Great Basin Bighorn Ceremonialism

Reflections on a Possible Sheep Shrine at the Rose Spring Site (CA-INY-372), Rose Valley, Alta California

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Abstract In the early 1990s, a bighorn ram skull cap with intact horn cores, set atop a stacked rock cairn, was discovered at the Rose Spring site (CA-INY-372), located on the edge of the Coso Range at the southwestern corner of the Great Basin. In this article, we describe the character of the discovery, date the feature, and posit its meaning and function. The feature is intriguing since it might represent a prehistoric manifestation associated with Coso Representational Rock Art. The context for understanding this discovery and other prehistoric bighorn features documented in the Desert West is explored. A review of ethnographic accounts, native oral tradition and cosmology, and bighorn figurative sculptures and rock art, help us explore the religious and ceremonial significance of this animal to the aboriginal people of the region.

Resumen A principios de los 1990, se descubrieron la parte superior del cráneo de un carnero cimarrón, con los centros de los cuernos intactos, ponida sobre un montículo de piedras en el sitio arqueológico de Rose Spring (CA-INY-372), situado en el borde de la Coso Range, en la esquina suroeste de la Gran Cuenca. En este artículo, describimos el carácter del descubrimiento, datamos el hallazgo, y postulamos su significado y función. El hallazgo es intrigante, ya que pueda representar una manifestación prehistórica asociada con el arte rupestre Coso Representational. Se exploran el contexto para comprender este descubrimiento y otras hallazgos prehistóricos de carnero cimarrón documentados en el Desert West. Una revisión de los informes etnográficos, la tradición oral y cosmología nativa, y el arte de figuras y rupestre del carnero cimarrón, nos ayuda a explorar el significado religioso y ceremonial que tiene este animal a la gente nativa de la región.

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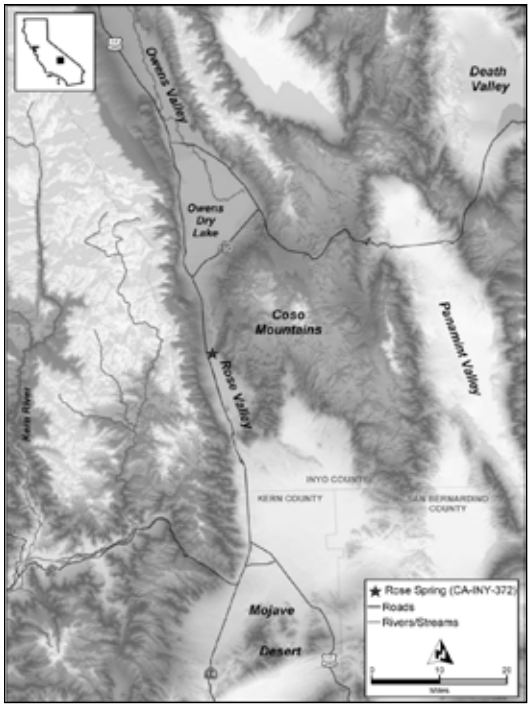

Figure 1. Map showing the location of the Rose Spring site (CA-INY-372) in the eastern Sierra Nevada and western Great Basin.

Bighorn sheep (*Ovis canadensis*) are fascinating animals, both in their physical form and in their behavior. Evidence suggests that these animals were something more than a mere sustenance resource to the aboriginal inhabitants of the Desert West. To explore the religious and ceremonial significance of bighorn sheep, a unique prehistoric archaeological feature is considered. The feature consists of a stacked rock cairn with a bighorn ram partial skull having intact horn cores at its apex. It was discovered at the Rose Spring archaeological site (CA-INY-372) on the western edge of the Coso Range in Rose Valley, east of the Sierra Nevada at the extreme southwestern corner of the Great Basin (Yohe 1992) (Figure 1).

This study describes the character of this discovery, dates the feature, and posits its meaning and function. The feature is all the more intriguing since it perhaps represents a prehistoric manifestation associated with the Coso Representational Rock Art Complex. The contexts for understanding the feature include other bighorn animal bone features documented in the Desert West, the great number of bighorn petroglyphs and effigies in the Great Basin Region, ethnographically documented aboriginal exploitation of bighorn, and the religious traditions of the late prehistoric Numic-speaking peoples of the region.[1]

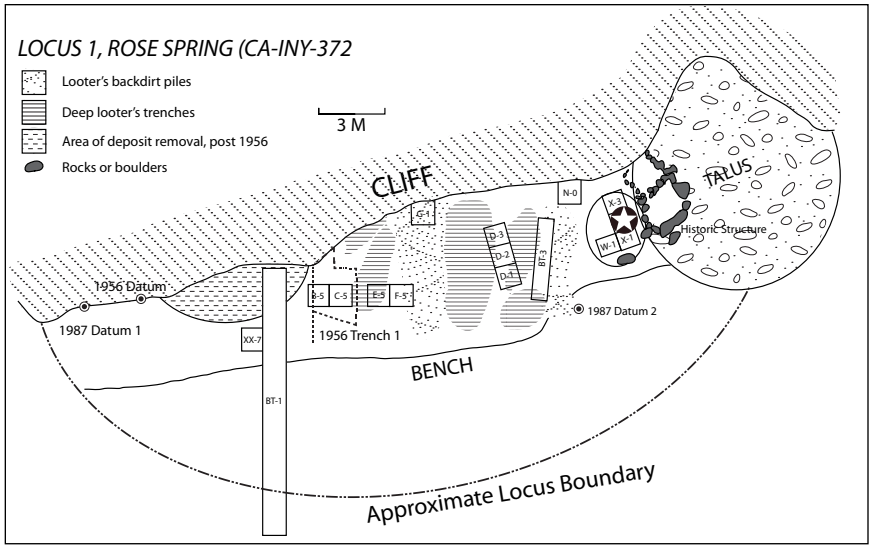

Figure 2. Map of the Rose Spring site (CA-INY-372; Locus 1) showing the general area, the different times of site excavations, and the placement of excavation units and trenches. Excavation unit X-2 is beneath the star that indicates the location of the bighorn sheep feature.

