village of Cerro Prieto.

The Los Robles Community was defined as part of the Arizona State Museum's Northern Tucson Basin Survey. This full-coverage survey, with a study area of more than 900 square miles north of Tucson, was designed to increase understanding about the settlement structure of Hohokam desert farmers who lived away from the large irrigation systems of the Salt and Gila rivers. The resulting site distributions, including those of the Los Robles Community, have provided insights into organizational trends in the Tucson area paralleling those of the densely populated irrigation communities in the Phoenix Basin, thus blurring earlier distinctions by archaeologists between the Desert and River Hohokam.

Detailed studies at Cerro Prieto have also played an important role in changing traditional interpretations of *cerros de trincheras* as defensive refuges. Evidence from Cerro Prieto demonstrates that rather than a fortification,

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Extensive natural and cultural landscapes are threatened by urban expansion.

Henry D. Wallace



Petroglyph portrays a headless human figure.

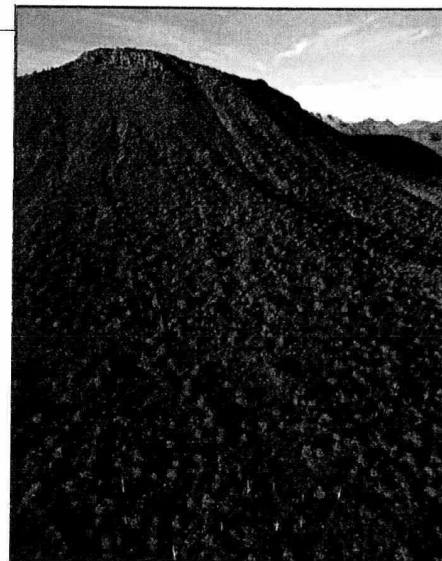
it was a large habitation site. The stone terraces and other cobble features may have had residential, ritual, and agricultural functions.

Christian Downum, in *Between Desert and River: Hohokam Settlement and Land Use in the Los Robles Community*, reports on investigations both within the Los Robles Community as a whole, and at its most impressive site of Cerro Prieto. Downum suggests that some of the masonry features at Cerro Prieto, such as massive compounds and dividing walls, were constructed for ceremonial and symbolic purposes.

Preservation of the Los Robles Community has been an important archaeological objective in southern Arizona over the past two decades. In 1986, the Arizona State Parks Board designated it a state park. It was recognized as a National Register District in 1988, as the result of a joint effort by Arizona State Parks, Arizona State Museum, and Arizona State Land Department. Unfortunately, funds were never appropriated to manage these cultural resources. For a time, the Bureau of Land Management (BLM) considered acquisition of the Los Robles National Register District and pursued public hearings regarding land exchange with the Arizona State Land Department. However, the Land Department has never received a legal mandate to pursue such exchanges. Despite continuous monitoring by Arizona Site Stewards and aerial surveillance by the Army Reserve National Guard during the 1990s, vandalism has been an ongoing problem within the National Register District, as well as elsewhere within the monument boundaries.

The newly formed Ironwood Forest National Monument provides an unprecedented opportunity in southern Arizona to preserve a related set of highly significant cultural resources in a diverse natural environmental setting over a broad area. The monument will be managed by the BLM for the primary purpose of preserv-

ing environmental and cultural resources under most conditions of current use. Livestock grazing will continue and private property (approximately 5 percent of the total monument area) will not be affected. Land disturbing activities such as mining and geothermal exploration will be prohibited. Such an approach fits well with the Sonoran Desert Conservation Plan, Pima County's emerging regional comprehensive land use plan, with a philosophy of preserving habitat, historic, archaeological, and ranching landscapes in an integrated fashion. Because only a small fraction of the monument has been surveyed, an important first step in managing the cultural resources should be a comprehensive inventory of archaeological remains.



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Cerro Prieto's lower slopes have extensive residential terraces.

About the Authors

Paul R. Fish is Curator of Archaeology at the Arizona State Museum. He has extensive experience with both survey and excavation in the northern Tucson Basin, including the area of the Ironwood Forest National Monument.

Diana Hawks was Archaeologist for the Arizona Strip Bureau of Land Management for the past 10 years. She researched the archaeology of both the Grand Canyon-Parashant and Vermilion Cliffs national monuments. She just became a Planner for both new monuments.

LouAnn Jacobson was recently named Manager of Canyons of the Ancients National Monument. She has been Director of the BLM's Anasazi Heritage Center near Dolores, Colorado, for the last eight years and will retain these responsibilities in addition to managing the new monument.

