Navajo Settlement and Architecture in Southeastern California

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THE Navajo have probably been the subject of as much ethnological study as any Native American group. Their capacity for assimilating both material and ideological culture traits from surrounding groups is well documented (Hester 1962; Witherspoon 1983: 533) and, as discussed by Aberle (1963) and Witherspoon (1975), may stem from a traditionally flexible lifestyle. This flexibility is evidenced socioeconomically by Navajo participation in railroad construction and maintenance from Chicago westward to California, including the Mojave Desert, and archaeologically by the establishment of rail-associated occupation sites (Kluckhohn, Hill, and Kluckhohn 1971: 320). This article describes several Navajo structures in the Mojave Desert in terms of their architecture and ethnohistoric function. Documentation is also provided regarding the nature of general Navajo settlement patterns in southeastern California.

Navajo homelands are usually associated with the Coconino Plateau country of northeastern Arizona, northwestern New Mexico, southeastern Utah, and southwestern Colorado (Fig. 1), a traditional territory known to the Navajo, or Dine', as Dine'tah. Contact with American culture has had an extensive impact on Navajo social organization, economics, and ideology by allowing or, in many instances, requiring Navajo to leave their ideological stronghold of Dine'tah for education, wagework, or military service. Such absences from close relatives and the familiar physical environment, in combination with contact with strangers, are thought by the Navajo to be potential sources of illness. For this reason, ceremonies such as Enemy Way rites are, to some extent, reserved for patients who, according to their diviner, have received their sickness from non-Navajo (Kluckhohn and Leighton 1962: 222). Such rites may have been conducted at several of the structures described herein.

THE RAILROAD AND NAVAJO ACCULTURATION

The American Period of Navajo acculturation began abruptly in 1846 when the United States took possession of southwestern territories acquired from Mexico. After various military campaigns and attempts at peace negotiation, Colonel Kit Carson effectuated the Navajo containment at Bosque Redondo in 1864 (Kluckhohn and Leighton 1962: 39-40). The next cultural onslaught affecting Navajo society occurred in the 1870s and 1880s, and included the almost simultaneous establishment of trading posts, boarding schools, and rail-lines.

One of the most significant sources of broad-spectrum cultural impact on the Navajo was building of the Santa Fe Railroad in Arizona and New Mexico. Linkage of the east-west lines of the Atlantic and Pacific Railroad with the Southern Pacific Railroad...
latter to become the Santa Fe Railroad) was accomplished when the last rail was laid near Needles in 1883 (Casebier 1975). Tourism and wagework seem to have had the most immediate economic impact and ultimately produced changes in both Navajo social organization and ideology.

Construction of road houses along the Santa Fe route by Fred Harvey (such as the remaining Casa del Desierto at Barstow, California) created a huge market for Navajo crafts. Product demand, including mail-order catalog sales, resulted in mass production. Travelers would often purchase Navajo weaving by the pound and only if the design elements were those they had prescribed (Roessel 1983: Fig. 17).

Possibly as a result of acculturative influences during the Second World War, there began a general trend among Navajo to seek wagework, specifically off-reservation wagework. In 1940, wagework consisted of on-reservation, government employment (33% permanent and 51% temporary employment). By 1958, however, wagework had come to be dominated by off-reservation, railroad employment, accounting for 26.4% of reservation earnings (Kluckhohn and Leighton 1962: 59-60). While individual Navajo had been employed on track maintenance crews as early as the late 1800s, specialized Navajo crews were not used until the 1950s (J. Collyer, personal communication 1983). The post-war shift in emphasis to railroad employment required workers to leave the reservation and live in railroad towns to the east and west. This demographic change resulted in Navajo population concentrations primarily in towns along the Atchison, Topeka, and Santa Fe and the Southern Pacific rights-of-way. Even prior to the time of off-reservation wagework, the railroad had played a major role in Navajo settlement. As noted by Kluckhohn and Leighton:

One complication dates back to the building of the Santa Fe Railroad in the eighties,
when all odd-numbered (mile-square tracts) on each side of the right of way to a depth of 40 miles were granted to the railroad. Thus a “checkerboard strip” was created in the region which had the heaviest concentration of Navajo population. On many of the sections Navajo families had lived or run their sheep for years [1962:43].

NAVAJO OCCUPATION IN SOUTHEASTERN CALIFORNIA

Prior to 1960, most of the Navajo in California were located in agricultural settlements along the Colorado River (Spicer 1962:247) and in communities of specialized railroad workers at railroad towns, waterstops, and sidings between Needles and Barstow.

