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Salvage Archaeology in the Trinity Reservoir Area Northern California—Field Season 1958

Adan E. Treganza

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The University of California Archaeological Survey
Department of Anthropology
University of California
Berkeley 4, California

SALVAGE ARCHAEOLOGY IN THE TRINITY RESERVOIR AREA

NORTHERN CALIFORNIA - FIELD SEASON 1958

Adan E. Treganza

Report on a joint archaeological project carried out under terms of a contract (No. 14-10-434-205) between the U. S. National Park Service and the University of California

Preface

The author wishes to express his appreciation to the members of the archaeological field crew for their labor and cooperativeness during this project. Participating were John White, John Sanchez, Ronald Waterbury, Jerry Volkmann, Thomas Thorp, Edward Eldridge, Donald Gallup, Martin Heicksen, J. Busseto, and Frank Pierce. Special thanks is extended to Martin Heicksen, who functioned as my field assistant and was in charge of the mapping of the various sites; Donald Gallup, who did the sampling and computing of test pit data; Frank Pierce, who so willingly provided quarters and facilities for the crew.

Gratitude is extended to the following: Dr. Robert F. Heizer and Mr. Albert B. Elsasser of the University of California for field supervision and aid in preparation of the manuscript of this report; Mr. Paul Schumacher of the National Park Service for his prompt assistance whenever needed; Mr. Marvin Foster of Trinity Farms for permission to excavate sites on that property; Mr. Richard Hamilton for the care he employed in bulldozing parts of the sites; and Mr. William Foster, Jr., for cutting a tree so that we could perform a ring count as a rough age determinant of the time of abandonment of a sweathouse at one of the sites.

The following residents of Trinity Center were ever helpful and hospitable to the entire crew: the Gordon McKenzies, the Ellis Rogers, the Marion Dickys, the Richard Hamiltons, the William Fosters (Sr. and Jr.), and Marvin Foster. "Bud" Wagner of East Fork and Ida (Feder) Lachuga of Project City, Wintu Indians, provided useful ethnographic information.

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University of California Archaeological Survey
Department of Anthropology
Berkeley 4, California

March 31, 1959

Mr. Lawrence C. Merriam
Regional Director
U. S. National Park Service
Region Four
180 New Montgomery Street
San Francisco, California

Dear Mr. Merriam:

Enclosed are five copies of a report of the archaeological excavations in the Trinity River Division of the Central Valley Project, Trinity County, California. Included also are data pertaining to a preliminary archaeological survey in the Whiskytown Reservoir Area, Shasta County, and in the vicinity of the Wintu Pumping Plant, Redding, California. All of the work cited has been carried out under the terms of Contract No. 14-10-434-205 between the U. S. National Park Service and the University of California. The report together with this letter of transmittal should satisfy Articles I (a), (b), (d), and (e) of the contract.

Except for any Articles referring to matters which may come up in future, such as those pertaining to publication, terms of the entire contract may, with this report, be considered fulfilled by the University of California.

Professor Treganza's final report clearly indicates that further work in the Trinity River region would not be scientifically profitable. It is gratifying, nevertheless, that the University of California Archaeological Survey has been able to carry out such an intensive investigation in any archaeological culture province in California.

Sincerely yours,

Robert F. Heizer
Director

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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION FOUR

180 New Montgomery Street
San Francisco 5, California

April 12, 1959

Dr. Clark Kerr, President
University of California
Berkeley 4, California

Dear Dr. Kerr:

This is to inform you that the report entitled "Salvage Archaeology in the Trinity Reservoir Area, Northern California, Field Season 1958," by Adan E. Treganza, made possible through the cooperation of the University of California and the National Park Service, is accepted. This report was submitted by Dr. Robert F. Heizer, Director of the University of California Archaeological Survey, in fulfillment of Contract No. 14-10-434-205 between the University and the Service.

We appreciate the careful manner in which the archaeological salvage was accomplished and the excellence of the report. Dr. Treganza is to be commended, particularly for his archaeological work and fine cooperation with the National Park Service. This report is a worthwhile contribution to the knowledge of the archaeology of the upper Trinity River which might have been forever lost to science without the interest and the assistance of the University of California in the Inter-Agency Archeological Salvage Program.

It was interesting to note the author's details on the use of power equipment in salvage excavations of this type. The author presents a careful analysis of the information gathered and yet capably demonstrates the time and funds saved by applying this mechanized method of excavation to the periphery areas of an archaeological site such as occurred on the Trinity. The excellent draftsmanship of the maps and the interesting photographs presented with the report add a great deal to the report's value.

We agree with Drs. Treganza and Heizer that we can now consider the archaeological salvage work in the upper Trinity area completed. It is a pleasure to know that an additional area in the State of California can be considered as having been thoroughly studied from an anthropological

viewpoint. It was interesting that the University of California had in its collections the dance regalia belonging to Jim Feder who constructed the dance house excavated by Dr. Treganza during the 1958 field season and that he was able to interview Jim Feder's daughter and other Indians who had associations with the village and dance house site. It is gratifying to know that here we have a very thorough record of Wintu occupation through ethnographical studies made and recorded by Cora Du Bois and C. Hart Merriam, the dance paraphernalia, and now the archaeological record.

We hereby authorize the University of California to publish this report if it so desires. This report fulfills the terms of the entire contract.

Sincerely yours,

Lawrence C. Merriam
Regional Director

Copy to: Dr. Heizer

Introduction

This report represents the final results of two seasons of archaeological excavations in the Trinity Reservoir area of northern California. Work started with a site survey in 1952 (Treganza, n.d.), followed by the excavation of four village sites in the summer of 1957 (ibid., 1958). This season two village sites, a semisubterranean sweathouse and a dance house, were examined. In addition, site surveys were carried out in the adjacent Whiskytown Reservoir area where thirty-five new archaeological sites were recorded (Sha-172 through Sha-206) and at the proposed site of the Wintu Pumping Plant near Redding, where three sites were recorded (Sha-169, 170, 171).

Whiskytown Reservoir area and the Wintu Pumping Plant sites will receive further investigation in the summer of 1959 with excavation of recommended sites, and therefore the present paper will concern itself mainly with the results of the Trinity excavations and the conclusions which can be drawn from the two seasons of study.

Sites originally selected for Excavation were Tri-45, 57, 95, and 112. In the field it was discovered that Tri-95 was under cultivation and not available for digging. Permission to substitute site Tri-70 for Tri-95 was granted by the National Park Service.

Nothing discovered in the summer of 1958 would appreciably change the conclusions reported for the 1957 season of the project (ibid.). Our earlier conclusions were confirmed that the upper Trinity River region was occupied relatively late in time and underwent little significant cultural change until post-Caucasian times, when modification of the "old ways of life" was in the direction of a change of habitat and occupation, together with the adoption of certain aspects of modern technology. With the excavation of the two historic sites, Tri-45 and 112, we have been able to establish a picture of continuous occupation from a time estimated at about 900 A.D. to the present. We were fortunate in having available Wintu informants who were directly familiar with the sites in question.

Archaeological work here has been useful in providing historical depth to a previously constructed aboriginal settlement pattern. Ethnographic references (Kroeber, 1925; Du Bois, 1935; Merriam, 1955), meager as they are, present a scene of cultural dilution for the Trinity River Wintu as opposed to the culturally rich climax areas of the southern Sacramento Valley Wintun (Patwin).

Unique as a manifestation of aboriginal architectural achievement in western North America are the large surface and semisubterranean ceremonial houses characteristic of central and northern California. To date there has been a paucity of structural detail pertaining to these structures, especially those of the prehistoric period. It is gratifying, then, that the 1958 project provided the opportunity to examine two such structures, one a protohistoric semisubterranean sweathouse, Tri-45 (Fig. 2a; Map 8), and the other, Tri-112, a large surface round-house for dancing (Fig. 2b; Map 7). The latter structure was built and used in the full historic period. From three different sources (Du Bois, 1935, 1937; Merriam, op. cit.) we were able to obtain the name of the builder, the Indian name of the house, a description of the dance regalia used, and the role this type of dance house played in northward diffusion of the "Big Head" cult.

At no time during our investigation of the Trinity River drainage area did we encounter any evidence of antiquity beyond perhaps 1000 years. Village locations, midden composition, and artifact yield remained so consistent as to be almost predictable whenever a new area was investigated. However, in the survey of the Whiskytown region, which lies on Clear Creek and belongs to the Sacramento River drainage, one site was recorded which produced manos and milling stones (Pl. 2e), a sharp contrast to the expected pestle and hopper-mortar stones of the Trinity drainage. Farther to the south, in Mendocino County, it is presumed that the occurrence of the milling implements is indicative of an early occupation horizon (Treganza, Smith and Weymouth, 1950; Meighan, 1955).

As a closing chapter on the Wintu of the upper Trinity River region, some attempt was made to contact most of the remaining Indians and glean from their memories what they could recall of the old ways of life and, where possible, relate these recollections to the historical phases of the archaeology.

Excavation of Sites

(1) Tri-45: Semisubterranean Sweat and Dance House

General location: Map 6*
Map of site: No. 8
Illustrations: Fig. 2a; Pl. 1a-d

Site Tri-45 is located in the "Y" at the junction of the French Gulch and Delta Roads (NW 1/4 of the NW 1/4 of Sec. 22, T35N, R6W, U.S.G.S. Schell Mountain Quadrangle, Trinity County). The property is owned by the Trinity Farms Cattle Company.

During the first archaeological survey of the area our attention was drawn to a spot which was described by a local Forest Service sign as a "Steam Pit Used by Wyntoon [sic] Indians for Steam Bath." Local tradition held to the idea this was a large steam pit in which the Indians derived benefit by steaming through a direct process of pouring water over hot rocks. Although local residents knew nothing of the origin of this depression, no hesitation was felt in attributing to it an aboriginal function of a sweathouse. Interest in excavation was not to upset local belief but to inquire into the structural details of a potentially significant architectural feature.

Plan of Excavation

As the features referable to the doorway and outlines of walls of the structure were quite obvious, excavation methods were simple. Instead of systematically following a superimposed grid system, the main structural features were followed sequentially as they became apparent. Work was started with shovels, trowels, and small brooms in the center of the floor, where the debris was but a few inches thick. Material extraneous to the present investigation, such as tin cans, scrap iron, and obviously recent campfire refuse on or near the surface, was removed. The hard-packed dirt floor was followed from the approximate center toward the periphery, and was found to end abruptly against a vertical wall which evidently encircled the floor. The debris tended to thicken toward the edges of the floor. It was transported outside the sweathouse by wheelbarrow and put through a

*Numbering of maps in this report follows the sequence established in the report of the 1957 excavation in the Trinity region (Treganza, 1958).

power driven screen of one-quarter and three-sixteenths inch mesh for artifact salvage. It was found that no screen size larger than one-quarter inch should be used in the Trinity area, and that even with this size some extremely small projectile points weighing .3 gram or less might pass through if care were not exercised.

As the entranceway to the structure served as a passage through which to wheel dirt from the excavation, it was not exposed until the interior had been swept clean. When this was done, the entrance was cleared by following the floor level outward from the center of the floor. Trees which had grown up through the floor since the structure was abandoned were left standing since they in no way interfered with the clearing of the floor. The largest tree was later cut for a tree ring count in order to determine at least an approximate time of abandonment of the structure. Presumably the trees would not or could not have grown through the floor during a period when the structure actually was in use.

Description of Structure

No supersurface aspect of the structure was preserved, hence the reconstruction of such features as roofs or smoke holes presented (Fig. 2) is partially based on comparisons of known historic sweathouses with similar ground plans.

One informant, "Bud" Wagner, an Eastfork (Trinity) Wintu, could recall having heard that the roof was originally conical. Ida Lachuga, another informant, more than 100 years of age and born near the site, however, had no recollection as to any of the details of construction of the house.

The floor plan is circular, averaging 38 feet 4 inches in diameter (Pl. 1b; Map 8). The entrance faces south and is a passage 5 feet wide and 13 feet long (Pl. 1d). The hearth consisted of a nearly circular area of white wood ash 6 feet 8 inches in diameter, resting in a prepared pit about 12 inches deep. The wood ash deposit was lenticular in cross-section and extended several inches above the floor level. The nature of the white ash indicated that an open (as opposed to a "smothered") fire had been used over a long period of time (Pl. 1c). The symmetrical appearance of the firepit suggests that a formal "fire tender" might have been employed in the house. The practice of appointing a special person to be in charge of the ceremonial fire has been documented for the historic period among the Pomo (Treganza, Taylor and Wallace, 1947). The firepit is about 2 feet

off-center toward the entrance, in the northeast-southwest axis. In the reconstruction (Fig. 2a), therefore, the smoke hole is shown slightly off from the conical peak of the roof. A similar feature is to be observed in early photographs (e.g., Merriam, op. cit., Pls. 38a, 39b). Clear evidence of the location of the supporting roof posts is lacking. Detail A (Map 8) shows a rock-packed area, measuring 18 by 24 inches, occupying the probable correct position for an upright post foundation. If the roof were supported primarily by four large upright posts, as would be expected for this area, then evidence for the placement of three remaining posts is lacking. A pine tree (shown as "C" in Map 8) now occupies the spot where a former post may have stood. At the rear of the house the dance floor was cut into such resistant, hard clay that perhaps no post holes or rock foundations were necessary for securing the upright posts.