Doug McFadden is Lead Archaeologist for the Grand Staircase-Escalante National Monument. He has been with the BLM for 25 years and has conducted numerous surveys and multiple excavations within the monument.

Mark D. Varien is Director of Research at Crow Canyon Archaeological Center in Cortez, Colorado. He has been active in the archaeology of southwestern Colorado for the past 14 years.

David R. Wilcox is Curator of Archaeology at the Museum of Northern Arizona. He has a long-term interest in archaeological synthesis across the Greater Southwest and is working with Scott Wood in the Perry Mesa area.

Scott Wood is Forest Archaeologist/Heritage Program Manager for Tonto National Forest. Scott has long held an interest and active field program in the Perry Mesa area that now comprises a portion of the Agua Fria National Monument.

Commentary and Context

William H. Doelle, Center for Desert Archaeology

CONTROVERSY WAS FEATURED in almost all press coverage of the 18 new national monuments. Some people spoke out strongly in support while others were adamantly opposed. In these final four pages, my goal is to place the Antiquities and national monuments in a larger context. To do this I went to a variety of experts, and I did a bit of research as well.

The first individual to comment is Bruce Babbitt, who, as Secretary of the Interior, was at the forefront of putting the national monument proclamations in front of President Clinton.

Second, Don Fowler, a former president of the Society for American Archaeology and an individual who has carried out substantial research into the history of archaeology, describes the "birth" of the Antiquities Act – amidst controversy.

Third, I have excerpted information about the Antiquities Act from an excellent article by a lawyer named John Leshy. An early controversy over the Act went all the way to the Supreme Court, with interesting results.

Fourth, Center personnel spend a good deal of time in the field along the San Pedro River east of Tucson. Talking with ranchers and other residents made it clear that many of these rural residents were displeased with the establishment of the new monuments. Numerous community members identified Lamar Smith, who holds a doctorate in range management, as the individual who could best express their concerns over this issue. Fortunately, Lamar was willing to oblige our request.

Finally, Bill Lipe, a former president of the Society for American Archaeology, offers a thoughtful and balanced perspective on the importance of the new national monuments. Back in 1974, Bill wrote a seminal article titled, "A Conservation Model for American Archaeology." He pointed out that the archaeological record is a nonrenewable resource, and he called for its very careful consumption.

Hopefully this medley of opinions and information can broaden your understanding of the issues on a topic that so often stirs controversy.

Protecting Archaeology in its Natural Setting

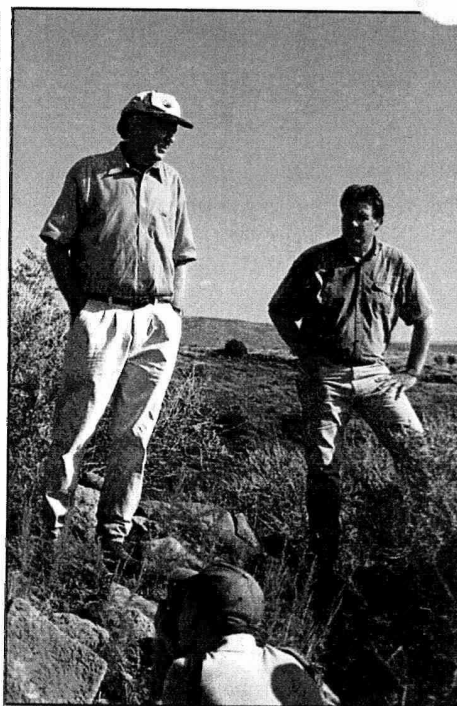
Bruce Babbitt, former Secretary of the Interior

THE NEED TO PRESERVE the archaeology within the seven new Southwestern national monuments was made clear during planning sessions I undertook with the BLM and residents of southwestern states. For example, when I visited the Hovenweep National Monument in southwest Colorado, I saw dramatic ruins of large pueblos located on small, dispersed parcels. The people who once called these sites home also had daily experiences in an extensive open landscape of rolling hills and dramatic canyons. Establishment of the Canyons of the Ancients National Monument will help ensure that something closer to that original landscape will be preserved as population increases and land use changes in this area in the coming years.

In every one of these new national monuments there is a striking and unique natural environment that was an ancient homeland. The national monuments serve to preserve that environment for both the past and the future. It seems especially fitting that the Antiquities Act – a law approaching a century on the books – is the mechanism that made this happen. Threats to the antiquities of the Southwest brought that act into existence back in 1906 (see article on page 17).

