

Looking east from Donner Pass. Donner Lake is seen in the background. (Photograph by Kathleen A. Roubal)

Donner Party Archaeology

Donald L. Hardesty

The following article by Professor Donald L. Hardesty is based on a paper which he delivered at the Oregon-California Trails Association's 1990 convention. His paper described the recent archaeological excavation which he led for the purpose of establishing the precise location of the Donner family campsite, known to be several miles from the camp of the major part of the Donner party. The site of the larger camp, known as the lake camp because of its proximity to what is now Donner Lake, has been well established for several years. However, until Professor Hardesty's 1990 excavation there had been some

controversy about the location of the Donner family camp.

The Donner party of eighty-seven was made up of ten families and nineteen individuals. Many of the individuals traveling alone were teamsters or servants of the Donner and Reed families. It is an irony that this emigration party, nearly half of whom died of exposure or starvation, was undoubtedly one of the best equipped, best provisioned wagon trains ever to travel west. Both the Donners and the Reeds were prosperous families. Reed, in fact, built a gigantic wagon for the special comfort of his family. The wagon had steps at the side leading into a little sitting room in the middle of the wagon. There were comfortable spring seats and a sheet-iron stove with a pipe to carry the smoke up through the canvas. The wagon even had a second level for the children's beds above special compartments used for storing food and clothing. This wagon became known as the "pioneer palace." Both the Donners and the Reeds had extra oxen, fine riding horses and animals to be used for food. Both had extra wagons crammed with provisions for the trip and also to be used to set up housekeeping in California. A further irony is the fact that at least nine members of the emigrant company had already emigrated from other countries. They had come from Ireland, Germany, England and Belgium seeking a safer, more prosperous life. They were taking just one more trip to finally settle in fabled, golden California.

—The Editor

During the twenty-five years following the opening of the California Trail by the Bidwell-Bartleson party in 1841, several hundred thousand emigrants traveled overland to what was to become the American West. The earliest emigrants to use the trail tried several alternate routes and shortcuts. Among the best known of these was the Hastings Cutoff. In 1846, Lansford Hastings, a California lawyer and the author of a popular emigrant guidebook, promoted a new trail as a shortcut to California. The cutoff left the main Oregon-California Trail just west of South Pass, went south past Fort Bridger in the present state of Wyoming, down through the Wasatch Mountains and across the Great Salt Lake Desert to the Humboldt River, where it connected once again with the main California Trail. The Hastings Cutoff was used by several emigrant parties between 1846 and 1850 before it was abandoned. Without question, the best known of these was the Donner party.