The side walls of the house were clearly defined, especially in the rear, where the circular wall had to be excavated by the builders out of the hard yellow clay. Toward the front the wall was less sharply defined, as it had been cut into the relatively loose midden which evidently had been deposited prior to the digging of the pit for the sweathouse. No evidence of a rock lining for the wall was observed. The feature of a rock lining on the subsurface interior wall has been observed among the historic Pomo (Treganza, Taylor and Wallace, op. cit., Fig. 1).

Two wooden posts of split cedar, about 7 inches in diameter, were found in situ (Map 8). With the two posts as evidence, it can probably be concluded that a circular wooden wall rose several feet above the elevated embankment which surrounded the sweathouse. This arrangement would perhaps provide for an additional 2 or 3 feet of head clearance along the side walls of the house, since the depth of the clay portion of the wall, including the embankment, was only about 4 feet. It has been observed in other cases (see above) that where a rock lining is present the pit is about 5 to 6 feet deep and the conical roof rests directly on the rocks at the original surface level.

That the roof of the Tri-45 sweathouse was covered with poles, brush, planks, or shakes, rather than earth, is quite certain. This is evidenced by the presence of a thin veneer of rotten pine needles and other recent camping debris in direct contact with the original floor (Map 8, profile $A\text{-}A_1$). Only near the periphery of the floor was the post-occupation deposit several feet deep and this was probably largely the result of the caving-in of the walls.

Following the abandonment of the sweat house, pine trees grew around and

within the floor structure in such a pattern as to suggest that the wall and roof remained relatively intact on the east side, but collapsed inward on the west side (Map 8; Pl. 1a). In order to ascertain the latest date that the structure could have been in use, the largest pine tree growing out of the floor was cut as close to the ground as possible and a ring count resulted in an estimated age of sixty to seventy years for the tree. If the count truly reflects the terminal date of the site, then the last time the sweathouse could have functioned as such would appear to have been not later than 1895. It is not surprising to learn that this type of house or even this particular house extended so far into the historic period.

The floor of the entranceway, though it contained no preserved wood, exhibited a series of post holes along both sides of the passage (Pl. 1d). The holes were strongly in evidence since the entrance passage cut directly across the older midden deposit and, in addition, was made of compact wood ash and clay (probably to reduce the dust). What most likely were split-cedar posts lined the passage, producing a well-defined scalloped pattern against the margins of the clay. The entranceway was about 8 inches higher than the inner floor. It was level through most of its length, but upon reaching the edge of the inner circle it dropped off in a direct short slope to the floor of that circle.

Local Indian informants all are aware of this depression and recognize it as the site of a former ceremonial structure. In August, 1958, I visited Ida Lachuga at Prospect City especially to inquire about Tri-45 and 112. This woman is the daughter of Jim Feder, known as the builder of the Trinity dance house. She was born near the site of Tri-45 some one hundred years ago. She remembered faintly the dance house her father had built which we now identify as Tri-112, but she had no recollection of the sweathouse site, now designated Tri-45. When asked specifically about any wood posts that might have been still standing or any talk by older people about the depression or pit, her response was negative.

It is our conclusion that either the sweat house has been exposed to the weather so long that almost all of the wooden remains have rotted away or that they were deliberately removed to build the dance house (Tri-112) some 100 yards distant. Another possibility is that the posts from Tri-45 were used by early White miners for building material or perhaps for maintaining their numerous water ditches.

Excavation of Tri-45 clearly shows what was suspected earlier (Treganza, 1958, p. 9), i.e., that here is represented one of the older types of ceremonial semisubterranean sweat and dance houses characteristic of the Sacramento Valley and foothill Wintun and not the type of structure which would

involve direct steaming with the use of water and hot rocks. However, the latter type of structure was also known to the Wintu of this area (Du Bois, 1935, p. 123, Pl. 1d) and it is possible that such a type of steam sudatory was exposed in the 1957 excavation of site Tri-58 (Treganza, 1958, Pl. 2c, Fig. 2a). Merriam (1957, p. 41), writing about the Wintun houses near Baird, provides an additional note on this small type of steam sudatory: " . . . besides these [houses] I saw the frame of a small sweat house where water is thrown on hot stones to convert it into steam. This sweat house used to be covered with deer skins; they are now commonly covered with blankets when in use and left bare between times." Both the ethnographic and archaeological data suggest that this form of sweathouse is later in California than the semisubterranean sweat and dance house. It is conceivable, however, that a small sudatory of the direct steaming type might have been used within the protected confines of the older archaeological feature at Tri-45.

Artifacts

The primary objective at Tri-45 was to excavate and define the sweathouse and not to excavate the small village which was in direct association with it. Complete excavation of the entire site would have been desirable, but unfortunately time did not permit this. It was felt that salvage operations would be more profitable archaeologically on the nearby site of Tri-57, which appeared to be a part of a self-contained settlement unit (Map 6) which included a habitation site, a cemetery, a dance house, and sweat pit. The artifacts from Tri-45 were recovered only from the sweathouse floor and along the entranceway of the latter.*

Seventeen obsidian projectile points were recovered (Fig. 1, IIIa-d). All were similar in type, range, and size to those collected from the other Trinity project area sites. Most common points were subtypes of the "Gunther barbed" point, i.e., with both serrated and unserrated edges and with the stems longer than the barbs (Treganza, op. cit., p. 14). In addition there was found a bone bead (Fig. 1, IVe) showing an incised central band, 5 cm. long and 8 mm. in diameter (No. 1-190622), a fragment of a birdbone whistle (No. 1-190623), a fragment of an incipient abalone shell pendant (No. 1-190621), and a square-ended pestle of the type used with the hopper-mortar stone (No. 1-190626). Several cut nails were recovered but all were from the central floor area and probably post-date the time of actual use of the sweathouse. They were, however, kept as part of the collection (No. 1-190625).

*All specimen numbers shown in this paper are those of the University of California Museum of Anthropology. Specimens from Tri-45 are numbered 1-190598 through 1-190627.

(2) Tri-112: Surface Dance House

General location: Map 6
Map of site: No. 7
Illustrations: Fig. 2b; Pl. 1e-f

As can be observed on Map 6, site Tri-112 is one of several aboriginal features located within a limited geographical area, less than half a mile in extent in any direction. The other associated sites are Tri-45, a semi-subterranean sweathouse; Tri-113, a historic Wintu cemetery; Tri-114, a small historic village; and Tri-57, a small prehistoric village.

Tri-112 is located just west of Delta Road and about 100 yards north of Tri-45 (NW 1/4 of the NW 1/4 of Sec. 22, T35N, R6W, U.S.G.S. Schell Mountain Quadrangle, Trinity County). The property is owned by the Trinity Farms Cattle Company.

Although the site is recognizable as an archaeological feature from the road, the circular outline of the dance house was not discerned until the floor had been cleared and the hearth exposed (Pl. 1e, f). Over-all photographs were difficult to obtain because of the very size of the floor and the fact that it is surrounded by large pine trees which cast varied shadow patterns across the area of interest.

Two of the original wall posts are still standing, but unless viewed as part of the house plan they appear to be merely random pine stumps (Map 7). The dance floor is circular in outline, with a diameter of 54 feet. The doorway of the house faces 15 degrees east of south. The circular floor proper is surrounded by a rim of dirt about 12 inches wide, which evidently was scraped up against the outside wall when the structure was in use. During the course of excavation ten stubs of split cedar posts were found in situ around the periphery of the floor. The hearth, once cleared, proved to be about 3 feet in diameter and located slightly (3 feet) off-center, toward the door of the structure. The fire pit was but slightly excavated and somewhat irregular in outline. The hearth did not indicate intensive use over a great period of time, in contrast to the sweathouse hearth at site Tri-45 (above). The soil around the hearth showed little evidence of hard baking.

The center supports of the house were represented by the remains of post holes, each about 18 inches in diameter, located exactly 22 feet 6 inches apart, and forming a perfect square set evenly within the circular floor plan. One of the standing posts which formed part of the doorway extended 8 feet 2 inches above the level of the ground. Another standing

member, a wall post, stood 7 feet 6 inches above the ground level. The difference in height between these two posts is important in working out details of reconstruction, as in some of the pictures of ethnographic round houses of generally similar type there is shown but a short entrance passage, actually a sort of shed roof projecting out from a point about one-third of the way up the slope of the conical roof, with the posts on the lower part of the "shed" placed slightly beyond the wall circle. These posts, however, would be higher than the wall posts encircling the main floor of the house. An example of this type of structure may be observed in two of Merriam's illustrations (1955, Pls. 41a, 45b). This, along with the archaeological evidence at Tri-112, greatly influenced the reconstruction presented in Figure 2b of the present paper.

Excavation methods were simple, since practically all the features were on or quite near the surface. Exposure of the floor was carried out with the sides of shovels, with trowels, and finally with brooms. Unfortunately, modern lumbering activities had marred the surface of the dancing area and spoiled it for photography.

That Tri-112 is the dance house referred to by Du Bois (1935) and C. Hart Merriam (op. cit., p. 22) appears quite certain. Merriam, speaking of the dance houses of the Wintun in general, remarks: "There was also another great dance house at Trinity Center; its Indian name, Nom-pta-nom-kane-pom, means 'to the waste and down land.'" A typographical error must be present in the word waste, either in Merriam's original or in the printed text. Waste should probably read west, as the word for west in Wintu is nom. The text then should read, "to the west and down land." This description would fit either a local or wider regional situation. Locally, in historic times, most of the Indians were living on the East Fork of the Trinity River, and since the location of the dance house was west of where they lived, and down stream, it would fit the name exactly. Considered regionally, the name suggests that this was the most western of the big dance houses, on the other side of the watershed which separated the main body of the Wintu from the Trinity River branch.

Du Bois, in her discussion of the 1870 Ghost Dance (1939), again speaks of a dance house probably located in the vicinity of the spot where Trinity and Delta Roads meet, i.e., in the area of the habitation complex which includes Tri-45 or Tri-112 (see below). Although the exact location of the spot is not quite clear, Du Bois in any case discovered the name of the builder and purchased some of the dance regalia used in the house. The main dances, and the role this dance house played in the northward diffusion of the Big Head Cult, are discussed (ibid., pp. 121-23, passim) as follows:

"The next clue in tracing the northern movement of the Big Head through an area which is now practically devoid of Indian population was in the Upper Trinity subarea of the western Wintu . . . . The two western Wintu informants were John Towndolly, one of the dancers, and Jim Feder, one of the purchasers. . . . Jim Feder built a dance house for the Big Head just east of Trinity Center. 'He used the old kind of sweat house but made it larger.' Was 5 or 6 feet deep, had ca. 4 center poles. Door faced east. No rear exit. Drum built in at rear of house. . . . Informant [Jim Feder] believed the dance came originally from the Round Valley Reservation (Yuki territory) where it was very old and well established. . . . The first performance of the Big Head, of which Jim Feder knew, was held at a place called Xentintcau south of the present town of Hayfork. Here [Jim Feder said] it [the dance] remained one year before its owner [Captain Jim] took it to Lewiston.

"To the Lewiston performance came Jim Feder and a group of people from Trinity Center. . . . At this performance it was announced that the dance was to be sold only in a northerly direction. . . . Jim Feder who was a chief near Trinity Center, and Bear Tom, a dancer of repute among his followers, agreed to purchase the ceremony and regalia from Captain Jim. The price was twenty dollars for each of the two sets of Big Head regalia consisting of a headdress and feather cape. With the purchase went instructions in the dance and songs. . . . Jim Feder and Bear Tom introduced the Big Head to their village, Tcenakbuli, on the East Fork of the Trinity, three miles east of Trinity Center. It remained there for about two years. Then the regalia and ceremony were taken to Yreka in Shasta territory. . . .

"Approximately four or five years after the sale of the first set to the Scott Valley Shasta, Captain Jim again offered Jim Feder another pair of Big Head costumes at Lewiston. This time Jim Feder was the sole purchaser and each set of the regalia cost only ten dollars. . . . The feathers were never resold until 1930 when they were purchased for the Museum of Anthropology at the University of California."

