A PRELIMINARY REPORT ON A BURIAL EXCAVATED IN THE YUHA DESERT OF IMPERIAL COUNTY, CALIFORNIA
A Preliminary Report on a Burial Excavated In
The Yuha Desert of Imperial County, California

Submitted to:

1) The Secretary, Smithsonian Institution
2) The Bureau of Land Management,
   Riverside Office

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May 10, 1973
TABLE OF CONTENTS

1. Abstract
2. Introduction
3. Location of the site
4. Geology of the site location
5. Description of the site
6. Methods of survey and excavation
7. The relationship of the Yuha Burial to other sites
8. Problems posed by Yuha Burial and plans for the future
9. Illustrations
10. References
CREDITS

1. Michael A. Barker - Photo mounting, general editor, and co-author of this report.
2. Erlinda Burton - Director of field work and co-author of this report.
3. Morlin Childers - Discovered the site, helped organize the field work, and co-authored this report.
5. Steve Lorenson - Photography

Additional credits: Imperial Valley College for financing the excavation and the carbon 14 date, Dr. Paul Ezell and Mr. Julian Haydon for arranging facilities for studying the skeletal material, Drs. James Bischoff and Richard Merriam for their help with the geology of the area, Captain George Parker, U.S.N. and his wife for protecting the site, and the students of Imperial Valley College who helped excavate the burial.
Abstract

In early October, 1971, the director of the Imperial Valley College Archaeological Museum, Mr. Morlin Childers, discovered a feature in the Yuha Desert region of Imperial County, California which he suspected to be a human burial of some antiquity. He reported his find to Mrs. Erlinda Burton, archaeology instructor at Imperial Valley College. Between the 23rd and the 26th of October, 1971, Mrs. Burton, Mr. Childers and the college archaeology field class surveyed, explored and excavated this feature. An almost intact adult skeleton was discovered beneath the low stone cairn and several inches of water and wind-borne sand. The bones were partially covered with a lense of caliche which has been dated by Geochron Laboratories in Massachusetts at $21,500 \pm 2,000 - 1,000$ years B.P. The skeletal material was transported, partly in matrix, to the Osteological Laboratory at the Department of Anthropology, University of Arizona, Tucson, where it is being subjected to metric analysis and reconstruction by Mr. Walter H. Birkby.
Introduction

For several years Mr. Childers has been reporting the presence of stone piles in the Yuha Desert to the field archaeology instructor at Imperial Valley College. Three years ago one of these stone piles was discovered near the Salton Sea on private land. Mr. Childers leased this land, and he and the field team from the college excavated it. It contained a human burial.

In October, 1971, Mr. Childers reported one of these stone piles in the Yuha Desert as being in danger of destruction by off-road vehicles. Since it looked very much like the burial cairn we excavated near the Salton Sea, we considered it imperative that this one be investigated before it was destroyed. We have observed 15 similar stone cairns that have been destroyed by pot-hunters, and all of these had been made easily accessible by heavy off-road vehicle use. The cairn excavated in October, 1971, in the Yuha Desert was only 16 feet from a heavily traveled dirt road; and, hence, we considered our operation essentially salvage.

Site Location:

The burial was in the west Yuha Desert, Imperial County, California at an elevation of 440 feet above sea level. On the U.S.G.S. Quadrangle map for Coyote Wells, it lies in the S.E. 1/4 of the N.E. 1/4 of Section 7, Township 17 South, Range 11 East. See maps, numbers 1-4.
Geology of the Site

The following description of the geology of the site area is based, in large part, on a personal communication from Dr. Richard Mereiam, 1973. The geology of the Imperial Valley, of which the Yuha Desert is a part, has been well described by Dibblee (1954). A crystalline complex of pre-Cretaceous metamorphic rocks forms the basement on which miocene volcanic rocks and younger sediments lie unconformably. These sediments are marine sands (Imperial Formation), silts with fine sands of the Colorado Delta (Palm Springs Formation), and fanglomerates of local origin (Canebrake Formation).

Extensive, complex faulting, with local folding, has cut all rocks except the youngest alluvial deposits. The main break is the Elsinore Fault, a strand of the San Andreas system, which strikes to the northwest through the center of the area.

One of the main physiographic features is the flank of the southern California Peninsular Range which rises in rugged relief above the west side of the Imperial Valley. The margin of the valley, in this region termed the Yuha Desert, consists of low hills and intricately eroded badlands (Yuha Badlands). A nearly flat erosional valley two to three miles wide separates the mountains from the Yuha Desert. Elevations range from 300 feet in this valley to more than 1,500 feet in the highlands.