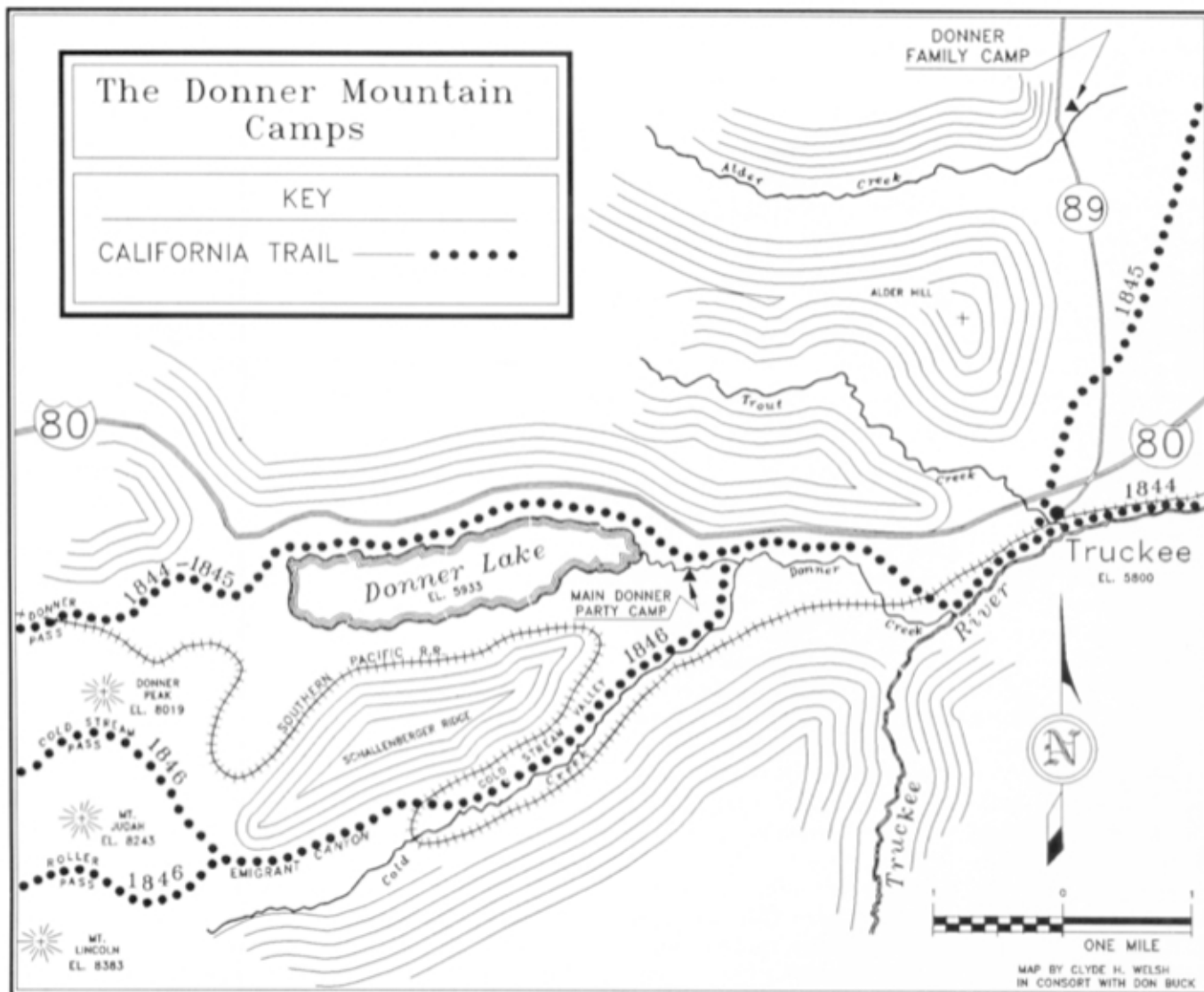
On 20 July 1846, a group of emigrants joined together just west of South Pass in present Wyoming to take the Hastings Cutoff. George Donner was elected captain of the wagon train. Although intended to save time, the cutoff, along with bad decisions, bad luck and conflict within the group, greatly delayed the party's trip along the trail. Wagons and goods had to be abandoned, and five of the party of eighty-seven perished along the trail. Those remaining did not reach California's Sierra Nevada until late October of 1846 and were trapped in the mountains by early winter storms. Despite several escape and rescue attempts, the emigrants were forced to spend several months in two winter encampments. The Murphy cabin, the Breen-Shallenberger cabin and the Graves-Reed cabin made up one encampment at the east end of what is now Donner Lake. The second encampment, approximately five miles to the northeast, was the Donner family camp. Not until 21 April 1847 did the last member of the Donner party leave the camps. Only forty-seven survived

the ordeal, some of whom may have done so by cannibalizing the dead. Probably because of the alleged cannibalism and human suffering, the Donner party has become one of the major symbols of the extreme hardships faced by emigrants of the American westward movement.