The Rose Spring Bighorn Feature

The bighorn feature discussed here was uncovered during excavations at the Rose Spring site as part of the senior author's dissertation research in 1987 (Yohe 1992, 1997). The partial cranium of the bighorn ram was first revealed at a depth of 80-90 cm below the surface on the western edge of Locus 1 in excavation units X-1 and X-2 (Yohe 1992:49) (Figures 2 and 3). Underlying the horn cores and upper cranium was a rock cairn consisting of a long, plinth-like andesite boulder placed upright into an old hearth and surrounded by fire-cracked stone. The structure of this feature might be better characterized as a stone platform akin to a shrine or altar. Figure 4 provides an artistic reconstruction of what such a feature may have looked like shortly after its construction.

Two radiocarbon dates were obtained from the hearth associated with the bighorn feature. The first was obtained from the top of the hearth, at a depth of 90 cm; the second came from the base of the hearth at 140 cm. The first radiocarbon assay yielded a date of 1,360 ± 70 radiocarbon years before present (RCYBP) and the second produced a date of 1,400 ± 50 RCYBP (Figure 5). When adjusted for their ^{13}C values and calibrated, these ages are equivalent to calendar dates having midpoints of about A.D. 493 and 465, or approximately A.D. 500 (Yohe 1997:49).

Figure 3. Bighorn ram skull and horn core upon exposure during excavation. Pictured in the photograph are Robert Yohe and John Goodman (photograph by Brooke Arkush, 1987).

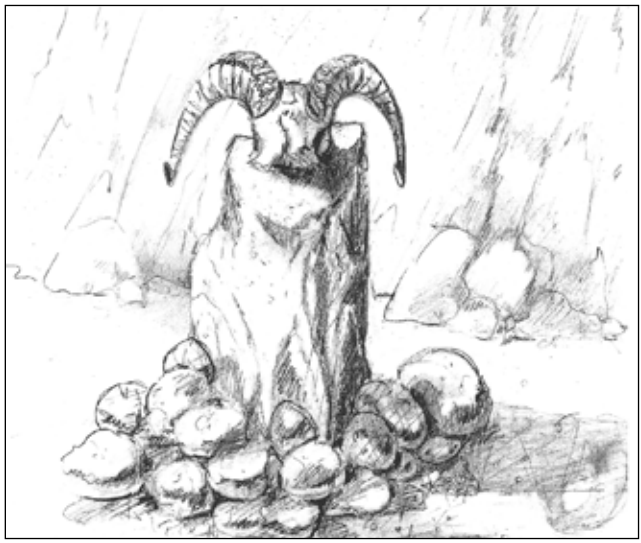

Figure 4. Artist's reconstruction of the bighorn sheep ram cranium rock feature at the Rose Spring site. Illustration by Michael W. Chittock.

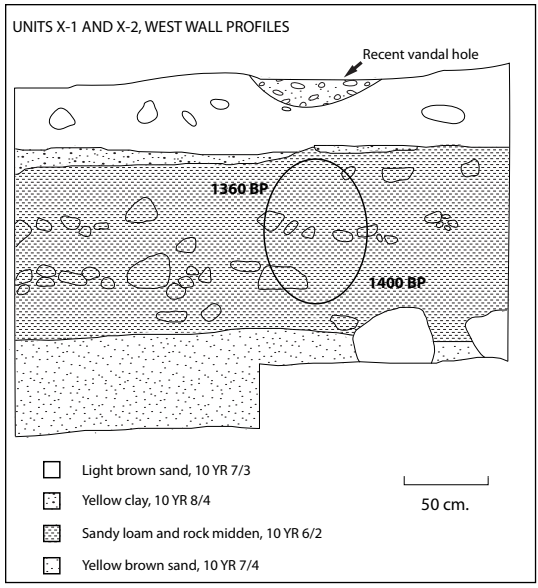

Figure 5. Stratigraphic profile of west walls of excavations units X-1 and X-2 and showing the radiocarbon dates. The oval depicts the approximate location of the feature within the stratum. Note the darker stratum that represents the cultural fluorescence during the late Newberry/early Haiwee periods.

A complete and finely executed Humboldt Basal-notched obsidian projectile point was also retrieved from the 80-90 cm level in unit X-1 within a horizontal distance of 50 cm from the bighorn feature. Judging from its completeness and exceptionally fine execution, it appears to have been an offering intended to accompany the feature and was most likely deposited contemporaneously with the use of the feature. The point is a long, slender implement with finely detailed finishing, measuring 70.1 mm in length with a maximum basal width of 24.6 mm, tapering to an average width of 21.6 mm.

Based on its dimensions, and particularly its basal width, this artifact is an example of the Wide subtype of the Humboldt Basal-notched form (Garfinkel and Yohe 2002). This style point, with its distinctive basal morphology and metrics, was most popular during the period from ca. 500 B.C. to A.D. 800. This temporal placement is consistent with the two radiocarbon assays that date the associated feature, and most likely this projectile point, at ca. A.D. 500. Such a date places the cached sheep cranium and rock feature near the Newberry-Haiwee interface, dating to about the terminal Newberry Period (1,200 B.C.-A.D. 600), or perhaps with the initial centuries of the Haiwee Period (A.D. 600-1300). This is a time in eastern California prehistory that is recognized by an unusually frequent pattern of human burials exhibiting grave offerings of multiple projectile points and other associated artifacts (Garfinkel 2007:124-125). Such grave offerings are consistent with the growing importance of status and prestige among the prehistoric inhabit-

ants in the region. Additionally, the Humboldt Basal-notched form has been noted in profusion and is especially correlated with communal game drive and intercept hunting sites that specifically targeted bighorn sheep and pronghorn antelope (Garfinkel and Yohe 2002).