Topographic forms, here interpreted as ancient shorelines, occur at several places in the Yuha Desert and on old alluvial
fans flanking the mountains at 400-500 feet elevations. At least two levels are apparent and easily discernable both on the ground and from air photos. They are terraces, or berm-like features, having abundant well-rounded pebbles and cobbles on their surfaces and much clean, well-washed sand. They are judged to be beach lines on the basis of:

1. The uniform elevation of widely separated occurrences as well as uniform spacing between the two levels;

2. The topographic form which is very similar to that of modern beaches and the well established 40-foot shoreline around the Salton Sea;

3. And, the cobbles, pebbles, and clean sand which are in marked contrast to the poorly rounded, poorly sorted sands and gravels of the alluvial fans and washes.

The recognition of these higher ancient beaches is only sketchily documented in geological literature. Thomas (1963) noted the presence of high beaches in the Salton Basin, but only at 150 feet above sea level. George M. Stanley stated:

"The southwestern shoreline of Pleistocene Lake Cahuilla (Le Comte) is deformed around Mt. Signal, and along the Cocopa Range where it becomes progressively lower southward to a vanishing point in Baja California. Spirit levels were run to all Pleistocene beach fragments from three miles northwest to Mt. Signal shoreline elevation 160 feet for an additional distance of 15 miles to the southernmost beaches, at elevation 44 feet, which are 'impounded' behind a recent Cahuilla gravel bar (elevation 45-46 feet). At this point, the sloped (or down-stepped) Pleistocene water plane almost certainly transects the horizontal recent one, and no trace occurs in the next 20 miles where the recent one continues to its outlet (1962)."

Stanley (personal communication, 1972) recognized the "higher beach terraces in the Salton Sea Basin, up to 400 feet, but accounted for them by uplift."
Our conclusions, based on somewhat conflicting opinions in interpreting the 420-440 foot beachlines, are that a 420 to 440 foot drainage base level on the west side of the Salton Sink, in late Pleistocene times, was associated with drainage lakes or ponds that stair-stepped up the higher valleys and canyons, and that early man found these lakes, ponds, and their drainage ways to his benefit.

Site Description

The site is typical of the Yuha Basin topography. The terrain is uneven with small mesa-like features 400-450 feet in elevation. In the lower portions of the Basin are eroded areas and gravel pits. Today the desert floor is covered with sparse vegetation such as creosote bush (Larrea tridentata), ocotillo (Fouquieria splendens), and unclassified weeds growing intermittently in adjacent areas. The site and surrounding areas are covered with typical desert pavement of cobble and gravel size stones covered with desert varnish. The soil is sandy, mixed with clastic clay sediments. Many large weathered flakes of green porphyry are scattered on and about the site. They may or may not have been modified by man.

The cairn was constructed of small boulders and pebbles ranging from 12 inches in diameter to smaller stones only two inches across. It was oriented lengthwise in a northwest south-east direction. Its maximum length was 12 feet 8 inches and its maximum width was 10 feet. Its maximum height from the surrounding surface was 13 inches. All about the perimeter of the cairn
the ground had been cleared of larger stones, presumably to build the feature, making it quite distinct from its surroundings (figure #1; photos #1 and #2).

Methods of Survey and Excavation

Since the cairn was such a distinct feature, so close to a well-traveled dirt road, and in immediate danger of destruction, we felt that a salvage of the suspected burial was the most important thing to be done. Working conditions were adverse. It rained intermittently throughout the whole time we were excavating, and at several points the work had to be suspended for several hours and the burial covered with a plastic sheet. It is for these reasons and the small number of people we had working that a **controlled surface collection was not taken prior to excavating**.

We began on the first day by mapping the site (map #5) with a plane table and aladaide. While this was being done, a 15' x 13' excavation area, enclosing the cairn, was laid out (figure #3 and photos #3 and #4). After photographing and carefully plotting the positions of all the stones in reference to the datum stake (figure #1), the first two six-inch levels of stone were removed and put into two separate piles for later inspection (figure #2, photos #5 and #6).

Our next procedure was to lay out trench "A", 12 feet long by 3 feet wide, bisecting at a 90° angle, the long axis of the cairn at its north end (figure #4, photo #7). The first two six-inch levels excavated from the trench, 14"-25" below the
 datum plane and 0"-12" below ground level, revealed nothing except a blanket-like layer of caliche, of varying degrees of purity mixed with soil matrix that began at ground level and petered out at approximately 23 inches below the datum plane (6"-10" below ground level). This caliche lense extended almost the entire length and width of the trench (figure #6, photos #8, #9, and #15).

Below the caliche deposit in the last 4 levels of the trench, the soil became less consolidated as the trench deepened. Trench "A" was dug to a total depth of 48 inches below the datum plane.