There is some confusion between Du Bois' description of the dance house and the archaeological data recovered by us. Probably the reason for this is that actually Du Bois was observing the semisubterranean sweat and dance house (Tri-45) which is in plain view in the "Y" of the road near site Tri-112, and which would appear, before exact measurement, to be about 4 or 5 feet deep. Du Bois' informants description, including mention of the four center poles, fits more the archaeological conditions encountered at Tri-112. The Tri-112 dance house is not discerned with ease, since no pit

is present to set it off from the otherwise almost level terrain (see Pl. 1f). Since the remains of the two structures are so close together, a mistaken identification could easily have been made by Du Bois. It is significant that during the initial survey in the Trinity region, site Tri-112 was not noticed by the members of the Survey crew until an informant insisted that the spot be checked. When it was, the remains of the dance house structure indeed were located. No explanation can be given why Du Bois reported the direction of the entrance as east when, with the aid of a compass, it was found in 1958 that the entrance of the structure at Tri-45 faced due south, while that at Tri-112 faced 15 degrees east of south. Perhaps the direction was estimated; if so, it would be quite easy to make an error where, as is the case here, no definite land-marks could be observed. If the traditional foot-drum were used in this dance house, it was probably as described, i.e., it must have been located at the rear of the structure, opposite the entrance. Our excavation, however, revealed no evidence of a pit over which the drum might have been mounted as was sometimes the practice. Du Bois (1939, Pl. 1d) pictures a Pomo foot-drum of the type probably used also at Tri-112.

The dance equipment described in the present paper is that purchased for the University of California Museum of Anthropology around 1930. It may reasonably be assumed that, since the material almost certainly was that used by Jim Feder, mentioned above, most, if not all, of the items were used in the dances held in Tri-112. The University of California Museum of Anthropology catalog numbers referring to the material run from 1-28175 through 1-28188, and the catalog simply indicates that the material is from Trinity Center. Included in the collection are two feather headdresses, two feather aprons, four feather plumes (two matched pairs), and four split-stick rattles. Illustrated in Figure 2c-g are examples of each of the types of specimens. The headdresses photographed by Du Bois (op. cit., Pl. 2d) appear to be similar to the specimens in the U. C. Museum of Anthropology, and are presumed to be the purchased items from Trinity Center. They are identified in the text only as being "Big-Head Headdresses."

1. Feather headdress (Fig. 2f), No. 1-28175.

The feathers are built upon an open twined willow or hazel framework shaped to fit the head like a shallow bowl (10 inch diameter), held in position by two cloth straps which tie under the chin. The short feather fringe is composed of plain and banded feathers, of the sharpshin hawk and the long-eared owl. Some of these feathers stand upright and others are attached so as to hang down around the sides and back. There are no

hanging fringe feathers in the front of the frame. The large "top" feathers rise upright about 22 inches from the frame. These feathers appear to be from both the buzzard and the golden eagle. To the tip of the feathers are attached small tufts of either snowy heron or white chicken down. No. 1-28176 differs from the latter in that it has no fringe of small feathers and the down attached to the tips of the feathers is not tufted in the same way.

2. Feather dress (Fig. 2d), No. 1-28177.

The feathers are attached to a burlap backing and form a sack-like dress supported by rawhide shoulder straps. The length of the dress is 45 inches, and its width (open) is 40 inches. The upper part of the dress is composed of a 4 inch band of eagle or buzzard down in the front, and white chicken feathers in the back. The main body of the dress is 29 inches long and is composed of various lengths of buzzard, hawk, and owl feathers arranged in four overlapping rows. The bottom 9 inches of the dress are composed of individual wing feathers of the bald eagle, each feather tipped with a fluff of eagle down.

3. Feather apron (Fig. 2e), No. 1-28180.

Like the dress, this specimen has a burlap backing. The feathers, however, are attached to a string net, and leather thongs hold the apron in position around the waist. Total length of the apron ia about 40 inches. The body is of three bands of feathers. The top row, 10 inches long, is made of white chicken feathers tied directly to the leather waist thong. The next lower course, 16 inches long, consists of two overlapping rows of brownish-shaded golden or bald eagle feathers attached to the netting. The bottom row, 14 inches long, is made of the white and brown wing feathers of the bald eagle attached by their quills to the bottom of the burlap.

4. Feather plume (Fig. 2g), No. 1-28184.

There are two sets of these plumes in the collection. The longest of the specimens (36 inches) is illustrated. This specimen has fine, soft, silky feathers bound to the shaft; the handle is 14 inches long. The type of feather has not been identified. It is possible that they were procured from White men who, in turn, imported them from elsewhere. The feathers were tied to a cane shaft with black thread. Their color, a weak purple, may possibly be attributed to alder dye which has faded since the manufacture of the plume.

5. Split-stick rattle (Fig. 2c), No. 1-28185.

Specimen is 18 inches long and made of alder. It differs from most rattles of the same general type in that it possesses an incised design of simple cross-hatches.

* * *

(3) Tri-113: Historic Burial Site

General location: Map 6
Map of site: None
Illustrations: None

This site occupies part of a small knoll directly north of Tri-45 and west of Tri-112, and overlooks the Trinity River near Trinity Farms. It was not on the list of sites recommended for excavation because known Wintu Indians are buried here in individual graves. Nevertheless this site constituted part of the settlement complex as shown on Map 6, and in order to complete the picture of the period of transition from the prehistoric to the full historic period in the area some observations were made at the site. All the graves showed some evidence of disturbance prior to our investigation. Surface outlines of the grave pits indicated burials in wooden (probably pine) coffins. Evidently the pits for the latter were dug into the hard clay with picks.

It is likely that around 1860 the Indian burial pattern shifted in this area from flexed pit burials without coffins to burials in the extended position brought about necessarily by the shape of the coffin introduced by the White man.

* * *

(4) Tri-57: Village

General location: Map 6
Map of site: Map 9
Illustrations: Fig. 1, IIa-m; Pl. 2a

This small site was given no specific name but was selected for excavation because of its apparent inclusion in the complex of aboriginal features already mentioned. The surface artifact yield of projectile points was exceptionally good, and the existence of six well-defined house pits at the site promised additional data which might be useful in the interpretation of the complex as a whole. The land on which the site is located is owned by the Trinity Farms Cattle Company (NW 1/4 of the NW 1/4 of Sec. 22, T35N, R6W, U.S.G.S. Schell Mountain Quadrangle, Trinity County).

The cultural deposit forms a small knoll in an open portion of a small, secondary drainage basin between Trinity Farms and Delta Road. The stream in the gulch, to the north and east of the site, was running little water in late August. Although this stream is probably fed from but one spring (Jackass Spring) at a higher elevation and seems to be of little consequence at present, it nevertheless must have been a factor in the original selection of the site.

This village was small enough to enable us to obtain a maximum sample of its content. The grid system employed covered all of the house pits and most of the cultural deposit. Fourteen 10 by 10 foot sections were excavated as follows: A3 to A5; B3 to B6; C3 to C6; D4 to D6 (Map 9). Thus practically the entire center portion of the site, including all house pits but one, was excavated.

The midden contained a fairly large proportion of small pebbles mixed with the typical dark ashy mound soil of the region. Only 6 inches of deposit was present on the northern periphery of the site, and house pit No. III was cut into the native yellow soil. On the south side, near house pit No. IV, was a maximum depth of 20 inches of midden deposit. At the base of the mound, in sections B5, B6, C5, and C6, large rock piles similar to burial cairns were discovered. When these were uncovered, however, no human bone was found. Although some of the rocks in the piles showed signs of burning, nothing else pointed to their relationship to the overlying house pits. This conglomeration was noted also in the excavation of site Tri-70, but there too no clues were forthcoming as to the function of the rock piles.

House pits yielded neither data pertaining to their structure, in the form of post-holes, for example, nor any other artifactual remains. It is assumed that the houses were conical and that they were made of bark. No central fire pit was noted for any of the houses in this village and no evidence of prepared floors was found in any of the pits.

Artifacts

Through the use of shaker screens a sample of 147 projectile points was obtained at the site. These were either complete specimens or fragments complete enough to be classified. With the exception of one red jasper point, all were of obsidian (Fig. 1, IIa-m). Working technique ranged from but slight modification to extremely fine chipping. Four of the five subtypes of the "Gunther barbed" type points (Treganza, 1958, p. 21) were found at the site, and these were by far the most common types

represented. In addition to these types, 19 specimens of points identical to or resembling Desert side-notched points (Baumhoff, 1957, p. 10) were found (Fig. 1, IIk, 1), as well as one diamond-shaped point.

The yield of projectile points from Tri-57 is not unlike that of almost all the other sites excavated in this area in 1957. No explanation can be offered at present why the Desert side-notched type of point has appeared in such number at Tri-57 and not at all, or in negligible number, at the other sites in the region. All of the points, whatever their type, would fall into the "light and small" category, as a glance at the "average weight" column in Figure 1 will testify.

Besides the projectile points, 6 obsidian drills, one basalt reamer (Fig. 1, IVc), one burned (bone) gorge hook, one Olivella bead with lopped spire, and an obsidian trade blank were collected. No historic artifacts were collected from this site.

* * *

(5) Tri-70: Trail Gulch Site

Map of site: Maps 10, 10a
Illustrations: Fig. 1, Ia-k

Site Tri-70 has been given the name Trail Gulch Site after the designation of the creek which joins Hay Gulch at a point where the site is located. The land is owned by Trinity Farms Cattle Company, and the lowest point of the site marks the high water pool level of the projected Trinity Reservoir (SE 1/4 of the NE 1/4 of Sec. 34, T36N, R7W, U.S.G.S. Schell Mountain Quandrangle, Trinity County).

This site was first recorded in the survey of 1952. Its position allows an open view both up and down Hay Gulch, which broadens out to a width of several hundred yards at this point. Trail Gulch runs along the west side of the village. Its intermittent stream emanates from the eastern side of the divide between the Trinity River and the stream in Hay Gulch. A gap in this divide was part of an early trail system, and it is through this gap, to the west, that access from the Trail Gulch Site to the area of sites Tri-45, 57, and 112 was most easily had.

The site had a particularly favorable location for the Trinity region. Winter snows are lighter here than along the main Trinity River, hills protect it from north winds, and its generally southerly exposure provides the maximum of winter sunshine. Even to this day, large quantities of

steelhead spawn in the streams along the flat meadow portion of Hay Gulch. The hills immediately west of the site are quite brushy, with numbers of oak trees included in the general cover. Local informants speak of this as a favorable winter range for deer. In Trail Gulch and in its small tributaries are many small springs which run or seep throughout the year. Earlier, brown bears were common in the region and three such bears were seen during the course of the 1958 excavation of the site.

The site was covered with short grass and a few large oaks stand here and there within the limits of the midden deposit. There were twelve house pits which appeared as small craters at the northern end of the site (Map 10a). Obsidian flakes were common on the surface, and the soil was of the usual type for the region, i.e., dark ashy midden.

The cultural deposit is broken off sharply to the east by the creek bank, and also terminates markedly to the north where the hill contours rise abruptly. Thus, the northernmost house pit, No. XII (Map 10a) was cut more into natural than into midden soil. To the south and west the darkish deposit gradually thinned out and finally blended into the lighter colored surrounding soils (Map 10a, profile $A-A_1$, $B-B_1$; Pl. 2d). The site measures about 400 feet long and 200 feet wide. The greatest depth of midden was anticipated along the east, or creek, side, but work with the bulldozer revealed the greatest depth on the opposite side of the deposit, near house pit No. VIII, in sections A2 and A3. Fire fractured rock was everywhere in evidence, and a particularly heavy concentration was noted along the eastern periphery of the mound.

House pits were circular in outline, ranging in diameter from 8 to 14 feet. Before excavation they appeared to have an average depth of 18 inches. This, plus a 6 inch rim of earth around their outer edges, gave a total depth of 24 inches to the pits. House pits Nos. V to VIII were examined carefully for clues to architectural details, but produced nothing of significance in this direction. House pit No. VIII was charged with large stones weighing from 50 to 80 pounds, all resting well below the floor level. Both careful troweling and cross-sectioning (Pl. 2b, house pit No. I) failed to produce any evidence of prepared (clay) or tamped-down house floors. A partial explanation for this lack of evidence may be that the occupants of the house used mats on the floor in an effort to reduce dust. Even if floors unprepared with clay were used with mats, they probably would not acquire the characteristic tamped-down appearance of house floors found in other parts of California.

Cooking apparently was done outside the house, as in no instance did we find a hearth within the periphery of a house circle.

Merriam (1957, p. 41), reporting on a single house of the McCloud Wintu, says, "the abode consists of a large brush-fence enclosure containing a rough slab and bark house with flat roof, and a canopy or brush-covered shelter . . . floor of the house at this camp is undisturbed earth. In the conical huts of slab and bark on the east side of the river the floor is excavated three or four feet."

In a site of this magnitude and favorable location, it was hoped that a cemetery would be discovered somewhere within the deposit. The hill slope directly behind the site appeared too steep for burials and showed no disturbance of the natural soil or rock outcrop. The one almost-level spot, about 75 feet in diameter, 75 yards up the slope from the site, was graded down by bulldozer to the yellow compact soil, with negative results so far as burials were concerned. As a further check for a possible burial site, all of the terraces and small hilltops for half a mile around site Tri-70 were examined. Again the results were negative. With these places eliminated, however, attention could be directed fully to the problem of finding either a burial spot or scattered burials contained within the midden deposit.