Unfortunately, the condition of the partial bighorn sheep skull was poor and very fragile, in part due to the large and delicate sinuses associated with this portion of the cranium. Both horn cores were present and approximately 10 cm in diameter at the base (maximum dimension) and 19 cm in length (partial measurement). The maximum circumference at the base of the horn core is 25.0 cm. The size of the horn core indicates a mature adult male, probably at least four years old (cf. Hansen and Demming 1980). At the time of excavation, the decision was made not to use a consolidant to help preserve the bone for fear of compromising the accuracy of future attempts at radiocarbon dating. A field photograph of the skull is shown in Figure 3. Attempts to directly radiocarbon date the bighorn sheep bone in 2008 failed due to the lack of any organic fraction in the friable bone (Murray Tamers, personal communication 2008).

This unusual stone accumulation, with an associated artifact and bighorn sheep skull, suggested to us that it might be representative of a feature that functioned outside of the realme of simple subsistence. Complete horn cores of *Ovis canadensis* are virtually nonexistent in the archaeological record of the region. The senior author thought it unusual at the time, but was reticent to conclude that it might have ceremonial implications. As time has passed, and additional data regarding other bighorn features in this region have become available, a reexamination of this anomalous feature suggests that it may indeed have had ritual significance.

Other Bighorn Features in the Far West

The Rose Spring bighorn sheep feature appears to be unique, although a scattering of other prehistoric features containing bighorn sheep bones have been reported in the Far West. Spanish explorers in the seventeenth and eighteenth centuries encountered large accumulations of bighorn sheep horns and deer antlers along the Gila River in the O'odham and Yuman territories of southern Arizona (Castetter and Bell 1942:67; Castetter and Underhill 1935:41). These horn and antler caches reportedly contained thousands of animal skulls. Grant (1980:30) summarized archaeological and ethnohistoric data pertaining to other accumulations of bighorn skulls and horns at sheep kill sites found throughout northwestern Arizona and southwestern Sonora, Mexico (Grant 1980:30). In his diary account from 1774, Juan Bautista de Anza noted that the Papago carried the bighorn sheep horns and

stacked them at the Cabeza Prieta Tanks to "control the wind and prevent the air from leaving that place" (Bolton 1930).

In the northern Rocky Mountains region of northwestern Wyoming is Mummy Cave (site 48PA201). This large rockshelter is situated on the banks of the North Fork of the Shoshone River, about 55 km west of Cody. During their excavations at this site, Husted and Edgar (2002:39-40) documented a portion of a bighorn sheep skull possibly associated with a purposeful rock alignment. It was positioned at the base of a slope, adjacent to three vertical stone slabs set in a linear array that created a 1.8-m-long alignment. Husted and Edgar (2002) suggested that the feature may have been a shrine. The feature was dated to about 8,800 RCYBP based on an assay from a nearby fire pit feature.

A bighorn sheep headdress is on exhibit in the Prehistoric Museum at the College of Eastern Utah, in Price, Utah. This artifact was discovered cached in a rock crevice on the eastern edge of the San Rafael Swell, near the Green River in eastern Utah. The headdress was found in two pieces, with drilled holes in the cranium, and a leather headband attached. Six *Olivella* shell beads are scattered around the band but are not attached to it. The sheep horns had been divided in half to minimize their weight and were sewn directly to the skull to ensure permanent attachment. The *Olivella* beads were most likely originally attached to the headdress and the regalia may have been used with the accompanying animal hide hood. Chester King (personal communication 2009) examined some photographs of the *Olivella* sp. shell beads and determined that they are probably of a recognized and chronologically diagnostic type that were drilled and split longitudinally. Such beads typically date to ca. A.D. 1050-1150 (Phase M5c in King's [1990] southern California sequence). Bennyhoff and Hughes (1987:125) referred to these bead types as split-punched forms, which they dated between the Middle/Late Period transition and early Phase I of the Late Period. This was a time when the Fremont expression in the Great Basin was on the wane and it is possible that the headdress might be early Shoshone or Gosiute in affiliation.

About 30 km north of the Reno-Sparks area, in northwestern Nevada, a trophy ram skull was recently discovered at site 26Wa2460 that was identified as a prehistoric village (Young et al. 2009). During excavations at the site, a Middle Archaic house floor was uncovered. In the center of the structure, a bighorn ram skull was discovered. The cached cranium had its horns still attached and appears to have been ritually curated and displayed. Young et al. (2009:249) hypothesized that this cached ram cranium was employed "to reinforce the benefits of a successful hunt . . . [thereby acknowledging] the enhancement of a hunter's prestige within a larger group." The skull was found in association with two complete projectile points, which perhaps served as ritual offerings. Several aboriginal houses

at the village site produced radiocarbon ages ranging between 3,700 and 2,800 calibrated RCYBP (cal B.P.), firmly placing the site and the feature itself in a Middle Archaic (4,000-1,500 cal B.P.) context.