Written accounts of the tragedy appeared in newspapers and periodicals shortly after the rescue, and C.F. McGlashan's *The History of the Donner Party* was published in 1879. The accounts and histories are based mostly on information contained in contemporary letters and journals kept by Donner party members or by rescue parties, on later reminiscences of some of the survivors and on several secondary sources.¹ Not much more is likely to come from the written record. George Stewart, in the preface to the 1960 edition of *Ordeal by Hunger*, observes that there is likely to be no additional information about the tragedy "unless some miracle of excavation at Alder Creek should bring to light the diary which Tamsen Donner is said to have kept."²

However, some new information that is independent of the written accounts may be contained in archaeological remains of the Donner party. As early as the 1870s C.F. McGlashan and some of the survivors of the tragedy dug into the two mountain campsites. Fragments of "old porcelain and china-ware...readily distinguished by painted flowers, or unique designs enameled in red, blue, or purple colors" were unearthed at a depth of one to six inches in the floor of the Breen-Shallenberger cabin.³ A cooper's inshave, an iron wagon-hammer and a whetstone with the initials "JFR" (James Frazier Reed), along with round headed pins and a tin box that had once contained hemlock were dug up at the Graves-Reed cabin in 1879. Other artifacts dug up at the lake camp included glass tableware, buttons, fishhooks, gun flints, mirrors, and "bolts, nails, screws, nuts, chains, and portions of wagon irons."⁴ George Stewart also mentions that on 12 November 1935 he "did some excavation at [the site of the Donner family camp], finding at two places layers of charcoal deposits about four inches below the present ground-level."⁵ The site of Murphy's cabin apparently was not disturbed by these early attempts at archaeology. McGlashan, for example,

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writes that he did not dig into the Murphy cabin site because the "marsh grass...firmly resists either shovel or spade."⁶

None of these early attempts, of course, took advantage of controlled stratigraphic excavation and other methods used in modern archaeology. These methods include the careful observation and documentation of the soil matrix (layer) in which the physical remains are found, the provenience (location) of the objects and what objects were found together. Accurate three-dimension maps of the physical remains then can be prepared and interpreted.

Within the last decade, there have been three archaeological studies of the Donner party sites using modern methods. In 1984, the site of Murphy's cabin was excavated by the University of Nevada, Reno, in cooperation with the California Department of Parks and Recreation and sponsored by the National Geographic Society.⁷ In 1986, the Antiquities Section of the Utah State Historical Society excavated and recorded the remains of several wagons thought to have been abandoned by the Donner party in the mud flats of the Great Salt Lake Desert. The most recent archaeological study took place in 1990 at the Donner family camp on Alder Creek, the

second of the two mountain camps.⁹ This project was conducted by the University of Nevada, Reno, in cooperation with the Tahoe National Forest.

ARCHAEOLOGY OF THE DONNER WAGONS—1986 EXCAVATION

Written accounts suggest that four Donner party wagons were abandoned in the Great Salt Lake Desert sometime between 31 August and 2 September 1846. The archaeological record of what has been interpreted as the Donner wagon site includes "wagon wheel ruts, identifiable stains of metal wagon parts such as wheels, wooden wagon parts, extensive concentration of charcoal, animal remains, and a scattering of small early to mid-nineteenth century artifacts..."¹⁰ Five wagons, four of which belonged to the Donner party and another to the 1850 John Wood party, are known from documentary accounts to have been abandoned at this place on the mud flats. One of the sites with unusually wide wheel tracks and the remains of an abandoned cache of goods appears to be the place where James F. Reed's large "pioneer

palace" wagon was abandoned and later retrieved by Reed; none of the other wagon sites, however, could be identified precisely. The 184 identifiable artifacts recovered from the Donner wagon site are mostly fragments of firearms, tack and animal equipment, wagon parts and clothing.