In the mid-1940s the Bureau of Indian Affairs requested the Mojave and Chemehuevi to open their reservation (Colorado River Indian Reservation) to colonization by other Indians of the Colorado River drainage. Spicer (1962:274) documented the subsequent events as follows:

In 1945 families of these tribes [Navajo and Hopi] began to move in and establish themselves as farmers, raising alfalfa. The Colorado River tribes organized a tribal council in 1937 under the Indian Reorganization Act. It was this council which gave permission for the colonization and which set up a land code in 1940 to regulate the use of the new land brought under irrigation by the Indian Bureau. As the Hopi and Navajo colonists increased in numbers, it began to appear to the Mohaves that they would be outnumbered in the Colorado River Tribal Council and they began to oppose the colonization, contending that the Indian Bureau program had been forced on them. In 1957 further colonization by Hopis and Navajos was stopped.

Navajo settlements relating to railroad employment were more broadly distributed but, in most cases, less stable. Habitation ranged from semi-permanent to permanent localities where organized community activities occurred. One such locality was Barstow, where Navajo history spans several decades:

Navajos . . . have lived in this small community for at least thirty-five years, working either for the Santa Fe or Union Pacific Railroad or the Marine Supply Center. In 1962, over 300 Navajos were here. A Navajo Club was formed and some Navajos take part in local church activities and sporting events. Navajo residents are eligible for some tribal welfare benefits such as clothing for school children [Hodge 1969:13].

Shortly after the Second World War, Navajo began to work for the railroad with more frequency—primarily on maintenance crews. Given the demanding nature and social isolation of such work, the Santa Fe Railroad made a concerted effort to organize work gangs comprised of different ethnic and minority groups. Navajo crews consistently proved to have the most stamina (J. Collyer, personal communication 1983; cf. Dean 1982). With the increasing success of totally Navajo crews, Santa Fe hired individuals such as Hubbell Parker (grandson of the famous trader Don Lorenzo Hubbell of Ganado, Arizona) in the 1950s (D. Brugge, personal communication 1984) and J. B. Collyer in 1965 to recruit Navajo workers. Mr. Collyer, who had operated the Wide Ruins Trading Post north of Holbrook, Arizona, was also familiar with Navajo culture and language.

Initially, the amount of time that a maintenance crew spent in any one place was determined somewhat by the seniority of each of its members. Primary gangs, consisting of individuals with more seniority, would live for a period of time in an area in “section houses,” while maintenance crews comprised of less senior members (“extra gangs”) lived in crew cars and were more mobile. Importantly, it was not unusual for families to travel and live with primary crew members. Primary gangs focused their work on “sections” of two, roughly 10-mile track segments.
extending in opposite directions from a central point. Many of the small communities formed around these 10-mile posts consisted of water stops created during the days of steam locomotion (mileposts are measured east to west from Albuquerque, New Mexico—Goffs, for example, is 610 miles west of Albuquerque). The Santa Fe “Needles District,” consisting of track between Needles and Barstow, includes the following major sidings (east to west): Java, Ibis, Bannock, Homer, Goffs, Fenner, Essex, Danby, Siam, Cadiz, Bolo, Amboy, Bagdad, Siberia, Klondike, Ash Hill, Ludlow, Pisgah, and Daggett (Fig. 1).

Work crews were often task-specific, and divided into three categories: “steel,” “plough,” and “tie” gangs. Steel gangs (“gandy dancers”), once responsible for laying shorter sections of track, are now replacing older track with ½-mile length, 32-ton sections (J. Collyer, personal communication 1983). While much of this activity is now mechanized, nailing is still done by hand by a “spiker” (cf. Dean 1982). Plough gangs are responsible for forming and repairing the rock ballast or mound upon which the ties and rails are laid. Tie gangs both set and replace the wooden ties to which rails are nailed.

Navajo crews working in the Mojave Desert practiced many of their traditional economic pursuits, especially while stationed at the more permanent section camps. Rabbit drives were often conducted on weekends, and families on the Southern Pacific line actually raised sheep, presumably for wool needed for weaving. Navajo weaving produced by railroad families was sold at Amboy, California (D. Brugge, personal communication 1984).

The earliest mention of Navajo railroad workers west of Needles, California, is found in the autobiography of Frank Mitchell (Olta’i Tsoh) who, in 1901, ran away from school at Fort Defiance to work on the railroad (Frisbie and McAllester 1978: 69). Mitchell described his activities in the following passage:

We traveled on the railroad from Gallup past Flagstaff and beyond. We went to Needles, where there is a big wide river flowing there. We passed over that and continued going. Somewhere beyond there a lot of Navajos were working, and when we arrived we were let out to join the crew . . . . What we did was to get those railroad ties out; we were replacing the worn, old ones with new ones. Our crew went ahead; after we took out the old ties, the next crew followed that; they filled in with dirt and tamped the dirt down in. That is the way we worked in separate crews, one crew for this and one for that. We moved westward, working like that [Frisbie and McAllester 1978: 78].