At Loyalton Rockshelter in Sierra County, California, in the northern Sierra Nevada, Wilson (1963) excavated a small, temporary hunting camp at 1,800 m above sea level. The site appears to have been a hunting station that was intermittently occupied over thousands of years but was most intensively used during the Middle Archaic. Wilson's (1963) extensive excavations led to the discovery of five individual cache pits containing a total of 12 bighorn sheep skulls from adults (n = 9) and infants (n = 3). Only bighorn sheep cranial elements were interred within these pits. Wilson (1963:63) suggested that these selected bighorn bones indicated their importance as ritual and magical expressions. While only one artifact (a projectile point) was found in direct association with any of the cache pits that contained the sheep skulls, artifacts interpreted as ritual offerings were discovered in other areas of the site, including several bone pins, an exotic obsidian biface, stone pipe bowls, and two ovate charmstones (Wilson 1963).

A bighorn atlas vertebra was uncovered by Sutton and Yohe (1987) during excavations at Nopah Cave, just east of Death Valley in Southern Paiute territory. They argued that this particular skeletal element was interred to physically manifest a Numic myth. In many Numic origin stories, Coyote uses a bighorn atlas vertebra as a penis sheath in order to copulate with a woman who had a deadly toothed vagina that killed her lovers. Coyote successfully reproduces with the girl and the progeny of their union become the various Numic tribes.

In the Tehachapi Mountains of eastern California, just outside the southwestern corner of the Great Basin, is Creation Cave (CA-KER-508), a Kawaiisu (Numic) site within Tomo Kahni State Historic Park. Sutton (2001) reported a burned atlas vertebra of a probable bighorn sheep within this cave dating to the late prehistoric era (ca. A.D. 600 to historic contact). He posited that this skeletal element was related to religious observances associated with Kawaiisu origin traditions (Sutton 2001:21), which indicate that the first people emerged from a bedrock mortar cup in Creation Cave and this was where the Kawaiisu themselves were born (Earle 2000; Harrington 1986; Sutton 1981, 1982; Zigmond 1977:76, 1980:41).

Bighorn Sheep Pictorial Representations

Strong religious associations for bighorn sheep, as a central element of prehistoric Basin cosmology, are suggested by the numerous prehistoric representations of these animals as well as depictions of bighorn hunting scenes. Great Basin rock drawings and paintings of bighorn number in the tens of thousands, and are no-

where more abundant than in the Coso Representational rock art expression recognized in eastern California (Garfinkel 2006, 2007; Grant et al. 1968). In another location, effigies of sheep include more than 1,000 fragmentary split twig figurines discovered at Newberry Cave in the eastern Mojave Desert (Davis and Smith 1981:97-101). The Newberry Cave split twig figurines and the associated men's hunting society activities date to a time centering on 1,500 B.C.

The geographic area of the Rose Spring prehistoric site is the western edge of the Coso Range (Figure 1). During certain periods of prehistory, aboriginal occupants of the Coso Range emphasized large game for the meat portion of their diet and were especially focused on hunting bighorn (Garfinkel 2007; Garfinkel et al. 2009, 2010). Bighorn sheep ceremonialism for the Coso artisans may have had immense symbolic and social importance (e.g., Hildebrandt and McGuire 2002, 2003; McGuire and Hildebrandt 2005). Approximately half of the estimated 100,000 rock art elements that adorn individual basalt boulders and canyon walls are depictions of bighorn. The demonstrated consistency of the Coso bighorn sheep rock art motif, the continuity of these depictions over time, their specialized locations (spatially correlated with hunting blinds, dummy hunters, and game drive sites), and their spatially constrained occurrence within the landscape (located most often in the open on sheer rock faces on the walls of major lava canyons) seem to provide persuasive evidence for placing this conventionalized bighorn sheep ceremonialism at the center of a ritual Coso bighorn sheep cult (Garfinkel 2007; Garfinkel and Austin 2011; Van Tilberg et al. 2011; but see Whitley 1998). Supporting archaeological evidence for a broader, less intensive regional expression of Great Basin bighorn sheep ritualism can be seen in rock art depictions throughout the Desert West (Allen 2011). Such a pattern includes a ritual complex that also incorporated split twig figurines (cf. Coulam and Schroedl 2004) and related religious paraphernalia, such as quartz crystals, paint palettes, and sculpted animal effigies (e.g., Grant 1980).

One notable, but perhaps atypical, example of bighorn ritualism is a Coso rock art drawing of what appears to be a ceremony involving the veneration of a bighorn sheep skull. This drawing, found in Parrish Gorge in the northern Coso Range, is associated with an assemblage of petroglyphs at prehistoric site CA-INY-43 (Grant et al. 1968:39). The panel appears to depict a mountain sheep skull set atop a pole (Figure 6). In the central panel, a large, nearly life-sized (4 feet in height) figure of a man stands with open arms and hands outstretched, seeming to reach for a weighted atlatl. On his back the man appears to be carrying a fringed basket or hide bag and at his feet is a small wand. Additionally, Coso Range rock drawings sometimes depict sheep skulls in a realistic, representational fashion and more commonly the sheep horns are rendered alone and in abstraction with a generalized iconic signature of sheep horns in simplified outline style (Figure 7).