THE ARCHAEOLOGY OF MURPHY'S CABIN—1984 EXCAVATION

Of the three log cabins at the Donner Lake camp, Murphy's, which was closest to the lake, was the most unusual. It was built against a large granite rock that was used as one of the walls and as a chimney. The sixteen members of the Murphy, Foster and Eddy families lived in this cabin; other people, however, moved into and out of the cabin during the winter. Murphy's cabin appears to have been abandoned sometime in late March or early April of 1847. What happened to the cabin afterward is known only generally. It may have been burned in June of 1847 by Gen. Stephen Watts Kearny's Mormon Battalion. The battalion's men are reputed to have interred some of the scattered human remains in a mass grave inside the cabin.¹¹ Without question, the cabin had been destroyed by 1872, when the *Truckee Republican* reported on 7 May that "all the [Donner] cabins have been burned down or carried away by relic collectors."¹² In the late 1870s, the site of Murphy's cabin was located by C.F. McGlashan after visits to the site with some survivors of the tragedy. In 1879, six logs were still in place at the cabin but the last log was removed in 1893 and the fragments placed in 5,000 vials and sold.¹³

Not much is known from written accounts about the architectural details or layout of Murphy's cabin. The size is unknown, but contemporary accounts and later recollections suggest that it had a flat roof covered with animal skins, canvas and tree branches; it may have had either one or two rooms. The 1984 archaeological study provided additional data about the cabin and what happened there.

First, the discovery of the thin organic layer with artifacts, charred wood, charcoal and ash that marked the dirt floor suggests the size and shape of the cabin. It was rectangular, about twenty-five feet long and eighteen feet wide and oriented approximately northeast-southwest along the face of the big rock. What about the layout of the cabin's interior space? No archaeological evidence of more than one room was located. At the base of the big rock, a hearth "hot spot" marked by a dense concentration of charcoal, ash and burned bone was located. The hearth appears to have "wandered" across the base of the boulder during the winter; the rock face and an opening through the roof would have been used as a chimney.

Second, more information about construction details was acquired from the excavation.¹⁴ Although parallel to the big rock, the cabin was longer than the rock and extended outward beyond the face of the rock wall. Postmolds located at the ends of both short wall extensions suggested that "cribbing" had been used to tie otherwise floating wall ends to the large

rock. Cribbing was a common nineteenth-century log cabin construction method used in similar situations and involved driving vertical posts on both sides of horizontally-laid wall logs. Furthermore, the roof log on the northwest side appears to have been placed flush against the curved rock wall and to have been cradled in two prominent notches located about eight feet up on the face.

Third, this 1984 excavation also refuted the common belief that the cabin floor contained human remains in a mass grave prepared by a detachment from Gen. Stephen Watts Kearny's Mormon Battalion on 21 June 1847. No archaeological evidence of a grave was found.

Finally, the Donner party is remembered, at least in part, for the alleged practice of cannibalism of the dead at the mountain camps and during escape attempts by some of the survivors. Murphy's cabin is one of the places where cannibalism supposedly occurred. Patrick Breen recorded in his diary on 26 February 1847 that "Mrs. Murphy said here yesterday that [she] thought she would commence on Milt [one of the dead teamsters] and eat him."¹⁵ A rescue party led by James Reed seemed to confirm the event three days later by finding the mutilated body of the teamster at the door of the cabin. Several small bone fragments recovered by the 1984 excavation were identified as human by radioimmunoassay methods used by Dr. Gerold Lowenstein of the University of California Medical School in San Francisco. Unfortunately, the remains are so fragmented that the practice of cannibalism at the cabin could not be confirmed.

ARCHAEOLOGY OF THE DONNER FAMILY CAMP—1990 EXCAVATION

The 1990 excavation at the reputed site of the Donner family camp on Alder Creek was intended to shed light on another controversy in the history of the Donner party. Bringing up the rear of the wagon train as it moved up the Truckee Canyon, the twenty-one members of the George and Jacob Donner families and their teamsters were stopped by a broken wagon axle. The group included six men, three women and twelve children. By the time the wagon had been repaired, the early winter storm hit, and the group was unable to catch up with the main body of the party. On 3 November 1846, the Donner family established a camp about five miles from the lake camp. Written accounts suggest that the family and their teamsters lived not in cabins but in three tents and crude, brush shelters.¹⁶