While the BLM has the lead role in managing these new national monuments, their scale and the remoteness of many of them means that all visitors must assume a stewardship role. It is fitting that we all bear a responsibility for ensuring that this legacy remains intact to share with future generations.

David R. Wilcox, Museum of Northern Arizona



Bruce Babbitt (left) and Michael Taylor (Director of the BLM Phoenix Area Office) on a visit to Pueblo Pato, Agua Fria National Monument.

Edgar Lee Hewett and the 1906 Antiquities Act

Don D. Fowler, University of Nevada, Reno

THE 1906 ANTIQUITIES ACT was the culmination of efforts throughout the nineteenth century to protect and conserve American antiquities. Rampant looting, especially in the Southwest, finally stimulated a coordinated effort in 1899 to pass legislation protecting sites on public lands. Various scholarly organizations were involved. Bills were drafted. Throughout this process, eastern universities and the Smithsonian Institution jockeyed for control of archaeological resources on western public lands. Bills were introduced in 1904 and again in 1905; all had fatal flaws in the eyes of one or another group wishing to control, or deny access to the public lands sites.

In the spring of 1903, Edgar Lee Hewett of New Mexico and Iowa Congressman John F. Lacey, chairman of the House Committee on Public Lands, spent two weeks on a horseback trip looking at various Southwestern ruins and discussing problems of vandalism and site protection. Lacey's interest was quickened.

In 1905, Hewett became secretary and spokesperson for the American Anthropological Association's Committee on Antiquities. At a scientific meeting in December 1905, he presented a draft bill that, he said, would solve conflicts in earlier bills and be politically feasible in Congress. For Hewett, "politically feasible" meant a bill that would *not* give control of western archaeology to eastern archaeologists. The draft was unanimously endorsed.

In January 1906, Congressman Lacey introduced Hewett's draft bill. Hewett and his flamboyant and ram-bunctious ally from California, Charles F. Lummis,

Photo courtesy of Harper's Ferry Center, National Park Service, United States Department of the Interior.



President Theodore Roosevelt signed the Antiquities Act into law on June 8, 1906. On September 24, Roosevelt created Devil's Tower National Monument in Wyoming, and by the end of his term he had established a total of 17 national monuments. Many of Roosevelt's national monuments are in the Southwest: Chaco Canyon (1907), El Morro (1906), Gila Cliff-Dwellings (1907), Grand Canyon (1908), Montezuma Castle (1906), Petrified Forest (1906), Tonto (1907), and Tumacacori (1908).

managed to block amendments that would have given control of western archaeology to eastern universities or to the Smithsonian. Their roughshod tactics offended many eastern sensibilities, but they got their bill through Congress. When President Theodore Roosevelt signed the "Lacey Bill," – the 1906 Antiquities Act – he signed Hewett's words into law.

The Antiquities Act in Court

William H. Doelle, Center for Desert Archaeology

THE ANTIQUITIES ACT was forged amidst controversy, and controversy very often follows its application to establish a national monument. Like President Clinton, many other presidents used the authority of the act to establish monuments relatively late in their terms of office. For example, one of President Theodore Roosevelt's proclamations was in the last few hours of his presidency. However, legal scholar John Leshy maintains, "no matter how controversial the initial proclamation – Congress has usually come to embrace these areas as its own within a relatively few years."

One of the strongest challenges to the Antiquities Act was a lawsuit by Ralph Cameron, who sought to overturn Theodore Roosevelt's 1908 creation of Grand Canyon National Monument. Cameron held fraudulent mining claims on the south rim of the canyon and on Bright Angel Trail which he used to control public access to the canyon and to enrich himself through an access fee. On April 19, 1920, a unanimous decision by the Supreme Court upheld both the Antiquities Act and Grand Canyon National Monument. Now a national park, the Grand Canyon is the most-visited natural and cultural park in the nation. Clearly, the way to judge national monuments is on their merit, not on the level of controversy they generate.

BLM's New National Monuments

Lamar Smith, Cascabel, Arizona

AS A PROFESSIONAL in natural resource management, I find President Clinton's recent designation of a number of national monuments on Bureau of Land Management (BLM) lands to be unjustified. As a citizen, I find the process disturbing because it reinforces the trend toward management by regulation and litigation rather than by legislative action.