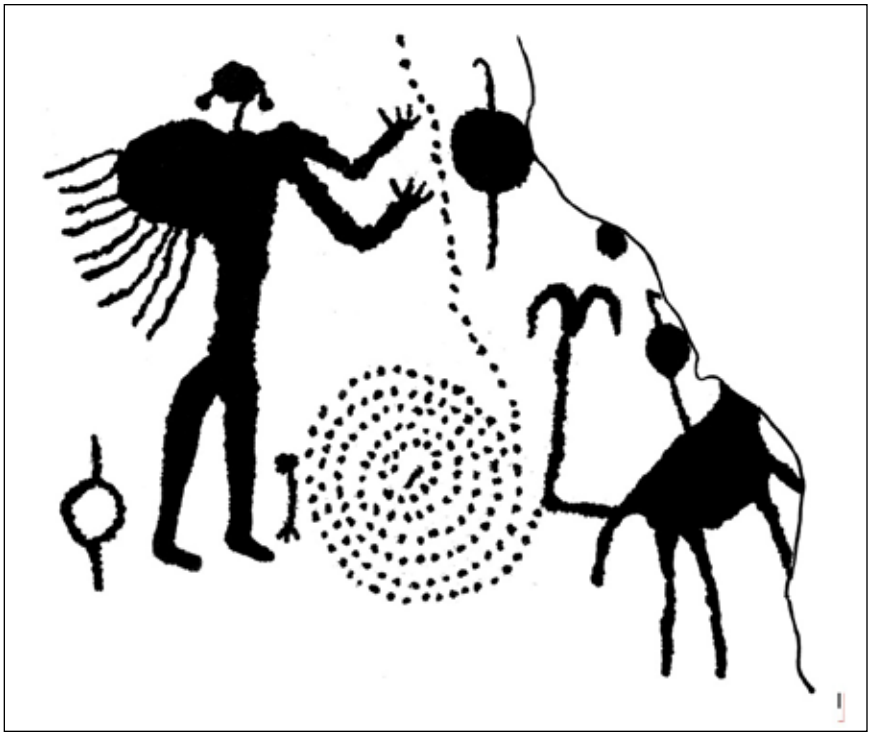

Figure 6. Coso rock art panel in Parrish Gorge showing bighorn sheep ram skull atop a pole.

Finally, Miller (1983) postulated that rock art images crafted by prehistoric native peoples in their hunting areas were designed as visual prayers. They were a means of speaking to the spirits, animals, plants, and rocks, to remind them of what the appropriate activities were for the area.

Seasonality and Hunting Techniques for Bighorn Sheep

Bighorn sheep mate in the fall, their rutting season. This is the only time of year when the ranges of rams, ewes, and yearlings coincide (Geist and Petocz 1977; Matheny et al. 1997). During other parts of the year, ewes and rams occupy different habitats. The rutting season is considered one of the best times to hunt bighorn, when they are most vulnerable to predation (Matheny et al. 1997). Moreover, the animals are fattest during the fall as they prepare for a less verdant environment during winter. They are also less wary, because it is a time of considerable tension when rams are intent on breeding.

Figure 7. Rock art panel in Renegade (Little Petroglyph) Canyon, Coso Range, with a frontal view of two bighorn sheep ram skulls with horns and four simplified sheep horn outline glyphs (photograph courtesy of Don Austin).

In the dry deserts of the Great Basin, there were infrequent opportunities for people to come together in larger social gatherings. Fall was one of the most important times for such aggregations, when dispersed aboriginal groups coalesced for communal pronghorn antelope and rabbit drives. This was also the time for seed and nut harvests, during which there were activities associated with feasting, ceremonies, and courting, as well as the Round Dance (or Circle Dance). The Round Dance was held specifically to promote game and to ensure that there would be a bountiful supply of seeds. Hence, the dance was intended "to make seeds grow" and to foster animal and plant fertility (Park 1941:192; Shimkin 1970:177; Steward 1941:323; Stewart 1941; Vander 1997:220).

Gilmore (1953) described a bighorn hunt conducted by the Paiute northeast of Bishop. A Round Dance led by a shaman was held prior to the communal sheep hunt. After the dance and a large feast, the celebrants followed the hunt shaman and/or singer into the local mountains. The hunting party spread out over a large area and worked together to draw the bighorn into a prepared corral. People

trapped the sheep by spreading out over the region and gradually closing them in and concentrating them into a narrow chute (a V-shaped wing trap) composed of rocks and brush. This trap led to a corral, where the animals were ultimately slain. The hunt leader, ritualist, or singer stood at the gate and directed where his fellow hunters should shoot.

Alternatively, a solitary hunter could stalk a lone bighorn through the skillful use of a decoy. The hunter used a bighorn skull with horns as a headdress and concealed himself behind rocks and brush. With the horns protruding, he would replicate the sounds of a sheep pawing the ground by plucking his bow. He would then jab and scrape the ground, producing sounds of an aggressive ram preparing for a dominance display. Such activity would attract his quarry, and he could dispatch the beast at close range (typically 25 feet or less) with an arrow directed under the bighorn's chin (Gilmore 1953:150). Julian Steward (1941:220, 423) reported that Great Basin natives thumped logs together or pounded on rocks to attract the curious sheep to the hunters—the bighorn thinking they were hearing rams fighting for breeding rights.

Bighorn Sheep in Numic Traditions and Ceremonies

Steward (1968) believed that animal themes in Great Basin ceremonialism and ritual expression were not major elements of ethnographic Numic religious traditions. However, Malouf (1966:4) asserted that big game hunting rites and group religious ceremonies were strongly imprinted as characteristic elements of Desert West societies.

There may have existed, *in remnant fashion*, a more ancient religious substrate associated with "hunting religions" (Fowler 1986; Hultkrantz 1986a, 1986b). We believe that the religious import of the bighorn sheep and a culture complex of animal ceremonialism existed only in relict fashion among Numic cultures. These earlier elements can be reconstructed from a careful and selective review of certain recurrent patterns expressed in Great Basin oral traditions and rituals.

Whitley (1982) pointed out the potential symbolic significance of bighorn sheep in Great Basin oral traditions. He argued that myths from 12 different Western Shoshone groups all had underlying commonalities. In the myths, the principal animal character, Coyote, attained manhood by successfully slaying a mountain sheep. It was only after his success in hunting bighorn that Coyote was able to marry. Therefore, it appears that the bighorn was a symbol of male hunting success and had a key association with rites of passage into adulthood.