To sum up, the first 13 inches from the datum plane to ground level consisted of cairn stones mixed with sand (figures #2 and #6). Levels 3 and 4 consisted of fairly calcified sand, small boulders, decomposed granite, and the caliche deposit (figure #6, photo #15). Levels 5 through 8 consisted of fairly loose sandy soil mixed with small amounts of caliche.

Since trench "A" revealed no skeletal material, we laid out trench "B" at a 90° angle to trench "A" (map #5, figure #5, photo #10). This cut was 7 1/2 feet wide and 9 1/2 feet long. At 16 inches below the datum plane (3 inches below ground level) a fragment of a human left femur was exposed (photo #11). Large tools were set aside; dental picks and small paint brushes were used to expose the remainder of the skeleton. Utmost care was taken to avoid contaminating the bone so that chemical tests wouldn't be invalidated. The excavators wore plastic gloves and handled bone only with forceps and tweezers.

The entire procedure of exposing and pedestalling the skeleton took three days. Most of the bones were in fair to
poor condition. The skeleton was extended, oriented northwest to southeast, lying on the back, with the skull lying on the left side, the face oriented east (photo #18). Since the femora angled slightly to the left of the thoracic orientation, and since the soil under the femora was darker than the soil under other portions of the skeleton, there is some speculation that the legs could have been flexed at the knees. However, no portion of either a tibia or a fibula was recovered, so flexion of the legs will have to remain conjectural.

The left arm was contracted, the hand resting on the chest. The right arm was also contracted, the hand resting near the right shoulder with the palm turned down. The parietal and frontal regions of the skull were badly smashed, but the soil matrix held the pieces intact. The zygomatic bones, maxilla, mandible, teeth, cervical vertebrae, and the thoracic region were in fair condition. The lumbar and pelvic regions, the feet along with all of both lower legs were missing. Only portions of both femoral shafts, minus distal and proximal ends, were recovered.

After exposing the skeleton, it was photographed and recordings made. The skull was stabilized with shelac, the femoral shafts removed, wrapped in aluminum foil, and placed in foil lined boxes, and the entire thoracic region was removed in matrix and placed in a foil lined box. All skeletal material was then transported to the osteology laboratory at the University of Arizona at Tucson for further study.

All of the skeletal material lay between 16 and 21 inches below the datum plane. An additional 12 inches of excavation
(down to 33 inches below the datum plane) was conducted in an effort to locate the missing portions. The results were negative, and we can only surmise at this time that the soil chemistry was such that the missing portions were dissolved. This is possible, since the body seems to have been placed on uneven ground with the pelvis in the lowermost position. And in such an instance, water working with an acidic soil could have differentially dissolved portions of the skeleton (photo #18). Scrutiny of the boulders and alluvial material, as they were removed from the cairn, supported a hypothesis that interment was accomplished by placing the body in a shallow depression or small ravine, then covering it with boulders from the surrounding area. Subsequent down-wash from slightly higher terrain to the north infiltrated the boulders. Up to 1/2 inch of caliche formed to coat many of the boulders in the cairn and formed a blanket-like layer in the alluvium over the bones. This sealer coat of caliche may be the element that saved the skeletal remains from complete deterioration. During the final stages of exposing the skeleton a sample of this sealer coat of caliche was removed directly from the ribs and arm bones and sent to Geochron Laboratories. The sample indicates an age of 21,500 ± 2,000 - 1,000 years B.P.

There was no indication that any of the lithic material removed in the course of excavation was purposefully placed. However, two possible tools were recovered (photos #20-#29) from the same layer as the skeleton (16 to 21 inches below the datum plane). They were situated 12 inches from and at a right angle
to the lateral surface of the distal portion of the right femur. These lithic objects could be described as cores, unifaced beaked scrapers, or pulping planes. One of these objects has been catalogued as 4-IMP-115-L3.2 (photos #20-#23). This object measures 4 and 9/16 inches in length, 2 and 7/8 inches in width, and 1 and 7/8 inches in height. The other object has been catalogued as 4-IMP-115-L3.4 (photos #24a-#29). It measures 5 and 1/8 inches in length, 3 and 1/8 inches in width, and 2 7/8 inches in height.

The Relationship of the Yuha Burial to Other Sites

The Yuha Burial was the second cairn site containing human remains excavated by Imperial Valley College. Approximately 50 miles north of the Yuha Site, in the Santa Rosa Mountains, a stone cairn, situated on private property, containing a human burial was excavated in 1971. It is similar to the Yuha Site in that both burials were on the west side of the valley and were located on older high beach lines (400-500 feet). In both instances the cairn was made by picking up boulders from the surrounding desert pavement and placing them over the body. Both cairns were approximately 1 foot high, 12 feet long, and 10 feet wide. In both cases, the body appears to have been placed in a shallow natural depression and covered with small boulders. It doesn't seem that any soil was purposefully placed on the body in either case. The soil covering the bones in both burials seems to have been derived from the down-wash from higher adjacent areas. The soil that infiltrated the boulders and covered the bones has a high caliche content in both instances.
The burials differ, however, on a number of counts. The burial found in the Santa Rosa Mountain region has been designated as 4-IMP-109. It was located on an extensive ancient stone quarry site where tons of worked lithic materials are present. The Yuha Burial and 4-IMP-109 represent different cultures if the tools found on the two sites are true indicators of the cultures responsible for the burials. The difference in lithic materials from these sites is the subject of a report now in preparation.