Mitchell described living in camps and being transported to work, sometimes in passenger cars. At one point, he mentioned a Navajo woman in camp, which suggests that families occasionally followed mobile work camps (Frisbie and McAllester 1978: 79).

Speculation that Navajo settlement may have occurred along railroad rights-of-way led the author to inquire locally regarding potential Navajo structures. Several different, traditional forms of Navajo architecture associated with a variety of both habitation and ceremonial activities were located. While most of the located architectural sites exist along the Santa Fe right-of-way between Needles and Barstow, at least one structure was recorded on the Union Pacific right-of-way between Barstow and Border Town, Nevada.

Architectural Remains: Sweathouses

Initially of circumpolar origin, sudatories, or sweathouses, were likely introduced to the Southwest by ancestral Athapaskans (Jett and Spencer 1981). Navajo use of sweathouses has been summarized by Jett and Spencer (1981: 196), who noted that such structures were hygienic and physically and ceremonially therapeutic, as well as social, although utilization has declined in recent years. Sweat-
houses for ordinary use are commonly located where rocks are available at some 45 to 200 meters from the dwelling—for privacy and, in the past, so that returning hunters and warriors could purify themselves before entering the camp. If water is available, its proximity is also a prime consideration (Downs 1972: 33), so that the users may bathe after sweating. According to Page (1937: 19), sweathouses are built in or near the sandy washes (users may roll in the sand between uses). When built near the dwelling for rituals related to warfare or epidemic, the sweathouse is normally built some 200 yards to the north (Kluckhohn, Hill, and Kluckhohn 1971: 318).

Both the sweathouse and hogan are Navajo architectural forms that have been recognized in southeastern California. One hogan, or house, and several sweathouses have been identified in the Mojave Desert. These structures are associated with either railroad sidings or water stops, presumably where work gangs resided during construction or maintenance activities.

Of the four types of sweathouse (tache'che'h) recognized by Jett and Spencer (1981), the conical forked-pole and the dugout forms are known for the Mojave Desert. The conical type is a more traditional form, and has been reported to occur at Newberry, near Barstow. Brugge described the traditional conical form as follows:

The best preserved conical sweathouse known to the author is located near Goffs, California, on the Santa Fe line (Fig. 2). This structure has been recorded as CA-SBR-5473. It has a doorway oriented to the east, as does another conical structure (CA-SBR-4911) between Kelso and Cima on the Union Pacific line (Fig. 3). The Goffs example has a diameter of 2.25 m., a circumference of 6.95 m., and an inside height of 60 cm. The area where rock was heated to be taken inside the sweathouse is located approximately three meters east of the structure as evidenced by some surface soil discoloration and numerous fire-cracked rocks. Fire-cracked rock, a sawed cow horn, and a left mandible fragment (horse?) were observed inside the structure. The structure appears to have had a solid, rectangular door, which presently lies approximately two meters to the northeast of the doorway. While the upright structural members of traditional sweathouses would have consisted of two posts resting in the fork of a third, the structural members of the Goffs example were affixed together with bailing wire at the apex. The nonstructural boards were then leaned immediately adjacent to one another against the structural uprights, suggesting that the building was once covered by adobe, a fact recalled in this particular instance by a one-time resident of Goffs (T. Overson, personal communication 1983). Usually, the base, if not an entire sweathouse of this form, would be covered with earth as are examples in northern Arizona.

The second, or dugout form, was reported by Brugge (1956) at Cadiz and at Siam, California, on the Santa Fe line (Fig. 1). Brugge described the construction of these sweathouses, noting that

a low steep bank is first located and a circular room excavated behind it to approximately the depth of the bottom of the bank and placed so the edge of the bank more or less strikes a tangent to the circle, allowing
Fig. 2. Conical style sweathouse (CA-SBR-5473) located near Goffs, California; view to the east.

an open space in that side for an entry. If the bank is sufficiently steep and the excavation set far enough back into it, the earth of the bank forms the front wall. More often the bank slopes too much and the upper part of the front wall must be built up from whatever material is available, usually logs or branches laid on top of each other; but occasionally it is merely reinforced with an upright on either side of the entry. The roof is built flat, of logs, poles, or planks laid across the excavation on the surface of the soil at the top of the bank from left to right or on a foundation of logs laid at right angles to these to raise the roof somewhat, either viga style or around the edge of the pit somewhat in the manner of the upper part of a cribbed hogan wall. The outermost member of the roof serves as a lintel for the entry. On the railroad, scrap sheet metal is sometimes used to cover the roof. It is finished by covering the entire roof with loose earth from the excavation. Inside, a shallow pit is dug in the floor to the right of the entry against the wall, usually occupying about a quarter of the floor space. This is to receive the heated rocks, which are sometimes piled as high as the roof [1956: 103-104].