Rituals prerequisite to the hunting of bighorn sheep are also attested to in Numic myths. Shoshone oral traditions recount Rat's invitation to Mountain

Sheep to join him in the Round Dance. Through his charade, as played out in song, Rat attempted to woo Mountain Sheep to his side, in order to slay him (Lowie 1924a:194-195; Steward 1943:284-285). A Northern Paiute pre-hunt dance and song were traditionally performed by animal-human spirits: Crow, Eagle, Wildcat, Yellow-hammer, and Big Rat (Lowie 1924b:214; Vander 1997:220). These supernaturals danced and sang a song saying, "I am going to shoot mountain sheep."

A puberty rite is ethnographically described in which Numic boys were required to kill a mountain sheep, deer, or pronghorn as a mark of their formal entrance into adulthood (Steward 1941:256). Myers (1997) identified distinctive and recurring relationships between hunting big game animals and human sexual reproduction. He argued that to reach male maturity and be permitted to copulate with women, it was necessary to hunt and kill big game animals.

Northern Paiute ritualist doctors dreamed of "mountain sheep which gave power to suck out and blow away disease" (Steward 1941:259). The Southern Paiute had "game-dreamer" songs and dances that had special importance in hunting bighorn sheep. These "dreamer-singers" would dream about killing game, foods eaten by bighorn sheep, rocky places, rain, bows and arrows, and sometimes "arrows turning into male mountain sheep" (Kelly and Fowler 1986:384-385). In the dreams, a bighorn sheep song was provided as a gift from the sheep. The songs were intended as a means of enhancing the killing of game, and game animals became attracted and increased in number with the proliferation of game food furnished by the rain. The rain, in essence, brought the game.

In her discussion of Chemehuevi shamanism, Kelly (1936:138-142) similarly identified a class of ritual specialists known as sheep dreamers, who were especially adept at charming game animals for the hunt (Hedges 2001:131). The sheep dreamers/game charmers had visions of rain, and bullroarers, and they wore a cap of mountain sheep hide. The cap, fashioned of sheep skin and quail topknots, was a fashionable headpiece for a chief and was reserved for the most skillful hunters of big game animals (Kelly and Fowler 1986:372, Figure 2; Laird 1974, 1976). Kelly (1936:139, 142) further noted that "It is said that rain falls when a mountain sheep is killed**.** Because of this some mountain-sheep dreamers (i.e., game charmers) thought they were rain doctors."

For the Chemehuevi, a mountain sheep was a good spirit familiar and was exclusively associated with curing shamans (Laird 1976:32-38, 1984). Laird (1976:11) noted that "the mountain sheep and the deer differ from all other animals: they are the only animals who were not shamans in the mythic period, yet appear as shamans' familiars in this present time." Similarly, for the Nevada Shoshone, ritualists dreaming of mountain sheep had the power to cure disease (Steward 1941:259).

Some traditional Numic songs were employed as a means to lure and attract large game animals. By singing songs, a ritualist could capture the souls of the animals and draw power from them. By singing and speaking over the animals and dancing in imitation of their movements, the animals were more easily killed and were already tired and docile when the hunters finally met up with their quarry (Sapir 2002:212; Vander 1997:221, 487). Some Southern Paiute bands would sing to attract sheep, or have a feast and gather around the singer in a partial circle. They would lay bows across their bellies and drape their arms over them, bending their arms and holding their fingers in front of them, representing sheep hooves, and marking time to the music. They also had dancers who would jump and mimic bighorn sheep behavior. These mountain sheep dreamer-singers would direct hunters to the place where they could hunt and slay the sheep. The bighorn song was one of the four principal songs of the Southern Paiute (Laird 1976, 1984).

A core belief of some foraging peoples is that there is innate power in the skeletal remains of hunted animals (Brown 2005; Hultkrantz 1981, 1987a, 1987b). The sacred skulls were believed to be alive, in that they embodied energies associated with animal ancestors. Hence, the animal skull was full of power. The planting or disposal of a deceased animal's bones assured the regeneration process. Great Basin indigenous peoples shared a worldview regarding large game animals that was summarized by Fowler (1986:95):

> . . . respect was shown for animals and plants taken to meet human needs. Portions of larger game animals, including the eyes, skulls, and sometimes organs . . . were specifically set out in the brush or trees or buried after a kill. In addition to showing respect, these acts were a form of manipulation that would insure that game would be continually supplied. Slain game animals were often placed with their heads to the east and addressed with special terminology, again to show respect.

Great Basin Cosmology, Animal Taxonomy, and Bighorn Sheep Religious Symbolism

A brief description of Great Basin cosmology is significant for this discussion. The indigenous view is that the world is ordered into three distinct strata divided into upper, middle, and lower realms that were seeded by different forms of Animal People. Native taxonomy categorizes these animals according to their environment and behavior, or habitats and habits (Vander 1997:155). As such, the religious ecology of the bighorn is central to our analysis.

Having its habitat in the elevated crests of the high, rugged mountains, big-

horn sheep typically occupy the uppermost frame in the minds of native Great Basin people (cf. Goss 1972; Myers 1997:44; Nissen 1995:72). Myers (1997:44) affirmed this specific positioning based on analysis of 25 variants of Numic origin myths, and concluded that mountain sheep serve as a topmost symbol due to their association with mountain peaks.

The tiered Great Basin cosmos attributes the color white to the uppermost sky realm (portrayed by snow, clouds, smoke, and fog). As one goes higher in elevation, each division apparently increases in spiritual content and supernatural strength. Goss (1972) argued that the bighorn was identified in Ute worldview as the shamanistic "boss" of the ungulates, and the term for bighorn is applied throughout the Great Basin as a singular reference for all large game animals (cf. Nissen 1995:72).