The habitation area was projected into 10 foot square grids, so that the grid lines would cover the deepest portion of the site (Maps 10, 10a). The following complete sections were excavated by hand techniques, using shovels, trowels, and hand or power-driven screens: A3 to J3 (9 sections), C4, D4, D8, E7, E8, H3, H4, H5, H6. Small portions of other sections were also excavated, this amounting to the digging of about one full section. A total of about 19 sections thus were examined. Average depth of all sections was about 3 feet, hence approximately 57 cubic feet of midden soil was examined under rigidly controlled archaeological techniques. (Note that the area shown in Map 10 as excavated by hand techniques is only approximate. Details of the area actually excavated by hand are fully shown in Map 10a.)

Hand testing techniques were employed to determine the presence of significant cultural features in the deposit which might possibly be destroyed by the bulldozer. A D-7 type bulldozer was to be used in the gross examination of the entire remaining part of the deposit. This type of excavation had proved to be successful in previous work in the Trinity River region (Treganza, 1958).

Excavations were initiated in sections H3 to H6, along the abrupt eastern face of the site, where the soil was a rich, dark color, and where we suspected, from our experience with site Tri-47 during the 1957 excavation, that there might be burial plots (ibid., p. 19). The upper levels

of these sections produced projectile points and nothing else. Near the bottom of the deposit, at a depth of 3 feet, large fireburned boulders were encountered, apparently deliberately arranged or concentrated. Evidence that these boulder concentrations covered pit burials failed to materialize as the rocks were removed. Hand excavations were then continued in sections D8, E7, and E8, in order to check on the depth of deposit and artifact yield.

It was thought that the next most probable place for the location of a cemetery was at the extreme southern tip of the site, near the juncture of Trail Gulch and Hay Gulch Creeks. At this point work was started with the bulldozer. The procedure was first to grade down one edge of the midden deposit in 4 inch cuts, with the full 12 foot width of the bulldozer blade heading directly into the work, until the native yellow soil was reached. Any patches of midden deposit remaining after the bulldozer work were checked with trowels and shovels for possible burial or cache pits.

This first phase of bulldozer cutting was exploratory, and at the same time provided a level working area for the bulldozer. Following this, a progressive shaving of the now exposed face of the midden deposit took place. This procedure permitted the heavy tracks of the bulldozer to run on the sterile, non-midden soil with no danger of disturbing cultural material. At the same time the blade of the machine, which extended horizontally beyond the track, could be lifted or lowered so that when the bulldozer passed across the front of the midden face (Pl. 2d) segments of any desired size within the range of the blade could be removed from the deposit.

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In work of this type, using a D7 type of bulldozer, for example, the limits of the size of cut depend upon the height of the blade (ca. 36 inches) and the distance it protrudes beyond the outer edge of the track (ca. 40 inches). However, only rarely does one desire to employ the full capacity of the blade. Generally, about a 4 to 6 inch cut, horizontally and vertically, is sufficient for archaeological purposes. Where the midden deposit is less than the height of the blade, then a single pass extending 6 inches into the face of the deposit may profitably be made across the exposed front. In any case, the blade can be raised so that it will take any desired depth of cut. The artifact-bearing midden material drops to the sterile ground between the track and the midden face. An observer walking along with the machine, so that his position is just ahead of the track and directly behind the blade, has a clear view of the freshly cut midden soil as well as of the freshly exposed face of the deposit. In

this type of work the machine moves slowly and should any feature appear in the exposed front, the equipment can be stopped almost instantly. When working with power equipment of this type, the user should not be overly impressed with the potential power at his control, but should view his machine as an oversized trowel or shovel which can be manipulated with relatively delicate precision.

The bulldozer was used for a total of two and one-half days, at a cost of $150. As an argument for the continued use of power equipment in salvage archaeology, the following figures are presented: Nine crew members, under the direction of one research archaeologist, spent fifteen days excavating under controlled conditions 18 grid units, at a total cost for labor of $1,980, or $110 per unit. By hand-shoveling and screening, it required one and one-half days for about seven men to excavate one unit. With the bulldozer, in two and one-half days a total of 154 grid units were examined. To have hand-examined the same number of units would have taken 10,320 man-hours (1,290 man-days) with a labor cost of about $16,940. Actually, the entire cost of the 1958 season's work, including the Whiskytown and Wintu Pumping Plant surveys, was in the neighborhood of $5,000. There is no question that these figures represent, with some qualification, a great saving in time and money, both of which are the main limiting factors in any archaeological excavation program. Although the implications of such a saving by the use of a bulldozer are obvious, it should be pointed out that the value of the procedure with heavy machinery should be measured in terms of data obtained and data lost. Here it is felt that other than perhaps several thousand small projectile points, relatively little was lost, since the controlled sampling by hand in 18 excavation units provided a reasonable index to the nature of the material contained in the remaining 154 units of the site. It is now believed, on the basis of the excavation of site Tri-70, and from ethnographic evidence, that individual burials probably were made widely over the entire area adjacent to and surrounding the habitation site and not in a specific localized part of the site, i.e., in a cemetery.

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The shaving technique with the bulldozer started at the south end of the site and continued northward with successive east-west cuts, extending over 200 feet along the face of the deposit, until the line between sections A10 and G10 was reached. At this point house pit No. I was cross-sectioned (Pl. 2b) and a profile of the cultural deposit was plotted (Map 10a, profile A to A_1). Again the expectation of discovering a burial spot, or even some bits of human bone, in this large expanse of exposed midden was not fulfilled.

In order to maintain control of excavation in the central portion of the midden, the bulldozer was next moved over to the western margin of the site for north-south cutting. First a section 20 feet wide and 110 feet long was graded down, so that the working edge of the cut cross-sectioned house pit No. VIII and also provided a north-south midden exposure for the drawing of a profile diagram (Map 10a, profile B to B_1). Although a number of hearths and much burned rock were observed in this cut, no cremations or burials were found.

The next operation was at the north, or uphill, end of the site. Here the shaving technique was resumed in an east-west direction, so that gradually the machine worked back into the main or center portion of the deposit. This resulted in a cut 30 feet wide by 150 feet long, which brought the exposed portion of the midden to the line between sections A2 and J2 (Pl. 2c). At this point what remained of the midden was a large, unexcavated portion, rectangular in plan, which, judging from the depth of the deposit, represented the area of greatest living activity (Pl. 2d).

As that portion of the site represented as sections A3 to J3 on the grid had previously been selected as the area for control testing, the final phase of the bulldozing was to move the machine back to the original east-west profile on the south side of the site and to resume shaving back the exposed front northward, toward section 3. When this was completed, all that remained of the entire mound was a strip 10 feet wide and 80 feet long (sections A3 to J3). That part of the remaining strip which had not already been examined by hand techniques was subsequently excavated with shovels, and the midden soil was passed through shaker screens (Map 10). One hundred percent of the soil content of Tri-70 was thus known to us. This amounted to an estimated 67,500 cubic feet of midden deposit.

Midden Analysis

The occupation sites in the Trinity River region are characterized by large quantities of fire-fractured stones and other broken or unbroken cobbles or boulders. A full explanation of the original purpose of these stones is lacking. It has been noted in several sites in the region, during the excavations in 1957 and 1958, that the heavy rock concentrations follow a definite location pattern, i.e., they occur around the peripheral portions of the sites, especially where a steep bank was present. Charcoal, dark soil, and wood ash were also abundant in these areas. It may be suggested that cooking localities are represented here, especially since little evidence of hearths has been noted within the house pits proper of the site.

An alternative suggestion is that the rocks may have served as drying racks for salmon. If this were the case, they may have been erected along the edges of the sites so that the smoke from the drying fires would at the same time keep flies away from the central part of the site. This, however, does not explain the rather heavy rock content observed in the rest of the midden. In order to obtain further data concerning the nature of the midden soil, a 5 by 5 foot pilot soil (column) sample was removed from the southwest quadrant of section D2. It was assumed that this was an average sample of the midden. All material taken from the test pit was passed through a power-driven shaker containing three screen sizes, 5/8 inch, 1/4 inch, and 3/16 inch. The material caught in each screen was hand-sorted for bone, obsidian chips, and artifacts. Material remaining in the screen, such as fragmented stones, pebbles, or cobbles, was weighed separately on a set of bathroom scales. The midden deposit of the entire depth of the test pit, 27 inches, was subjected to this treatment. In order to speed operation, weights of the material were recorded for two arbitrary depth levels, from 0 to 12 inches and from 12 to 27 inches. Yellowish sterile soil was encountered at 27 inches. The fine midden soil which passed through the three screens was weighed for the first foot only. Bone and obsidian were weighed later on balance scales.

The following table shows the weight of rock material (excluding obsidian) in pounds, by level and screen size:

Table 1

Occurrence of Rock in Pilot Sample Pit

Depth	Weight of rock in pounds			Weight of soil
inches	5/8" screen	1/4" screen	3/16" screen	passed through screen
0-12	337	81	37	1497
12-27	690	103	48	-

Total rock weight for the first foot of depth was 455 pounds or, disregarding the small amount of bone and obsidian, 23.3 percent of the total mass of that level. The table shows that the bottom 15 inches of the test pit yielded about twice as much rock by weight as did the top 12 inches. The average rock weight per inch of depth in the upper 12 inches was 28.08 pounds, and in the bottom 15 inches, 46 pounds. It was thought unnecessary

to weigh the soil which passed through the screens from the 12 to 27 inch level since the value could be approximately extrapolated after considering the relative weights of the material from both levels which did not pass through the screens. A rough estimate shows the lower 15 inches of midden to be composed of about 50 percent rock by volume. Rock on the bottom level was larger and the difference between top and bottom can in part be explained by a pre-occupation concentration of rock on the site surface and from talus creep, for example. An explanation for the relatively high content of rock throughout the midden is yet lacking. Since most of the rock material found in the site is shale, slate, and schist, all of which fracture easily upon contact with heat, and with the physical action resulting from human occupation, it may be suggested that this material, imperfect as it was for use in stone boiling or in winter fireplaces, was more easily available, hence more frequently used, than more resistant igneous rocks, which occur as float material in association with the larger streams of the region. The result of this constant use of easily shattered rock was a steady accumulation of small, worthless fragments throughout the midden deposit.

The near absence of animal bone in sites of the Trinity River region has been discussed in some detail in a previous report (Treganza, 1958, p. 6). In the present excavation bone of any type was likewise rare. Nevertheless, all bone was collected in the pilot screening process, with the results shown in Table 2 below.

The occurrences of bone must be considered minimal, considering the emphasis upon hunting reported ethnographically. It is possible, however, that deer were boned out where killed, and that only the flesh was carried to the living sites. This is said to be a common practice among the Northeastern Maidu in historic times (see Dixon, 1905, p. 193). The bone recovered at Tri-70, unless partially carbonized, was in poor physical condition. Identifiable bone was mainly of deer and rabbit.

Of interest is the frequency of obsidian projectile points and flakes in the site. Obsidian is import material, hence the large amount of flakes reflects both a local projectile point manufacture and external trade.

Obsidian chips had a total weight of 325.1 grams in the pilot sample pit and the finished obsidian points, drills, and scrapers had a weight of 29.2 grams. The latter represents about 9 percent of the weight of the chips. The great quantity of small flakes found when a fine screening sample is washed suggests, as indicated, local manufacture of the various obsidian implements. If the obsidian implements recovered from the sample

pit are a true index of the number of artifacts completed at the site, then we may say that about 90 percent of the imported material was rendered useless by the process of manufacture of the implements.

Thirty-five small projectile points, one drill, and one scraper, all of obsidian, were recovered from the test pit. This recovery is probably higher than could be expected from other areas of the site, because three screens were used in the collecting process, and particular care was taken to pick out every visible bit of obsidian in the screens. Also, the area selected for the pilot sample pit may have been more productive than other parts of the site since it was located between four house pits.

Table 2

Occurrence of Bone and Obsidian in Pilot Sample Pit

Depth inches	Bone grams	Bone percent of midden (by weight)	Obsidian chips grams	Obsidian chips percent of midden (by weight)	Obsidian points grams	Obsidian pts. & chips percent of midden (by weight)
0-12	162.2	.0183	144.4	.016	12.8	.017
12-27	34.6		180.7		16.4	

The pilot sample test pit contained about 62 cubic feet of midden deposit, hence with 35 projectile points, there was .56 artifact of this type recovered per cubic foot. The estimated midden soil content of the site was about 67,500 cubic feet. If a figure of 35,000 cubic feet (representing the heavily occupied part of the site) is used for calculation, and if the artifact yield per cubic foot throughout the site is assumed to be constant, we arrive at a total of about 19,600 projectile points in the entire midden. This figure is probably much too high, but even reduced by 50 percent, it indicates a strong emphasis toward a hunting complex. The classifiable projectile points were recorded for three levels in the sample pit, but show no depth differences other than that two lanceolate forms occurred in the middle level and not in the other two.

The sampling procedure at site Tri-70 demonstrated clearly that in order to obtain a true picture of the obsidian artifact content, screening is absolutely necessary. Although a chip of obsidian is glossy when clean, the sheen

is easily dulled by fine midden dust, and even with screening devices small points and flakes may often be lost to the collector.