At least two examples of this second form exist in the Mojave Desert, one southwest of Goffs and another at Cadiz on the Santa Fe line. The Cadiz structure (Fig. 4), recorded as CA-SBR-5472, is oriented with its door to the northeast and consists of only the upright structural members resting in a depression on what appears to be a man-made drainage bank. The lack of more traditional building materials probably resulted in the northeast orientation of the drainage bank and the
Fig. 3. Disintegrated conical style sweathouse (CA-SBR-1911) on the Southern Pacific line between Kelso and Cima, California. Note excavated depression in right center of photograph; view toward the east.

structural units being made of metal. Excavation of the structure into the bank allowed the walls to consist of earth, thus requiring fewer building materials and allowing more room for participants.

Brugge (1956: 104) noted that mention of the dugout type of sweathouse is absent from early ethnographic reports, suggesting that it may be a more recent innovation. His Navajo consultants reported that while the conical form is older, the subterranean form was preferred for its spaciousness. Brugge (1956: 104-105) further implied that the origin of this second form may have been related to railroad camp activities where dugout sweathouses were most common, or that they may be related to Pueblo kiva structures.

A one-time resident of Goffs recalled the sweathouses near that town and some at Fenner, 10 miles to the west (T. Overson, personal communication 1983). The conical sweathouse at Goffs described above (Fig. 2) was observed in use between 1946 and 1948 by Overson, who also recalled seeing night dances. Many of the Navajo men he observed wore their hair tied in a bun, a style worn today by men in the more traditionally minded families. Given the apparent duration of Navajo occupation at locations such as Goffs, sweathouses were likely built for both daily use and special ceremonial purposes.

Architectural Remains: Hogans

The traditional Navajo residential structure, the hogan (thoo—“place” or “area,”
Fig. 4. Excavated-bank style sweat house (CA-SBR-5472) near Cadiz, California; view to the south. This structure was initially observed and described by Brugge (1956).

-ghan—"dwell ing" or "home"), is an archetypal model of the houses used by the First Man and First Woman of Navajo oral tradition (Jett and Spencer 1981: 239). Circular hogans are sanctioned by the Emergence and Blessingway myths and fulfill ceremonial necessities that houses (kin—"rectilinear floor plans") cannot (Jett and Spencer 1981: 14). The author has observed that families who today choose to live in westernized houses will often build a hogan for purely ceremonial reasons. A Navajo consultant near Chinle, Arizona, told the author that what appeared to be a recently constructed hogan near his house was built only for the occasion of a Blessingway ceremony. Some of the larger ceremonial hogans are built exclusively as churches for peyote (Native American Church) services (Jett and Spencer 1981: 7), a condition that may relate to the hogan described herein.

The typical seasonal Navajo habitation consists of ramadas (primarily for summer use), hogans, and/or houses, socially comprised of matrilocal extended families—a nuclear family plus married daughters' families (Jett and Spencer 1981: 7). While hogan architecture has been acquired by the San Juan Southern Paiute and Havasupai (Jett and Spencer 1981: 210), off-reservation Navajo settlements that include hogans are relatively rare. Up to the 1950s, the westernmost occurrence of such settlements known to the author were those at the Belmont Munitions depot west of Flagstaff remaining from the Second World War (cf. Jett and Spencer
Aside from off-reservation hogans built for exhibition, Jett and Spencer (1981: 210) mention their occurrence in Albuquerque (Albuquerque Indian School), Flagstaff (Belmont Munitions Depot), and railroad-related structures in Arizona and California. One of their consultants, Chauncey Neboyia, recalled a structure built as far west as Stockton, California, by railroad employees. Apparently, the Navajo occupants along the Colorado River did not build hogans (Jett and Spencer 1981: 211).