Goss (1972:126) further emphasized the bighorn's significance by noting that it is the most difficult large game animal to kill, lives in high, rough country, and has a "white rump." The color white is notable, as it is recognized as having the most sacred and highest supernatural status. White is associated with the topmost animal of the sky—the Eagle, the boss of the sky (Goss 1972:126). The color white is also identified with the undersides of the eagle's wings and tail feathers, is considered a symbol of the highest good, and has ritual associations with healing, curing, hunting, shamanism, and vision questing (cf. Miller 1983:70). Hence, the power and energy of the universe is often concentrated in these uppermost planes on mountains and high places—the sites of vision quests and homes of immortals (Miller 1983:70). Therefore, birds soaring above the land are considered metaphoric representatives of the flying and hovering attributes of spiritual energy or power (*puha*). Similarly, it could be argued that the bighorn, abiding just slightly lower than its avian comrades, is imbued with nearly as much kinetic, supernatural, religious power.

Interpreting the Rose Spring Bighorn Sheep Feature

As noted above, several archaeological features and isolated skeletal elements that represent caching and interment of select mountain sheep bones have been discovered in the Desert West. Numic oral traditions provide a context for the possible symbolic import of bighorn faunal caching. The particular importance of the bighorn and the metaphoric content of the burial of their bones are of relevance to an understanding of the cosmology of the indigenous peoples of the West.

Some of the cached elements of these features, such as the skull and atlas bones, contain low meat mass and would be unlikely to represent simple provisioning. Such elements should normally have been left near the kill site rather

than being lugged back to a base camp setting. The identification of bighorn crania as trophy skulls could imply that these were symbols of a successful hunt, but their hidden and cached context argues against a simple status symbol or symbolic representation of big game hunting success. As such, it is argued here that, for the most part, these bighorn faunal caches are likely ritual in nature.

The Rose Spring bighorn feature dates to a time (ca. A.D. 500) when many researchers have asserted that Coso Range hunters were drastically depleting local bighorn populations in the immediate area (Garfinkel et al. 2010; Gilreath 2007; Gilreath and Hildebrandt 2008).[2] Rather than switch their prey, as optimal foraging theory would predict, they apparently made bighorn sheep the central focus of large-scale ceremonial activities (Garfinkel 2006; Hildebrandt and McGuire 2002, 2003; McGuire and Hildebrandt 2005). This emphasis on Coso bighorn exploitation may have provided successful hunters with high levels of status and prestige. On the other hand, the interrelationships of religion, hunting, and prestige may have led to ever more intensive hunting efforts resulting in extreme resource depletions (cf. Raven 1990).

A recent computer simulation and review of archaeofaunal data for the Coso region (Figure 8) provides a chronological trajectory for this pattern of Coso bighorn sheep resource depression (Garfinkel et al. 2010). The Rose Spring mountain sheep feature was fashioned during a time when bighorn were undergoing significant population depletions.[3] This occurred close to the inception of bow and arrow use and during a peak period of Coso Representational rock drawing production. It is apparent that the prehistoric inhabitants of the Coso Range experienced a cultural-symbolic fluorescence associated with an intense episode of naturalistic rock art depictions, and this activity may have been accompanied by elaborate ceremonialism and heightened ritual activity.

It has been noted that during tumultuous periods, especially in preliterate cultures, religious rituals become pervasive. Anthropologists have asserted that in stressful times, foraging cultures are especially prone to conduct ceremonies aimed at appeasing and pleasing various spirits and supernaturals (Helventson and Hodgson 2010:65). When events are unpredictable and economic insecurity prevails, ritualistic behaviors have been shown to flourish (Zusne and Jones 1989). The Rose Spring mountain sheep rock cairn and fire pit may have been one physical manifestation of such intense ceremonial activity.

The Rose Spring feature may have been constructed and/or used in association with a bighorn sheep hunt. This might have occurred at any time of the year, but the most frequent period of bighorn hunting (with the best chance of acquiring a large number of animals) was during the fall rutting season, when these animals aggregate and are less wary due to their focus on mating.

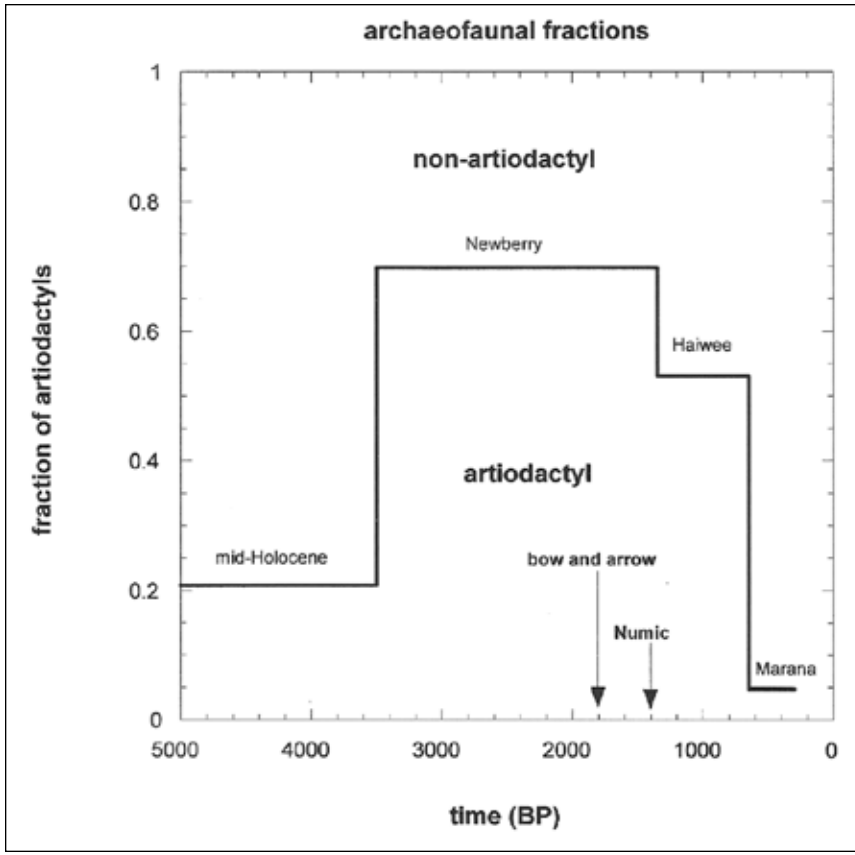

Figure 8. Graph showing the relative frequency of artiodactyl archaeofaunal remains in Coso region prehistoric sites relating to changes over time, including the introduction of the bow and arrow and the possible in-migration of Numic people into the Coso Range.