The Antiquities Act was clearly intended to provide protection for landmarks such as historic buildings, battlefields, or cemeteries, not for setting aside vast tracts of land for "preservation." Although other resource management decisions on federal lands require environmental impact studies and public input, executive orders, like those which created the new BLM monuments, do not. The entire process indicates a desire to avoid public involvement in achieving the goals of some environmental groups that advocate restricting human use of large areas of our country – an objective that is not shared by the majority of the public. In one case I know, there was support from the local government because the designation fit in with county planning efforts, but generally the response from local government and landowners has been negative. Apparently, they are not convinced that these "monuments" will be beneficial.

Regardless of the process, the designation of these "monuments" was not warranted from a resource protection standpoint. BLM lands are administered under a philosophy of multiple uses established by Congress through various pieces of legislation. Except for mining,

the BLM "monuments" generally have allowed continued multiple uses, although with some restrictions. The Clinton administration attempted to justify "monument" designations based on the presence of certain features needing "added protection." However, laws already exist that direct BLM to manage all its lands to protect archaeological and historical features, endangered species, other wildlife, water quality, air quality, and other aspects of the ecosystem. I can only conclude that a national monument designation is the first step toward eventual elimination of hunting, grazing, and woodcutting and severe restrictions on public use of these lands.

Ironically, the designation of these new "monuments" may have a net detrimental effect on BLM's ability to manage its resources. BLM's staff has declined over the past eight years, along with its budget for on-the-ground management. The remaining personnel are increasingly occupied with litigation rather than monitoring and management. Experience has already shown that designation of monuments tends to divert resources away from those areas not so designated, resulting in even less ability to manage the majority of the public lands. The constraints already imposed on the Arizona monuments will increase the cost of management, as they do in designated wilderness areas. Also, merely designating an area as a national monument will attract much more human impact than the area probably would have received otherwise. Of course, all of these consequences can be used as a basis to expand the "monument" concept to "protect" other BLM lands and/or to put further restrictions on the use of "monuments" to increase their level of "protection." Maybe that is part of the plan.

See the Center for Desert Archaeology website for more information: <<http://www.cdarc.org>>

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Managing Archaeological Resources for the Future: A Monumental Task

Bill Lipe, Washington State University and Crow Canyon Archaeological Center

THE 2000 CENSUS showed that Nevada, Arizona, Colorado, and Utah ranked first through fourth, respectively, among the 50 states in percentage of population increase since 1990; New Mexico was twelfth. In the twenty-first century, the Southwest's public lands will increasingly be asked to meet multiple demands. This includes outdoor recreation for these growing populations, as well as traditional uses such as grazing, mining, logging, and hunting. In addition, Native Americans will increasingly seek to influence management decisions on public lands they consider ancestral. In this context of growing, and often conflicting demands, the designation of certain public lands as national monuments is highly significant. What are the implications for the future of Southwestern archaeology?

In the new monuments, large numbers of archaeological sites remain relatively intact in environments with considerable ecological integrity. These qualities are likely to become increasingly rare as urbanization and development fragment the Southwestern landscape. There is, however, exceptional potential for the public to benefit, including new information about the past from archaeological research, opportunities for the public to learn about archaeology, and preservation of sites that are culturally important to Native Americans. These benefits ultimately provide the justification for protecting and managing archaeological sites. Land managers have the daunting task of balancing site protection with delivering these benefits now and into the distant future.

Recreational use will certainly increase in the new monuments, and with it, the threat that sites may be vandalized or "loved to death." Channeling visitors to a few exceptional sites that have been "hardened" in the national park mode seems impractical and inappropriate for most, if not all, the new monuments. Instead, land managers will need to educate visitors about "site etiquette," as well as an area's cultural history. If a critical mass of concerned and informed visitors can be created, the knowledgeable ones will help educate those naive

about backcountry site etiquette and will constrain or report the few malicious ones bent on causing damage. Volunteer site stewards and a program of training and licensing backcountry trip providers can also help multiply the efforts of agency personnel. The Bureau of Land Management (BLM) has shown national leadership in archaeological education and public outreach, and thus, is well positioned to carry out such strategies.