Table 3

Projectile Point Types from Test Pit 1

Depth inches	Gunther barbed w/ stems longer than tangs, plain	Gunther barbed w/ stems longer than tangs, serrated	Gunther barbed w/ ill-defined tangs	Lanceolate
0-6	4	1		
6-12	1	4	2	2
12-27	5	3	6	

Population

A rough measure of population of Tri-70 can be presented. By computing the area which would enclose the house pits, a figure of 901.5 square meters is obtained. On the basis of data referring to mound mass, volume, and population such as that presented by Cook and Treganza (1950, p. 234, Table 2), we may say that the site would support between twenty and forty inhabitants. If population is estimated by considering the number of house pits, and assuming that there were three to seven persons per house (Du Bois, 1935, p. 28), then, since twelve pits were present, from 36 to 84 persons could have been living at the site simultaneously. It seems a fair estimate that not more than eight houses were occupied at any given time. Hence, either by mass of deposit calculations or by house count, the figures would indicate a population of about thirty persons at any one time during the history of the site.

Artifacts

At Tri-70, as at other occupation sites in the region, obsidian projectile points were by far the most common artifact. From this site were obtained 273 points amenable to classification and fragments of many others. Of the points classified, 240 were variants of a form described previously

and given the name "Gunther barbed" (Treganza, 1958, pp. 13-16). This type includes forms having exaggerated tangs (barbs) with short stems and those with shorter tangs and stems which extend beyond the ends of these tangs. Another subtype has prominent stems and ill-defined barbs or tangs which form an almost horizontal line across the point near the base of the stem. This type has proved to be most common at the site, providing some 123 examples.

Thirteen "Desert side-notched" points were collected. The distribution of this type is certainly centered to the east of the Trinity River region and those occurring at Tri-70 were probably derived from the Sacramento Valley, or at least from that direction, either through indirect influence or directly, through trade. Other projectile points, totaling 20 specimens, represent simply a variety of leaf, lanceolate, and roughly stemmed forms. These specimens are not diagnostic of any particular culture province, although they may be found in the southern part of the northern Coast Range and in the Sacramento Valley.

Other artifacts recovered were of little significance in adding to our present knowledge of Trinity prehistory. A rectangular, fine-grained sandstone abrader is of some interest, as one side exhibits remains of what seem to be a fossiliferous marine concretion and the other side is smooth from use as an abrading tool. On the working side of the specimen and at one end, cross-hatch incisions and shallow parallel line grooves are present. Whether these marks are decorative, or functional, i.e., for sharpening bone awls, could not be determined. In addition were found a thumbnail scraper (Fig. 1, IVd), an obsidian drill (Fig. 1, IVa), six obsidian side scrapers or knives, a split cannon bone awl (8.8 cm. long), a bear tooth, 10 blunt-end pestles, 12 hopper-mortar stones, and a fragment of an arrow shaft smoother.

Burials

A single burial was exposed in the southwest corner of section D3. The burial was in a pit roughly 20 inches in diameter, and extending 6 inches into the submound, at a depth of 41 inches from the surface of the midden. The burial had been disturbed by ground squirrels and only remnants of the long bones and skull were to be found. No specific burial position could be determined from the remaining skeleton, which appeared to be that of a sub-adult individual.

Conclusion

From the 1957 excavation of four archaeological sites, and with the aid of a limited amount of published ethnographic data, there emerged some general conclusions about the prehistoric and early historic occupation of the upper Trinity River area. It was concluded that this area, held in historic times by the Wintu Indians, was first occupied by the ancestors of these same Wintu at some time around 900 A.D. Prior to this time, it is assumed that the region was not occupied by man. The lower Klamath River culture had not as yet worked this far inland nor had the Sacramento Valley Wintu yet moved over the divide into the upper Trinity drainage. Analysis of the archaeological specimens revealed no sharp break between the prehistoric and historic cultures of the region. What is seen here is a case of an almost changeless cultural continuity in a people adapted to a hunting, fishing, and gathering economy.

The 1958 excavations confirm our earlier opinions and add some details to the picture of life in this previously little-known area of California. If the artifacts themselves which were recovered were taken as the sole basis for construction of this picture, they would portray nothing but an under-developed and impoverished culture possessing perhaps but a single technical refinement, that of stone flaking. Although at no time was this culture as elaborate as that of the neighboring people of the upper Sacramento Valley, it certainly must have been far more complicated than was revealed by the artifacts recovered during two seasons of excavation. The large quantity of projectile points, as compared with other types of artifacts, presents a very unrealistic, unbalanced picture. Articles such as bone tools, large obsidian (ceremonial) blades, shell ornaments, charm stones, and the like were, with but few exceptions, lacking in the sites excavated in the Trinity River region. The assumption now is that such artifacts were not absent in the culture but that they have been utilized as grave goods in scattered burials.

The explanation as to why only projectile points, hopper-mortar stones, and crude pestles are almost the exclusive artifacts in site association in the Trinity River region is that they were probably so commonplace in the daily economy that they were not considered cherished or wealth items but simply necessary domestic property. Small projectile points are easily lost about camp and the numerous broken specimens that were found are no doubt the result of breakage in manufacture or perhaps in hunting, in which case the points might have been brought back to camp for reworking and subsequent reuse, with the broken butt discarded on the spot. Hopper-mortars and pestles are but slightly modified natural cobbles and probably were not

considered to be of much real value. On the contrary, well-shaped pestles, formed by grinding and pecking, were either found broken, or "killed," or in burial association (Treganza, 1954, pp. 20-34; 1958, p. 29).

It is the conviction of the author that the upper Trinity Wintu did not have any big cemeteries, as did their kin in the Sacramento Valley, but rather buried their dead individually or in small family groups throughout the hill country in places above winter floods. This conclusion was reached not so much through our negative archaeological results, though these tended to confirm the idea, but by working backward through the ethnographic data. At no time during the original survey of the region, or in subsequent survey and excavation work, did we observe any fragmentary human bone in the small piles of dirt from squirrel holes, on the cut sides, or on the surface of archaeological sites. This absence of human bone in occupation sites is unusual for almost any other part of California.

Reports of Indian burials accidentally discovered over the past years in the Trinity River region, through mining, road building, or lumbering activities, have followed no set pattern other than that they are consistently of individuals only. Locations vary from canyon sides to terraces and small knolls. Informants "Bud" Wagner and Ida Lachuga stated that burials could be made any place so long as they were above flood levels. The locations of a number of early historic Indian burials were checked. None of these graves were in direct association with the so-called Indian rancherias. Most graves were single, or occasionally double, apparently of a man and wife. A pair of such graves, on a shaded, pine-covered slope on a small lateral creek leading into the East Fork Trinity River was visited and photographed. The surface of the grave area (Pl. 2f) was cluttered by tin cans, old coffee pots, and a teakettle. It could not be determined if these containers were grave offerings for holding water or if they at some time held cut flowers, following the custom of the white settlers. Du Bois (1935, p. 65) states, regarding burials, that "placed with the body at the right hand was a basket of acorn-meal water for the soul to drink." It is not known whether this practice is in any way connected with the presence of these various containers at burial spots observed in 1958.

The practice of burying individually or in small groups probably did not preclude an occasional burial within a village. This would explain the few burials which were encountered in our excavations.

Little notice has been taken, except by anthropologists, of the achievement of the California Indians in constructing large ceremonial structures.

It is fortunate that the excavation of sites Tri-45 and 112 provided the opportunity to add additional information relating to the general plan of construction of these buildings.

It is felt that there now remain practically no archaeological or ethnological data yet to be collected within the Trinity Reservoir area, save that data pertaining to individual burials. These are presumably so dispersed throughout the land that their locations will probably never be known. Evidently all of the sites worth excavation have been excavated and continued efforts in the region would almost undoubtedly result in an accumulation of quantitative data of little comparative value.

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Description of Plates

Plate 1

a. Tri-45. Sweathouse prior to excavation. View looking south.
b. Tri-45. Sweathouse following excavation. View looking south, with Delta Road in foreground.
c. Tri-45. Floor and hearth.
d. Tri-45. Entranceway looking into sweathouse.
e. Tri-112. View following excavation.
f. Tri-112. View of site looking north across Delta Road to entrance of dance house.

Plate 2

a. Tri-57. Crew at work screening.
b. Tri-70. Cross-section of house pit No. II shaved off by bulldozer.
c. Tri-70. View of excavation.
d. Tri-70. Shaving technique with D-7 bulldozer.
e. Sha-204. Manos and metate from site. Whiskytown Reservoir.
f. Metal containers on surface of historic Wintu graves, East Fork of Trinity River.

Explanation of Figures

(All numbers are University of California Museum of Anthropology numbers)

Figure 1: Artifacts from Tri-70, 57, and 45.

I: Tri-70

a-b. "Gunther barbed" projectile points with stem longer than tangs (1-190184, 1-190224).
c-d. "Gunther barbed" projectile points with stem longer than tangs, serrated (1-190027, 1-190013).
e-f. "Gunther barbed" projectile points with ill-defined tangs (1-190314, 1-190199).
g. "Gunther barbed" projectile point with ill-defined tangs, serrated (1-190265).
h. "Gunther barbed" projectile point with tangs longer than stem (1-190052).

i-j. "Desert side-notched" projectile points (1-190316, 1-190136).
k. Leaf-shaped projectile point (1-190121).

II: Tri-57

a-b. "Gunther barbed" projectile points with stem longer than tangs (1-190506, 1-190495).
c-d. "Gunther barbed" projectile points with stem longer than tangs, serrated (1-190547, 1-190516).
e-h. "Gunther barbed" projectile points with ill-defined tangs (1-190553, 1-190497, 1-190483, 1-190556).
i. "Gunther barbed" projectile point with ill-defined tangs, serrated (1-190499).
j. "Gunther barbed" projectile point with tangs longer than stem (1-190403).
k-l. "Desert side-notched" projectile points (1-190573, 1-190524).
m. Leaf-shaped projectile point (1-190502).

III: Tri-45

a. "Gunther barbed" projectile point with stem longer than tangs, serrated (1-190603).
b. "Gunther barbed" projectile point with ill-defined tangs (1-190600).
c. "Desert side-notched" projectile point (1-190606).
d. Leaf-shaped projectile point (1-190612).

IV: Various sites

a. Drill, Tri-45 (1-190620).
b. Drill, Tri-70 (1-190057).
c. Basalt hand reamer or drill, Tri-57 (1-190590).
d. Thumbnail scraper, Tri-70 (1-190132).
e. Birdbone bead or gambling bone, Tri-45 (1-190622).

Figure 2

a. Reconstruction of sweathouse at site Tri-45, as based upon archaeological and ethnological data.
b. Reconstruction of dance house at site Tri-112, as based upon archaeological and ethnological data.

Figure 2 (continued)

c-g. Dance regalia purchased by the University of California in early 1930's from Jim Feder, Wintu Indian of Trinity Center. This regalia was probably used in the dance house known as Tri-112 (Fig. 2b).

c. Incised split-stick rattle made of alder wood (1-28185).
d. Feather dance dress (1-28177).
e. Feather dance apron (1-28180).
f. Feather headdress (1-28175).
g. Feather dance plume (1-28184).