Most authorities believe that the site of the Donner family camp is on Alder Creek. The Alder Creek site is based on C.F. McGlashan's nineteenth-century interviews with survivors of the Donner party and with members of rescue parties. In 1879, McGlashan and several other citizens of Truckee, California, visited the Alder Creek site with Nicholas Clark, a member of the second rescue expedition who spent three weeks at the camp in the winter of 1846-1847.¹⁷ In 1921, the site was visited by P.M. Weddell of San Jose, California, a Donner buff who had interviewed McGlashan and received instruc-



The George Donner tree was identified by P. Weddell as the site of the tent shelter in which the George Donner family lived. The bronze plaque on the nearby rock commemorates the location. The 1990 archaeological excavation, however, did not find any physical evidence that this is the correct location of any of the shelters. (Photograph by Greg A. MacGregor)

tions from him about the location of the site.¹⁸ Weddell placed wooden signs on trees marking the location of the trail taken by the Donner party and at the site of the Donner family camp. In 1927, both Weddell and McGlashan visited the site, and McGlashan verified the marked location of the camp; the wooden markers are still in place.¹⁹

The Alder Creek site, however, has been somewhat controversial. Other emigrant parties traveling along the California trail between 1845 and 1850 appear to have taken a route up Truckee Canyon that leaves the river in the vicinity of present Verdi, Nevada, goes around the north end of the Verdi Range through Dog Valley, then turns southward and goes across the Little Truckee, on past Prosser Creek continuing directly back to the Truckee River at about the center of what today is the town of Truckee.²⁰ No emigrant diaries suggest a diversion off the main Dog Valley road that would have gone up Alder Creek and down Trout Creek. Why would the Donner family have departed from the commonly used trail and taken a deviant route that rises an additional 600 feet over more mountainous and difficult terrain when they were already exhausted?²¹ Or, if they did take the commonly used

Dog Valley route, why would they establish a camp at least a mile off the trail? The camp, therefore, must have been closer to the Dog Valley road along which most emigrant parties traveled.²²

In 1990, the University of Nevada, Reno, conducted archaeological studies at the Alder Creek site marked by McGlashan and Weddell to help resolve the dispute over the location of the Donner family camp. The first excavations took place at the reputed sites of the shelters in which the George Donner and Jacob Donner families lived, but nothing except modern trash was found. At this point, metal detectors were used to survey the surrounding area. After a period of fine-tuning for local conditions and after finding a large number of modern pulltabs from aluminum cans and .22 cartridge casings, two metallic hot spots were located. Excavations at the hot spots turned up artifacts and other archaeological remains that could be dated to the Donner party time period. The two hot spots, in fact, are only 100 to 150 feet from the two shelter sites marked by Weddell.

Archaeological remains recovered from the hot spot next to the Jacob Donner shelter are the most abundant and suggest

the kinds of domestic activities that would be associated with one of the winter shelters occupied by the Donner family. Indeed, the remains are quite similar to those found at the site of Murphy's cabin. Included are fragments of ceramic tableware and glass bottles, musket balls, buttons, charred and calcined bone fragments. The site is difficult to interpret because of extensive mixing by rodents. Furthermore, the excavation has not located a hearth, such as the one at Murphy's cabin, which would give the best evidence for a shelter site. Future excavation at the site may locate a hearth; however, the concentration of bone and charcoal marking the hearth most likely has been dispersed by rodents to the point that its integrity has been lost completely.

The second hot spot is in the meadow west of the George Donner tree and includes few artifacts or other material remains related to domestic activities. Bone, charcoal, ceramic tableware, glass bottles and other domestic artifacts, for example, are completely missing. The artifact assemblage, however, includes wagon parts, oxen shoes, cut nails, percussion caps, musket balls and two coins—an 1830 United States Liberty penny and an 1839 farthing from the Isle of Man. The site may mark the location of one of the Donner family wagons, and the artifact assemblage represent the debris from material possessions packed in the wagons. One of the more interesting questions to be asked of the hot spot is whether or not it is the site of the shelter lived in by the teamsters. The physical evidence of the domestic activities expected to take place in a shelter is sparse; however, the apparent absence of domestic artifacts may be misleading. The occupation of the teamster's shelter was less intense and shorter than the other shelters; therefore, less trash was likely to have been left.