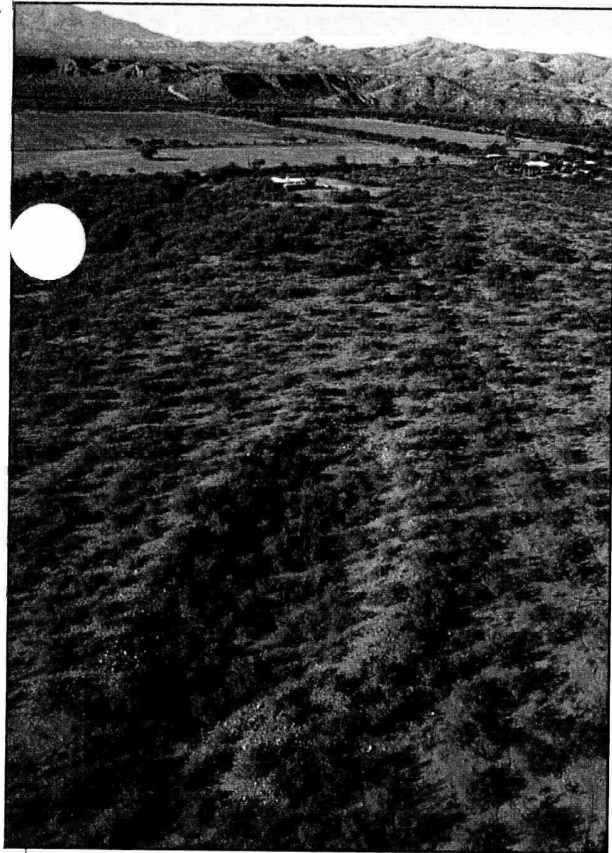
What should be the role of research in these new "archaeological preserves" full of irreplaceable archaeological sites? Should excavation be postponed to some indefinite future when archaeological methods will permit ever greater amounts of information to be obtained from ever smaller holes in the ground? While once I might have supported such policies, I have learned over the years that things are not this simple. Archaeological research does more than satisfy the curiosity of a few archaeologists – it provides a flow of information that maintains public interest in archaeology. Research moratoriums eventually create informational "black holes" and undermine a major justification for protecting sites in the first place. Furthermore, over the past 30 years, archaeologists have developed sophisticated field techniques and sampling designs that allow them to acquire a great deal of evidence from excavating only a tiny percentage of a site. Of course, research projects in the monuments must be well-justified and carefully designed, but the public educational and scientific goals expressed in the Antiquities Act require research to continue.

In implementing management plans that respond to multiple values and interests, the BLM has extraordinary opportunities and challenges. All of us who care about the archaeological component of the new monuments need to let the agency know our concerns. We must also work to ensure that those charged with managing the archaeological resources have the financial, administrative, and moral support required to get the job done properly.

CLOSING GALLERY...

Left and center: petroglyphs, Ironwood Forest. Right: painted plaster wall at cliff dwelling, canyons of the Ancients.





Dramatic landscapes along the San Pedro River are rich in archaeological sites such as this ballcourt village (ballcourt is oval depression in foreground). The Center is working with private land owners to achieve preservation via education and by holding conservation easements.

Back Sight

BACK SIGHT IS A FORUM for discussing the mission of the Center for Desert Archaeology. Because archaeological preservation is central to that mission, it is encouraging to witness the creation of these new landscape-scale national monuments. However, the commentaries on the preceding pages point out that government efforts alone are not sufficient to ensure long-term preservation. Broad citizen support and involvement are also essential.

The new monuments are large, but it is important to remember that some of the most important archaeology in the Southwest is located on private land. A prime example is the San Pedro River, where the Center has long been active. Recently we initiated a new program to hold conservation easements in order to protect sites on private property. Offering an easement is a voluntary decision by a landowner. The Center's responsibility is to seek out potential easement donors and to work closely with them to ensure that they understand the archaeological values that merit preservation on their property. Through negotiation, protection strategies are worked out that are ultimately recorded with the deed at the county assessor's office. The Center takes on the responsibility of regular monitoring of the land where we hold an easement.

Because our monitoring responsibility is perpetual, we have set aside a \$20,000 Preservation Fund as we embark on this new direction. We hope to expand that by at least \$10,000 for every additional easement that we take on. The Preservation Fund will help to underwrite annual monitoring costs, and it is a reserve in the event that we have to enforce an easement through legal action in the future. Donors interested in supporting this program can contact me or Linda Pierce for additional information.

We view conservation easements as very appropriate tools in areas like the San Pedro where we have a long-term commitment to carry out community-based research and preservation activities. We will invest significant effort to develop this program in the coming years.

Preservation must move forward on multiple fronts. Neither government nor private sector efforts alone can accomplish all that needs to be done.

William H. Doelle
President & CEO
Center for Desert Archaeology

back sight (băk sīt) n. 1. a reading used by surveyors to check the accuracy of their work. **2.** an opportunity to reflect on and evaluate the Center for Desert Archaeology's mission.

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