Explanation of Maps

Map 6. Area map of Tri-45, 57, 112, 113, and 114.
Map 7. Tri-112 dance house.
Map 8. Tri-45 sweathouse.
Map 9. Tri-57.
Map 10. Tri-70, showing hand-excavated area, not bulldozed.
Map 10a. Tri-70, showing bulldozed and hand-excavated area.

a

b

c

d

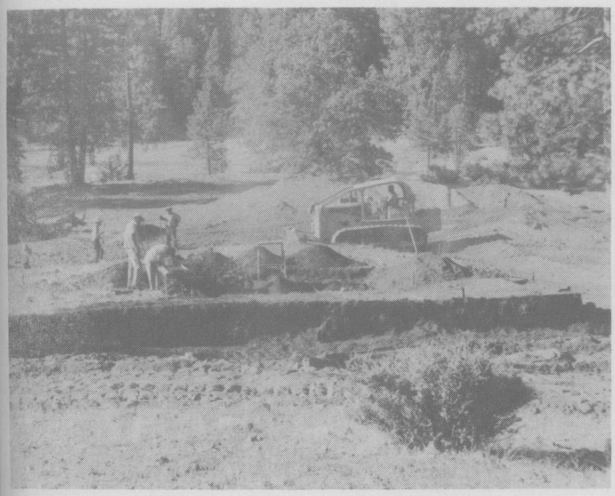
e

f

Plate I

a

b



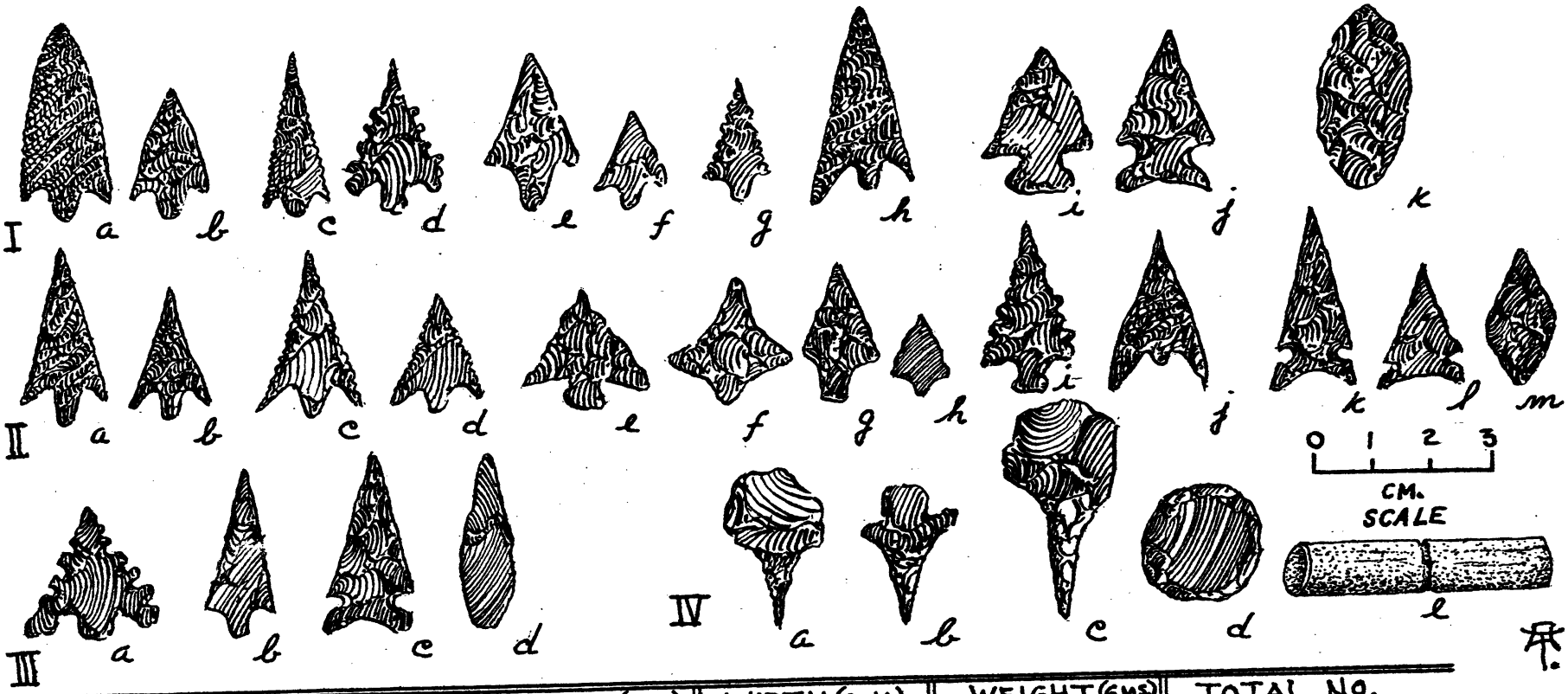
c

d

e

f

Plate 2



			LENGTH (MM.) MAX.	MIN.	AVG.	WIDTH (MM.) MAX.	MIN.	AVG.	WEIGHT (GMS.) MAX.	MIN.	AVG.	TOTAL NO.	
SITE TRI-70	I	a-b	36	15	22	25	13	16	1.5	.8	1	40	273
		c-d	28	20	24	23	12	16	2	.8	1.1	45	
		e-f	29	12	19	21	11	15	1.5	.1	.5	123	
		g	31	15	21	20	11	15	1	.4	.6	18	
		h	37	20	27	22	12	15	1.1	.4	.6	13	
		i-j	30	20	24	25	12	16	6.8	.3	1.4	13	
		k	40	20	28	20	10	14	5.3	1.3	2.3	21	
SITE TRI-57	II	a-b	41	15	21	20	12	15	2	1.2	1.5	53	147
		c-d	27	20	22	20	6	15	1.5	1	1.3	18	
		e-h	27	9	10	16	9	12	.9	.4	.3	38	
		i	25	11	12	15	8	11	.8	.5	.7	9	
		j	33	19	25	25	15	20	2.5	.7	1	9	
		k-l	30	13	21	15	6	14	2.3	.5	.7	19	
		m	21	21	21	7	7	7	1	1	1	1	
SITE TRI-45	III	a	22	18	20	20	14	16	1.3	.4	.9	11	17
		b	28	20	23	19	7	9	1.6	.8	1	4	
		c	25	25	25	15	15	15	1.3	1.3	1.3	1	
		d	28	28	28	5	5	5	1.4	1.4	1.4	1	
													437

FIGURE 1

a

"SWEATHOUSE", TRI-45

b

DANCEHOUSE; TRI-112

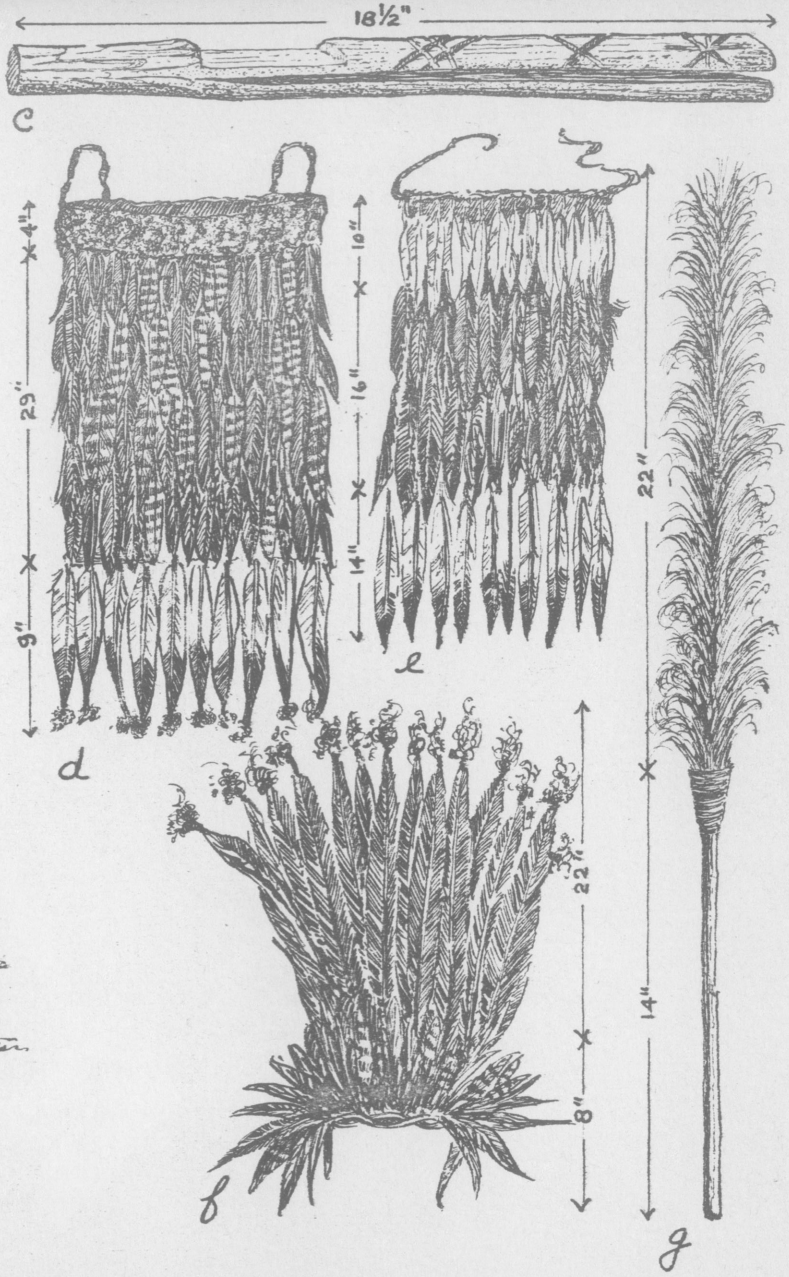
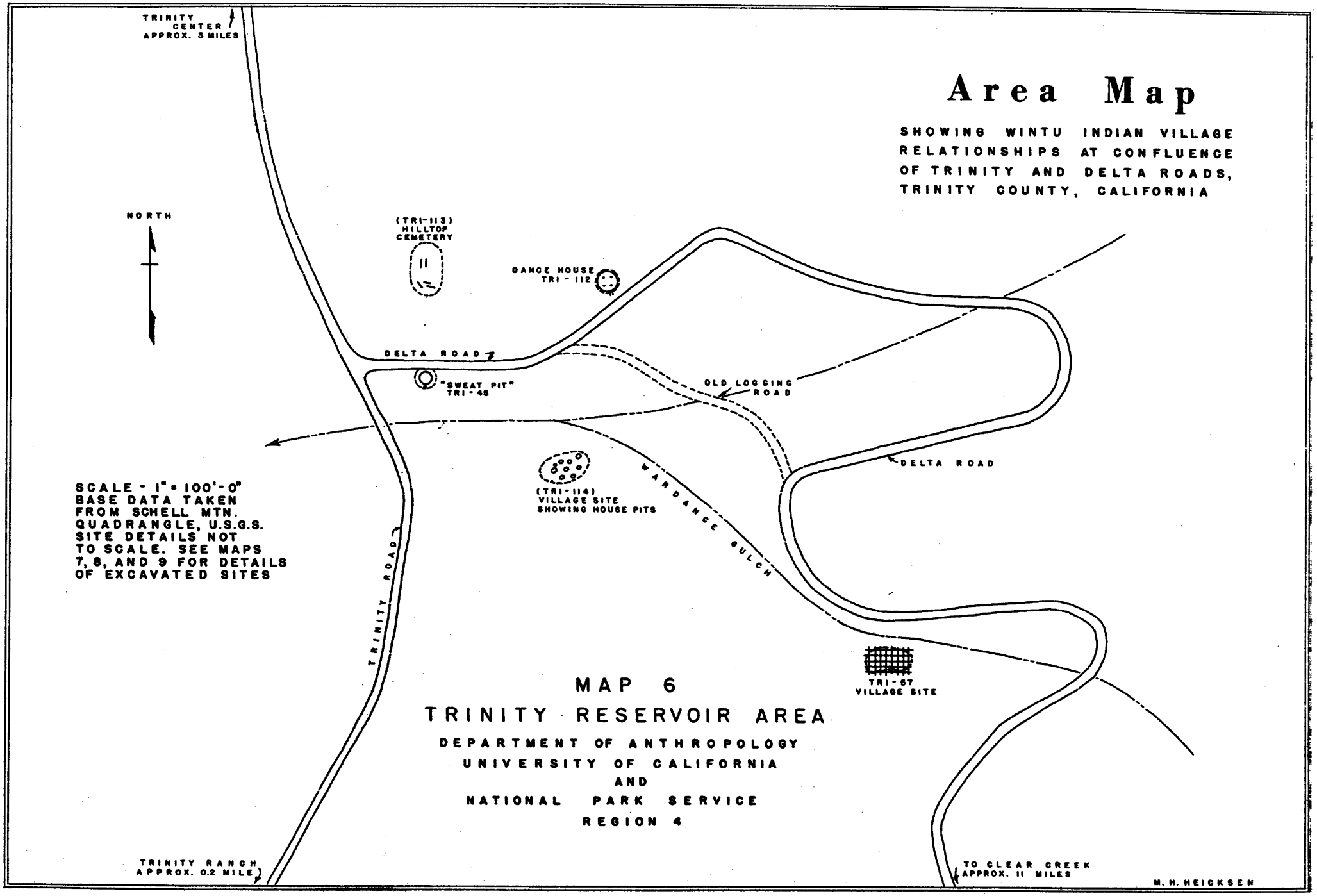


FIGURE 2



Area Map

SHOWING WINTU INDIAN VILLAGE RELATIONSHIPS AT CONFLUENCE OF TRINITY AND DELTA ROADS, TRINITY COUNTY, CALIFORNIA

SCALE - 1" = 100'-0"
BASE DATA TAKEN FROM SCHELL MTN. QUADRANGLE, U.S.G.S. SITE DETAILS NOT TO SCALE. SEE MAPS 7, 8, AND 9 FOR DETAILS OF EXCAVATED SITES