ARTIFACTS FROM THE THREE DONNER PARTY SITES

The artifacts from the Donner party sites are representative of the material culture being transported overland by emigrants traveling on the California Trail in the late 1840s. Unfortunately, most of the Donner party's possessions were discarded along the way, salvaged from the mountain camps by rescue parties during the winter of 1846-1847 or picked up by any number of visitors after the camps were abandoned. Written accounts of the trip across the Great Salt Lake Desert and the Humboldt Sink, for example, document the loss of heavy and bulky artifacts, including household furniture and boxes of books. To the extent that the Donner wagon sites have been identified correctly, the 1986 excavation in the Great Salt Lake Desert by the Utah Historical Society provides a glimpse at what was left behind.

Most of the identifiable artifacts at the Donner wagon site are associated with firearms (including musket balls, percussion caps and gun flints), tack and animal equipment, wagon parts and clothing. A few household artifacts and hand tools such as augers and grass hooks also are represented in the assemblage.

Most of the household artifacts are food and toiletry containers such as glass medicine bottle fragments, a glazed stoneware bottle or jug handle and a hotel china salt dish. Personal items such as jewelry and tobacco pipes are missing entirely. If interpreted as the remains of the abandoned Donner wagons, the artifacts provide an interesting comparison to the mountain camp remains. (Perhaps the largest number of artifacts at the Donner wagon site and the Donner family mountain camp are in some way associated with wagons or animal transportation.) Wagon hardware, oxen shoes and cut nails are the most common in both assemblages. Only a few transportation-related artifacts, however, are in the Murphy cabin assemblage. Other comparisons among the three sites are to found in the artifacts used as household furnishings, armaments, personal adornment and symbols.

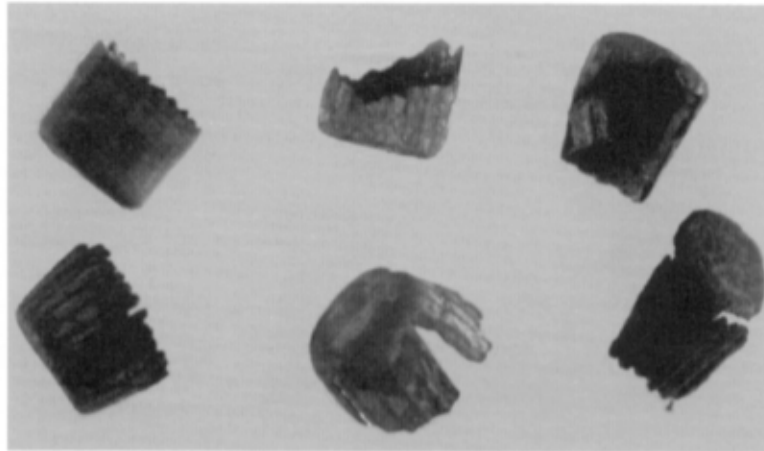
HOUSEHOLD FURNISHINGS

The emigrants in the Donner party carried with them many items intended to be used to set up new households in California, and many of the artifacts recovered from the excavations at the two mountain camps reflected this domestic baggage. The artifacts included fragments of ceramic tableware, table utensils, cobalt blue glass bottles, iron cooking pots and stoneware jugs. Most of the ceramic tableware came from the Donner family camp on Alder Creek. George Miller of the University of Delaware examined the Alder Creek assemblage and reached the conclusion that the ceramic tableware is typical of styles introduced in the mid-1830s and the early 1840s. No older styles are represented, suggesting either that new tableware was purchased when the owners moved to California or that their households were set up after 1835. Both decorated and undecorated white ware plates, muffin plates, cups and saucers are included in the assemblage. All of the decorated plates have unscalloped blue shell edges with shallow, repetitive molded patterns. Decoration of this kind made its appearance in the 1840s and continued to be produced through the 1850s. The decorated cups, saucers and bowls in the assemblage are sprig painted—small and widely spaced hand-painted floral designs in apple-green, red, blue and black. Advertisements for sprig painted tea, table and toilet wares appear as early as 1831. The earliest sprig painted wares are French porcelains, but the Staffordshire potters took up sprig painting in the early 1840s. In general, the ceramics recovered at the site were the least expensive decorated tea and table wares on the market at the time. No examples of even cheaper wares, undecorated creamware known, to exist at the time, were located by the excavation.