In general, the evolution of Navajo dwellings has proceeded from forked-pole hogans continuing through the early 20th century while stone-walled hogans became common by the mid-18th century in the timber-poor San Juan Basin. In timber-rich areas the corbeled-log form had gained precedence by the end of the 18th century, being eclipsed by vertical-post hogans in the first third of the 20th century (Jett and Spencer 1981: 222). By the middle 20th century, cribbed-log hogans had replaced both vertical-post and corbeled-log styles in areas where timber was available (Jett and Spencer 1981: 223). While rectangular houses, first introduced in the 1880s, have replaced hogans for residences in many parts of the Navajo Reservation, the use of hogans for ceremony, seasonal residence, and storage continues.

A Navajo hogan near the Homer siding, 10 miles east of Goffs, presumably constructed by Santa Fe railroad workers, was brought to the author's attention by Frank McShan and Ruth Musser-Lopez of Needles, California. Built in the 1960s, the hogan has subsequently been razed, presumably for the railroad ties of which it was built. The structure (Fig. 5), remotely located next to a wash some distance from the railroad tracks, is recorded at CA-SBR-5474. It is still intact at the floor level such that its basic characteristics can be described. The hogan had an eastern-facing doorway, a central stove manufactured from scrap metal (oil drums?), and was approximately nine meters in diameter. The superstructure consisted of railroad ties stacked in a circular fashion to create a corbeled or "cribbed-log" hogan type, most common to the western Navajo Reservation (Jett and Spencer 1981: 216-217). While some household items such as a broom, and various cans and bottles, were located in and around the hogan, it lacked a variety of refuse associated with residence of any duration. Such observations are in agreement with the known ethnohistorical use of the hogan.

This particular hogan was reportedly built by Navajo Native American Church members and its use (including peyote services) was terminated by authorities who ordered its closure in April 1962 (La Barre 1975: 225). It is unknown if the hogan was ever used for residential purposes, but its location and assemblage of cultural remains suggest that it was not. Activities observed at the hogan prior to its closure included dancers who emerged from the structure, circled a small tree, and returned inside (T. More, personal communication 1984). During a later visit to the structure, presumed ritual paraphernalia were noted, including wooden paddles fixed in the floor and small brooms constructed of native brush (T. More, personal communication 1984). Observations of wooden paddles ("wide boards") and dancing tend to reflect traditional Navajo ceremonial "Holyway" activities rather than Native American Church activities, possibly suggesting use of the structure for both purposes (D. Brugge, personal communication 1984). When peyote activities at this hogan were curtailed by the police, the closure ultimately set a legal precedent for peyote practices in the State of California. That case was described by La Barre as follows:

In April 1962, three Navajo peyotists were arrested near Needles, California, and given suspended sentences of two to ten years.
Judge Carl B. Hilliard of the San Bernardino County Superior Court based his decision on the United States Supreme Court decision of 1879, which held polygamy unlawful even though it was a feature of Mormon religious faith. On 7 May 1963, the American Civil Liberties Union asked the California Court of Appeals to overrule the conviction, on the ground of differences between polygamy and peyotism (1975: 225).

Hogans built only for ceremonial purposes are termed *hata’al biniiye’ hooghan*—"for-sing (ceremonial) hogans" (Jett and Spencer 1981: 243). A structure similar to the one described above, also constructed of railroad ties and used for peyote services, is located near Yucca, Arizona, across the river from Needles, California (T. More, personal communication 1984). It has been suggested that the innovation of hexagonal, cribbed-log hogans resulted from the coming of the railroad, which provided pre-cut railroad ties that could be used as building materials (Underhill 1956: 191). However, Jett and Spencer (1981: 77) discounted this idea, noting that both corbeled-log and cribbed-log structures were built by the Navajo prior to 1864.

**CONCLUDING REMARKS**

The Navajo settlements described herein represent a unique and interesting cultural presence in southeastern California. Their existence demonstrates the flexibility and resilience described for Navajo culture in the
presence of imposing acculturating pressures.

Additionally, architectural features such as those described above are frequently encountered in northern Arizona and represent loci of continued interest to the local Navajo community, as described below:

A third category of "sacred" places which is acknowledged in Navajo culture includes areas which may or may not have been sites of ritual activities, but which retain some aspect of supernatural forces. A common example of this is the sweathouse.... As a result, the sweatbath in its various forms is associated with the expulsion of evil (Reichard 1950: 109). This association is retained by the physical structure itself, for both intact and damaged sweathouses, in use or abandoned, have been perceived as housing spiritual power for evil (Bartlett 1980: 34; Medicinemen Interviews 1980-1981) [Holt 1981:48].

The presence of Navajo architectural features in the southeastern California desert deserves special attention for purposes of cultural resource management. The identification and description of these features is of both academic and practical concern since such structures could be neglected or, perhaps, misidentified as Southern Paiute in origin and thereby obscure an important component of the cultural-historical record of the California Desert.

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