MAP 6
TRINITY RESERVOIR AREA

DEPARTMENT OF ANTHROPOLOGY
UNIVERSITY OF CALIFORNIA
AND
NATIONAL PARK SERVICE
REGION 4

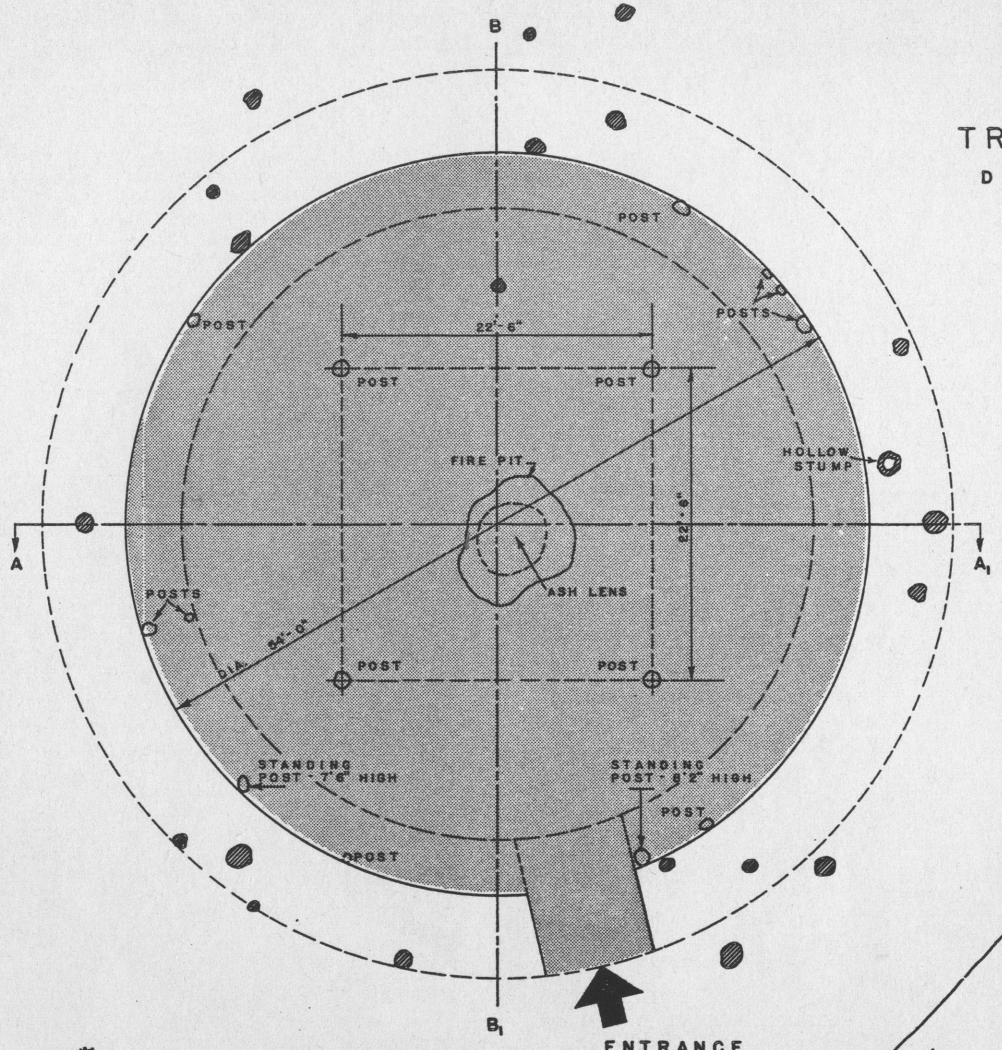
Site Tri - 112

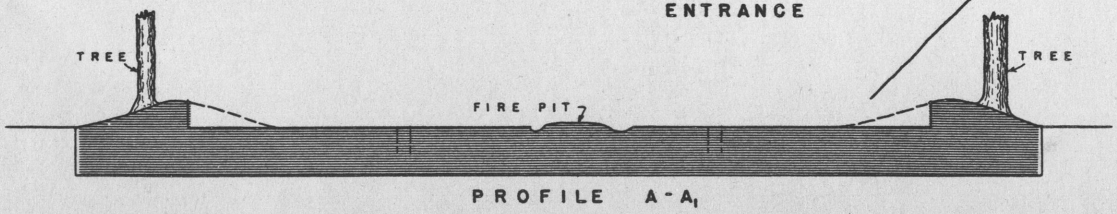
TRINITY RESERVOIR AREA

DEPARTMENT OF ANTHROPOLOGY
UNIVERSITY OF CALIFORNIA
AND
NATIONAL PARK SERVICE
REGION 4

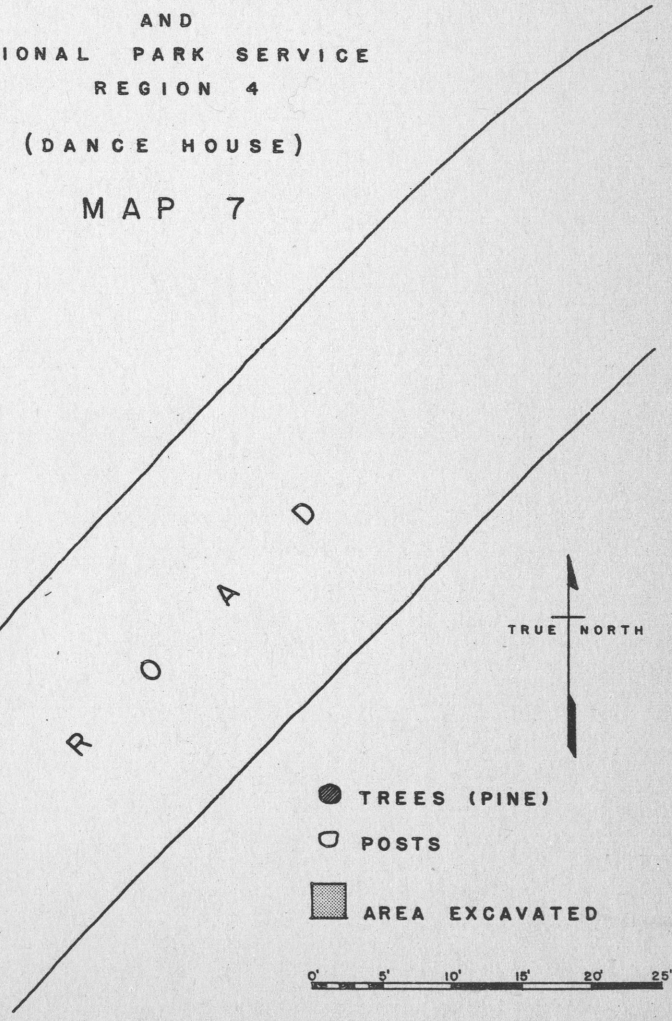
(DANCE HOUSE)

MAP 7





PROFILE A-A1



MARK HEICKSEN

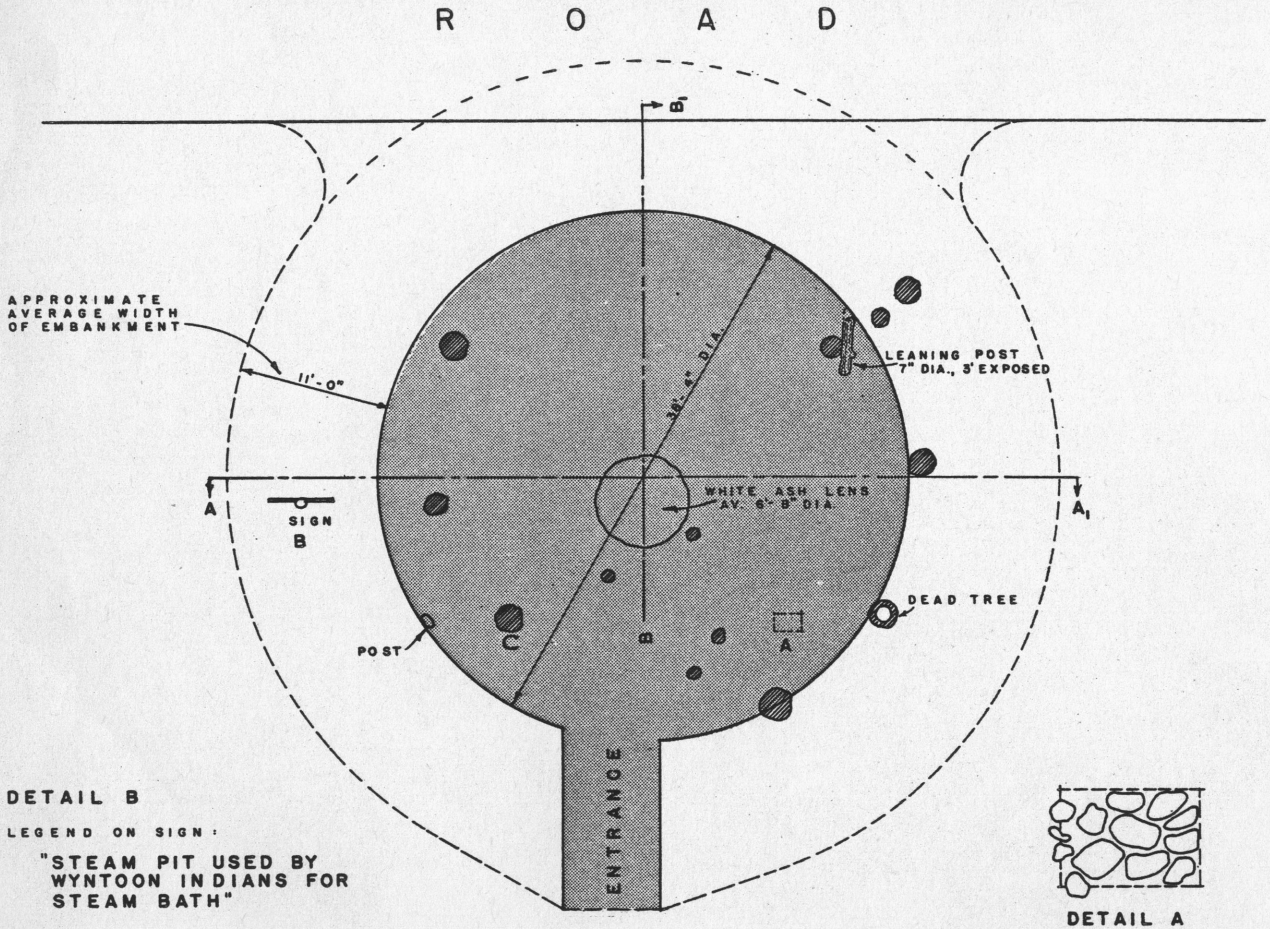
Site Tri-45

TRINITY RESERVOIR AREA

DEPARTMENT OF ANTHROPOLOGY
UNIVERSITY OF CALIFORNIA
AND
NATIONAL PARK SERVICE
REGION 4

("STEAM PIT")

MAP 8



DETAIL B

LEGEND ON SIGN:

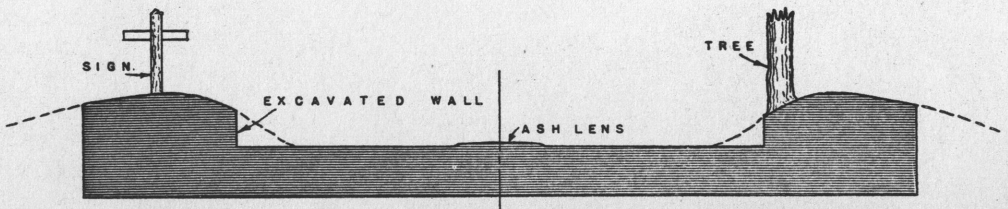
"STEAM PIT USED BY WYNTOON INDIANS FOR STEAM BATH"

DETAIL A

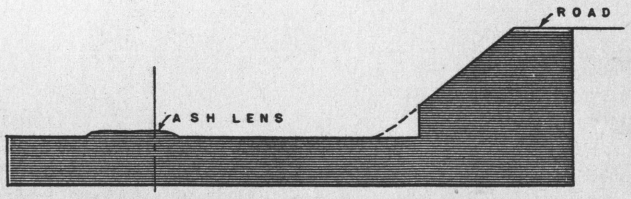
- TREES (PINE)
- POSTS
- AREA EXCAVATED

0' 5' 10' 15' 20' 25'

M. H. HEICKSEN



PROFILE A-A1



PROFILE B-B1

Site Tri-57

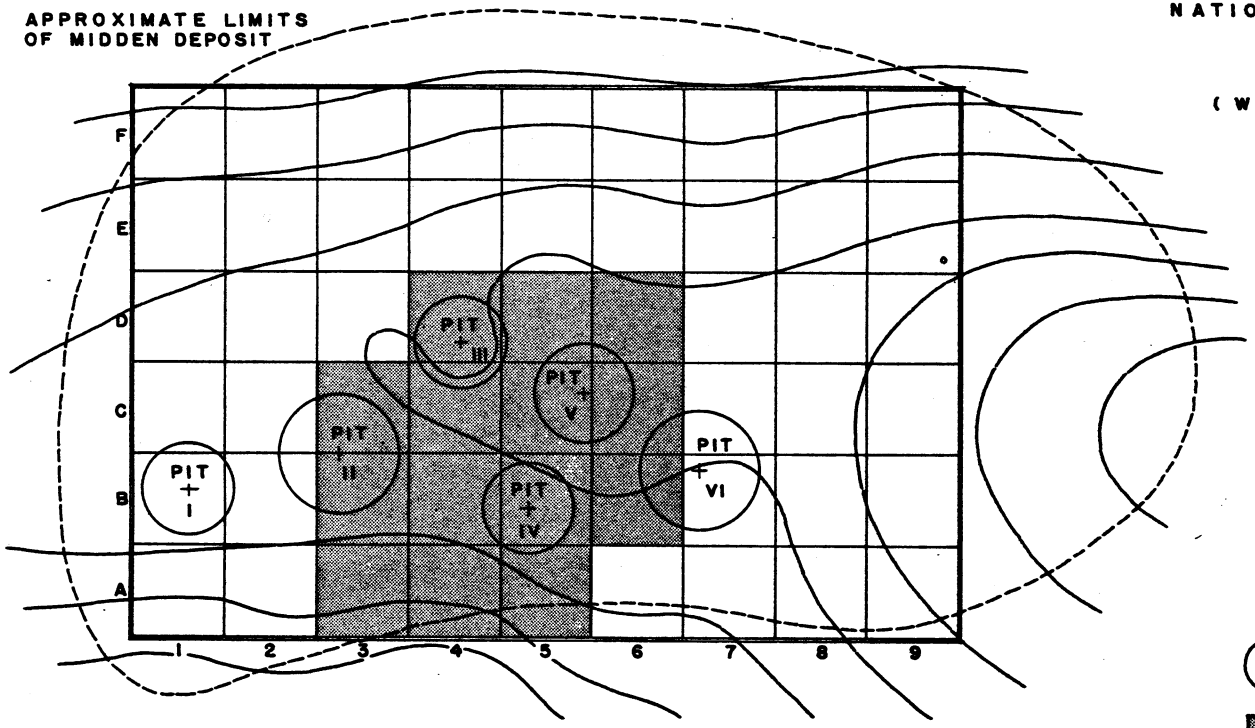
FOR ORIENTATION DATA
SEE AREAL MAP (NO. 6).
GRID AREA IS SITUATED ON
AN OPEN PORTION OF A RIDGE
IN AN INTERMITTENTLY WOOD-
ED TERRAIN.