ARMAMENTS

By far the most abundant artifacts recovered from the three Donner party sites are associated with armaments. Written accounts of the party mention a six-shooter, a pepper box pistol, rifle, muzzle loader, caps, bullets and a powder horn. A single barrel brass pistol and a flintlock were reputedly

ARTIFACTS RECOVERED FROM THE DONNER PARTY MOUNTAIN CAMPS



1839 Isle of Man farthing from the Donner family camp.



1830 U.S. Liberty head penny from the Donner family camp.



found at the sites in the nineteenth century. McGlashan mentions that gun flints were found at the Breen-Shallenberger and Graves-Reed cabins, and three were recovered in the 1984 excavation at the site of Murphy's cabin. But without question the largest number of firearm-related artifacts are musket balls. The size of the balls range from .64 caliber to birdshot, but most of the balls are either in the .50 to .59 caliber range or in the .16 to .22 caliber range. Percussion caps from what was cutting edge firearms technology at the time were recovered from the Alder Creek and Donner wagon sites but not from Murphy's cabin.

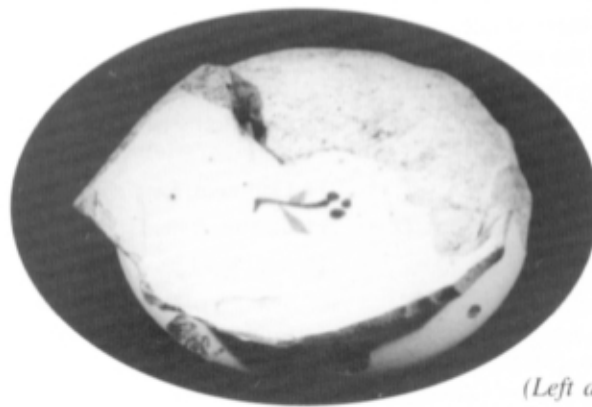
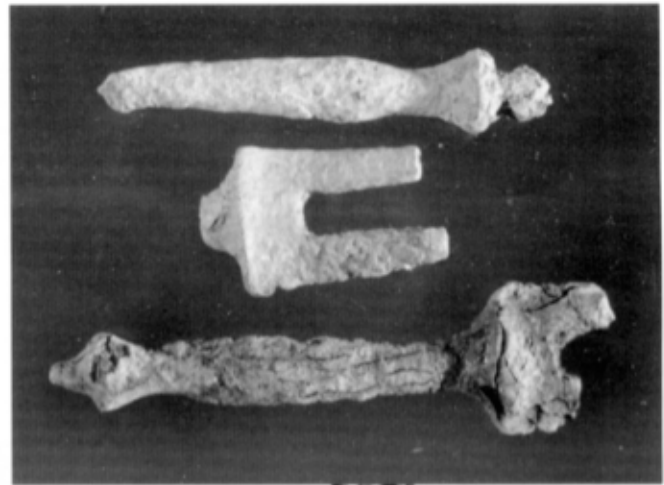
CLOTHING, PERSONAL ITEMS AND SYMBOLS

The two mountain camp assemblages include a variety of artifacts used as clothing, personal items, ornaments and symbols. No such items were recovered from the desert wagon sites. Several brass, glass, iron and pewter buttons from garments were found at both mountain camps, along with a few fragments of clothing and shoes. Personal ornaments included a brooch with a blue glass setting, a silver-plated dangling earring or pendant and several beads. The

twelve beads in the Murphy cabin artifact assemblage were glass; spherical, conical or donut-shaped; colored red, light blue, white or amethyst; and were manufactured by molding, pressing or winding. Several clay tobacco pipes also were discovered, including white kaolin Dublin clay pipestems and a gray ceramic pipe bowl with two grooves and rows of repeated circles.