Referents in religious rituals and oral traditions imply that bighorn sheep were not just something good to eat, but also something to be employed as symbols with multiple, imbricated meanings. In one sense, the bighorn sheep was a religious symbol, an animal immortal, one of the more heralded and sacred figures in Great Basin cosmology. In Numic ideology, the bighorn appears to have represented the entire category of large game animals and was closely related to the hunt, the killing of big game, and the provisioning of meat that evinced heightened status and male hunting prowess. These animals also exhibited close associations with the concepts of prestige, power, and strength, and acted as referents to the men's coming-of-age ceremony and sexual maturity.

The hunting of mountain sheep, the butchering of the slain animals, and the selective disposal of bighorn remains may have been subject to significant ritual and religious rites. Based on limited archaeological data, such meanings may have been applied to bighorn sheep across many millennia of prehistory throughout the Desert West.

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Notes

1. This paper is an attempt to provide a contextual understanding of the possible meaning and function for an unusual feature found at the Rose Spring site at the southwestern edge of the Great Basin. In large measure, we attempt to frame the subject of bighorn ceremonialism in the Desert West using linkages between the ethnographic record and archaeological phenomena. These relationships and connections certainly suffer from a potential temporal/chronological disconnect.

   Almost every archaeological example we use dates to the Middle Archaic, including the Rose Spring site sheep shrine itself. The archaeological expressions noted in this article most frequently predate the presence of Numic speakers. The bighorn sheep headdress we mention could be Numic or might be from a Fremont context. Most people think that Northern proto-Uto Aztecan spread across the southern Great Basin at about 2,500 B.P., with the Takic languages splitting off for southern California soon thereafter, Tubatulabal remaining as a linguistic isolate (or recently reclassified as a remnant Takic member; see Sutton 2010) with Numic splitting from Hopic later, and spreading across the Great Basin relatively late in time.

   The cultural-ethnic distance between the archaeological examples presented in this article and Numic is documented by the ancient DNA record, as the more northerly examples (e.g., Young et al. 2009) probably belong to the haplogroup D population (Kaestle and Smith 2001) or ancestral Washo/Martis (Wilson 1963)—both of which can easily be distinguished from Numic. This is also the case for Fremont skeletal material which is, not surprisingly, more tightly linked to the Anasazi/Pueblo groups.

   It is important to note that sheep hunting is less important in Numic-aged sites than older ones, and ethnographic Numic people do not appear to have fashioned the Coso Representational sheep petroglyphs. However, the Numa were apparently responsible for the very late dating (historic) Coso pictographs representing expressions of the Coso Painted Rock Art Style that incorpo-

rates many representational elements, including those regularly depicting bighorn sheep (Garfinkel et al. 2007).

We are providing information here that shows that there exists a native indigenous symbolic focus on bighorn sheep that is widespread in the Desert West and is not necessarily specifically related to the Numa. It is perhaps better seen as representing a deeper, more ancient, association with aboriginal populations of proto- or pre-Numic, Northern Uto-Aztecan affiliation. The fact that Numic myths often address sheep probably shows how important these animals were to these people, given that the Numic did not appear to hunt them as much as earlier cultures and did not craft as significant a corpus of rock art depicting bighorn sheep.

2. Bighorn depletion appears to have been a local (Coso region) manifestation of resource depression and, of course, the relative importance of bighorn hunting in the Desert West varied by locality. However, prehistorians largely agree that bighorn sheep exploitation did drop off rather dramatically after the early Rose Spring era (ca A.D. 300–1000). Numic culture exhibited only limited evidence of the former "bighorn religion." However, hunting of bighorn sheep certainly did not stop; yet, it surely declined from its earlier peak expression but may have come back somewhat after its dramatic fall-off in Rose Spring times (see Garfinkel et al. [2010] for a fuller treatment of this subject).
3. An important part of understanding bighorn ceremonialism in eastern California is the character, sequence, and cultural context of the large-scale changes that took place in the Coso region during the Haiwee Period (ca. A.D. 300–1300). Evidence has been presented elsewhere to support the notion that the Coso region experienced a series of prehistoric human population movements and associated radical shifts in adaptive strategies, exchange patterns, and ideological systems during this time (Garfinkel 2006, 2007; Sutton et al. 2007). These changes include the abandonment/population replacement of pre-Numic populations fostered by the in-migration of the Numic (ca. A.D. 600-1000) into eastern California with pre-Numic people outcompeted by the more labor-intensive Numic adaptive strategies (cf. Bettinger and Baumhoff 1982). In-migration of the Numic may have been facilitated by the introduction of the bow and arrow that replaced the earlier dart and atlatl technology (cf. Yohe 1992, 1997). Ensuing competition for subsistence resources (conflicting landscape use), disruption of the trans-Sierran Coso obsidian trade, depletion of big game, and epic droughts (e.g., the Medieval Climatic Anomaly; see Gardner [2007] and references therein) all factored into the transformative changes identified in the Coso region during this eventful time span.

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