TRINITY RESERVOIR AREA

DEPARTMENT OF ANTHROPOLOGY
UNIVERSITY OF CALIFORNIA
AND
NATIONAL PARK SERVICE
REGION 4

(WAR DANCE GULCH)

MAP 9



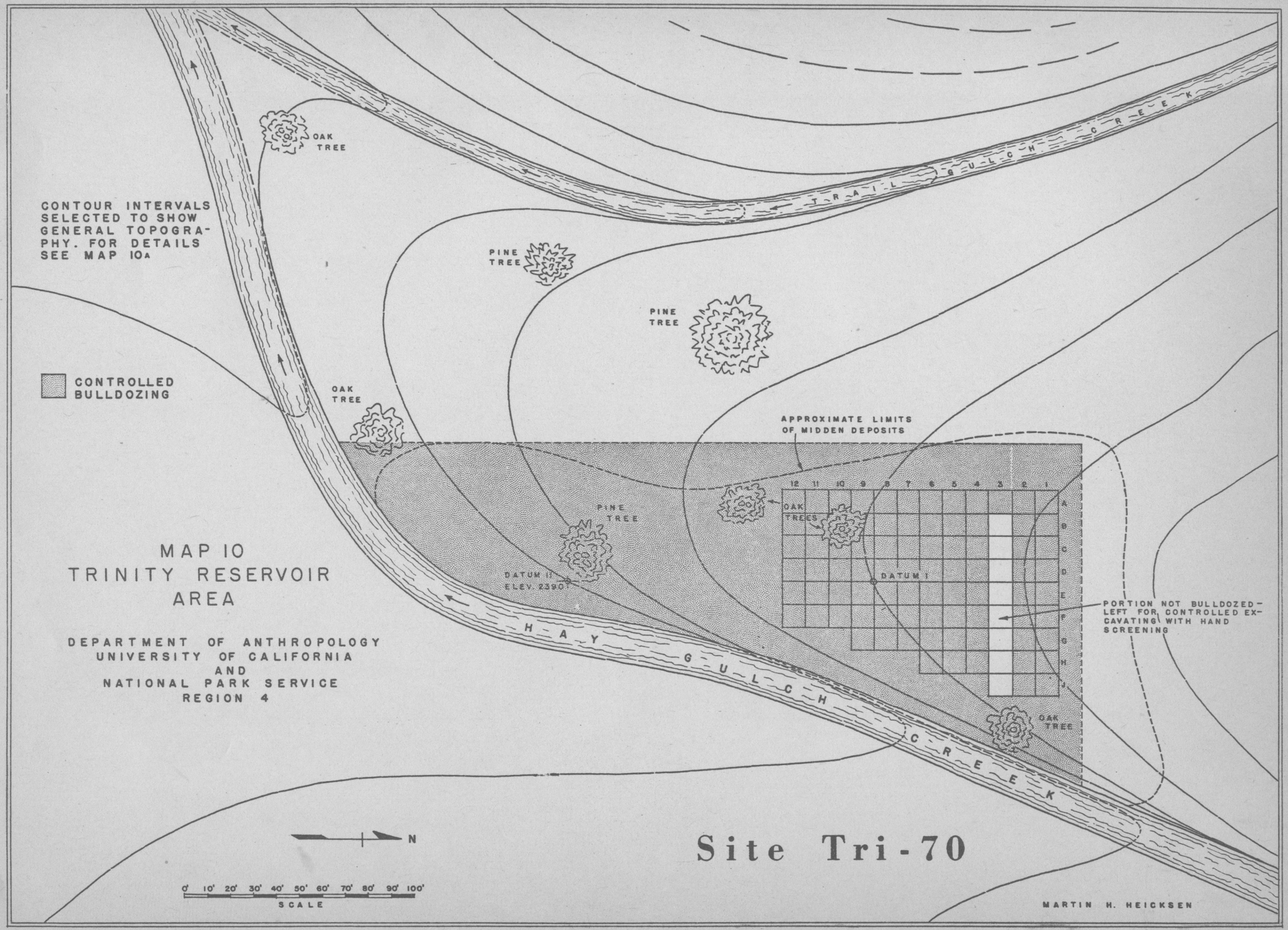
HOUSE PITS

AREA EXCAVATED

0' 5' 10' 15' 20' 25' 30' 35' 40'

CONTOUR INTERVAL = 1'-0"

MARTIN H. HEICKSEN

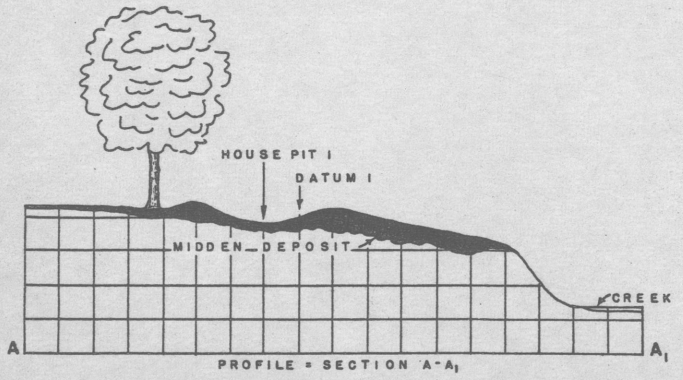

CONTOUR INTERVALS SELECTED TO SHOW GENERAL TOPOGRAPHY. FOR DETAILS SEE MAP 10A
CONTROLLED BULLDOZING
OAK TREE
PINE TREE
PINE TREE
OAK TREE
TRAIL GULCH CREEK
APPROXIMATE LIMITS OF MIDDEN DEPOSITS
PINE TREE
OAK TREES
DATUM II ELEV. 2390'
DATUM I
PORTION NOT BULLDOZED - LEFT FOR CONTROLLED EXCAVATING WITH HAND SCREENING
OAK TREE
HAY GULCH CREEK
MAP 10
TRINITY RESERVOIR AREA
DEPARTMENT OF ANTHROPOLOGY
UNIVERSITY OF CALIFORNIA
AND
NATIONAL PARK SERVICE
REGION 4
N
0' 10' 20' 30' 40' 50' 60' 70' 80' 90' 100'
SCALE
Site Tri-70
MARTIN H. HEICKSEN

Site Tri-70

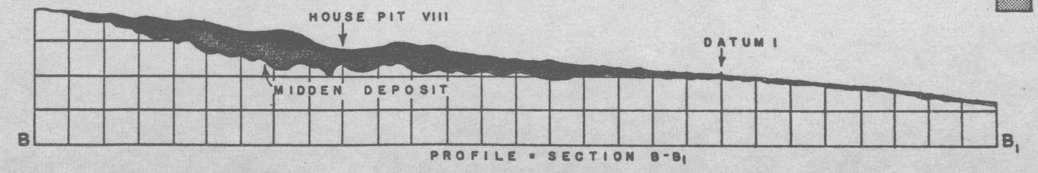
TRINITY RESERVOIR AREA

DEPARTMENT OF ANTHROPOLOGY
UNIVERSITY OF CALIFORNIA
AND
NATIONAL PARK SERVICE
REGION 4

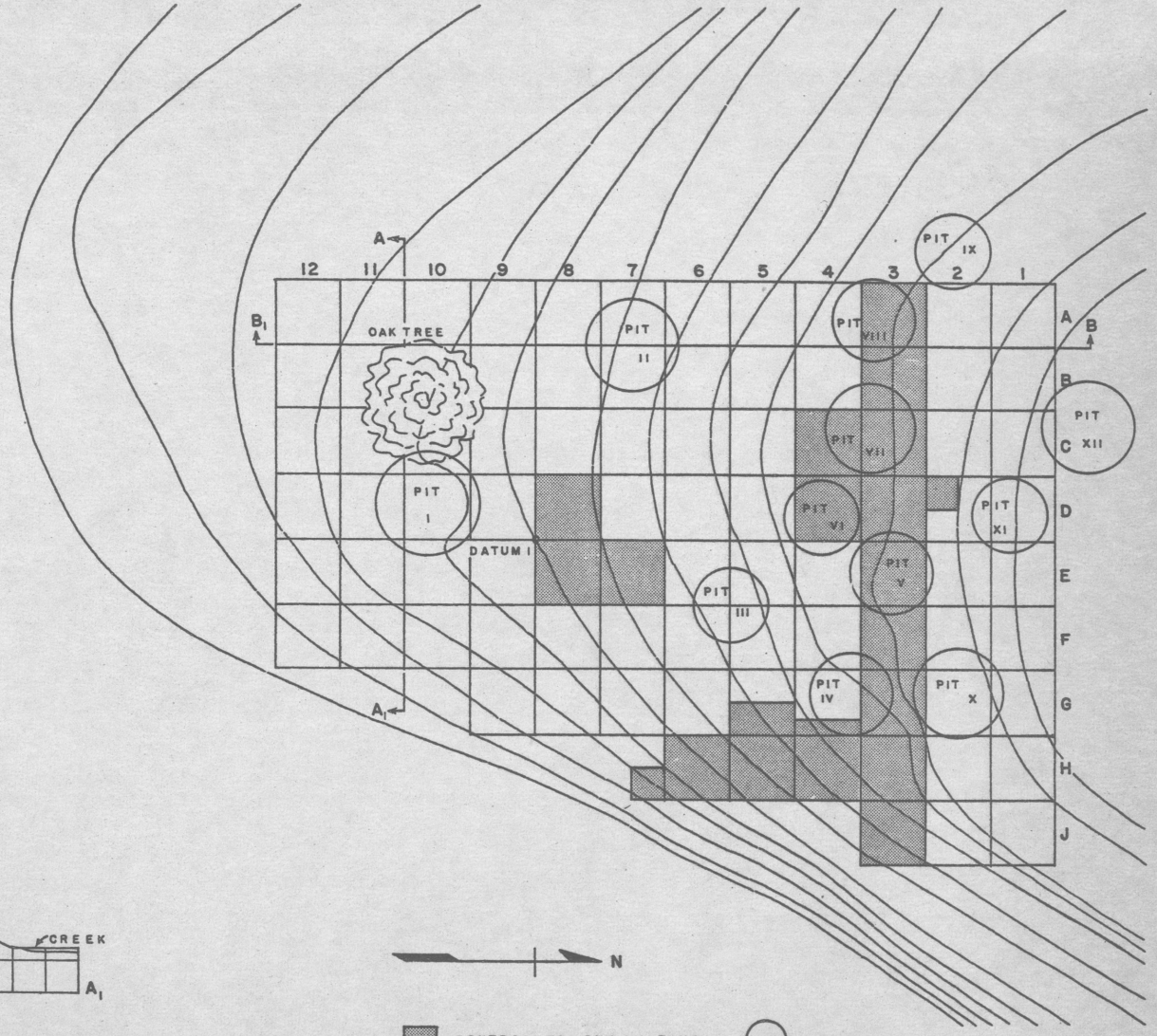
MAP 10A



PROFILE = SECTION A-A1



PROFILE = SECTION B-B1



CONTROLLED EXCAVATING WITH HAND SCREENING

HOUSE PITS

CONTOUR INTERVAL = 1'-0"

0' 10' 20' 30' 40' 50'

SCALE

MARTIN H. HEICKSEN