Two artifacts from the winter camp sites have been interpreted as personal symbols. Perhaps the most interesting of these is a religious medal recovered from the Murphy cabin site. The medal was examined by Richard Ahlborn of the National Museum of American History at the Smithsonian Institution, who found it to be stylistically similar to those made in the United States between 1825 and 1875 and used by Roman Catholics. Such medals were stamped out from a base metal and then plated with tin or silver. According to Ahlborn, "the representation of Jesus, encircled by the inscription 'SWEET HEART OF JESUS HAVE MERCY ON US,' and of His mother, encircled by 'BLESSED VIRGIN MARY PRAY FOR US' are typical in both gesture and sentiment of the mid-nineteenth century. These repre-

(Opposite) Percussion caps from the Donner family camp.
 (Right) Table utensils from the Donner family camp. (Center)
 Military emblem from the Donner family camp.



(Left above) Sprig-painted cup base from Donner family camp. (Above) Roman Catholic religious medal from Murphy's cabin.

sentations somewhat anticipate the popular sacred-heart themes, as they did not become official catholic dogma until about 1875.²³

Another personal symbol recovered from the Donner family camp in 1990 is a brass American eagle with a shield and arrows. This symbol appears to be part of a United States army uniform insignia "worn on the Infantry dress shako from 1821 to 1851 and on the 1855 Light Artillery dress shako, until 1872."²⁴ Whether the emblem might have been left behind by General Kearny's Mormon Battalion during their trip through the camp in 1847 is an interesting, but conjectural, question.

COINS

Without question the two most exciting artifacts located by the Donner party excavations are coins. Two were found at the Alder Creek site in 1990—an 1830 United States Liberty head penny and an 1839 copper farthing from the Isle of Man. John Denton, the only person in the Donner party known to have come from England, was traveling with the

George Donner family and may have been working as a teamster. In her reminiscences, Virginia Reed Murphy describes Denton as about thirty years old and a gunsmith and gold-beater from Sheffield, England, who perished on the way out of the mountains with the first relief party. What, if any, connection John Denton had with the Isle of Man is unknown.

ANIMAL REMAINS

In addition to artifacts, several animal bone and teeth fragments were recovered from the three Donner party sites. The faunal remains at the Donner family mountain camp are in the process of being analyzed; however, preliminary studies of the 306 identifiable animal remains at the Murphy cabin site and the fifty-seven at the Great Salt Lake Desert wagon site allow some conclusion. Both include the remains of domestic cow and mule. Cattle, probably oxen, are the best represented animals. Mostly lower limbs from a minimum of three individual animals were identified at each of the two sites. Perhaps the most interesting, and the second most

common, animal remains recovered from the Murphy's cabin site have been identified by Amy Dansie at the Nevada State Museum as bear. If this identification is correct, the archaeological record confirms the written account that William Eddy, one of the cabin's residents during the winter of 1846-1847, killed an 800 pound grizzly bear.

CONCLUSIONS

In conclusion, then, recent archaeological studies at the three Donner party sites have begun to tap a new source of information about what is probably the best known event in the history of the California Trail. To date, the studies have added architectural details of Murphy's cabin and refuted the common belief that there was a mass burial of Donner party victims inside the cabin. Perhaps more important, however, is archaeological confirmation that the Donner family camp is indeed on Alder Creek, well off the most commonly used emigrant route of the 1840s. In addition, the 1990 field season identified two clusters of archaeological remains that may be sites of shelters at the camp. Together these studies have shown that the systematic examination of the archaeological record can help write Donner party history; however, it also is clear that much more work remains to be done.

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