Another difference between the sites is the depth of the burials. At 4-IMP-109 the highest portion of the skeleton was 21 1/2 inches below ground level (33 1/2 inches below the datum plane). The skeleton at the Yuha site was much closer to the surface (3 inches below ground level, 16 inches below the datum plane). In addition, the burials were of different types and orientations. The one at 4-IMP-109 was tightly flexed, placed on the right side, the spinal column oriented east-west, and the face pointed north. Compared with the more-or-less extended nature and the direction of orientation of the Yuha Burial, it would seem that there was a cultural dissimilarity of some magnitude existing between the populations responsible for the two. Finally, the tentative dates assigned to the two sites are quite different. A bone appetite date run by Geochron Laboratories on a sample from 4-IMP-109 revealed an age of 4,990 ± 250 C-14 years B.P. A date run by the same laboratory on a sample of caliche taken directly from the bones in the Yuha Burial produced
a date of 21,500 + 2,000 – 1,000 years B. P.

Although the reliability of bone appetite dates is not well established (Bischoff, 1973) and dating of caliche to establish the age of the Yuha material has been questioned (Taylor, 1972), our evidence is adequate to strongly suggest a different age for the two skeletons. The final disposition on these matters, however, will have to await more extensive testing of skeletal and soil samples. Until the chronology and investigation of the Yuha Burial is more complete, further comments or comparisons to previous work would be speculative.

Problems Posed by the Yuha Burial and Plans for the Future

The most important problem raised by the Yuha Burial is its age. In addition to the caliche date, it is intended that other dating techniques be applied to the skeletal material when the metric work is completed and casts have been made.

Another problem in the relationship of the burial to the lithic materials on the site. This question may partially be resolved by future site survey and analysis of the lithic materials.

Finally, a preliminary report on the burial is in preparation for publication which, it is hoped, will generate interest in the problem of ancient man in the Imperial Valley to the extent that other institutions will conduct future investigations here to confirm or clarify our findings.
ILLUSTRATIONS

MAPS

1. Map #1. - The geographical relationship of Imperial County to the state of California.
2. Map #2. - The geographical relationship of the Coyote Wells Quadrangle to Imperial County.
4. Map #4. - The Yuha Burial Site in relationship to Section 7 of the Coyote Wells Quadrangle.
5. Map #5. - Contour map of the Yuha Burial Site 4-IMP-115.

FIGURES

1. Figure #1. - A top view of the undisturbed cairn of stones.
2. Figure #2. - An east-west profile of the sand mound under the stone cairn.
3. Figure #3. - The excavation area enclosing the cairn.
4. Figure #4. - Trench "A".
5. Figure #5. - Trench "B".
6. Figure #6. - Profile of northwest wall of Trench "A".

PHOTOGRAPHS

Numbers 1 & 2 - The cairn before excavation.
Numbers 3 & 4 - The excavation layout before removing any stones.
Numbers 5 - 7 - The first three 6" levels of excavation.
Numbers 8 & 9 - Two views of Trench "A" and the caliche deposit that covered a major portion of the skeleton.
Number 10 - The starting of Trench "B".
Numbers 20-29 - Various views of the two artifacts recovered from the cairn.
GEOGRAPHICAL RELATIONSHIP
OF IMPERIAL COUNTY TO
STATE OF CALIFORNIA
SECT. 7, T.17.S, R. 11 E. IN RELATIONSHIP TO COYOTE WELLS QUADRANGLE, CALIFORNIA, IMPERIAL COUNTY.

Scale: 1 inch = 1 mile
SITE IN SECT. 7, T.17.S, R11
COYOTE WELLS QUADRANGLE

SITE

UNIMPROVED DIRT ROAD

Scale in Inches
5 inches = 1 mile
Radar Station 343° Magnetic, Cerro Pinto 164° Magnetic, Contour Interval, Relative from Base, in inches, Magnetic Declination 15 E.
YUHA SITE

Drawing: Top View
Rocks overlying sand mound.
Extreme measurements:
12 ft. Length (N.-S.-E.)
10 ft. Width (E.-W.)
FIGURE # 2

EAST-WEST PROFILE OF SAND MOUND AFTER STONES WERE REMOVED ALONG SOUTH GRID LINE OF TRENCH NUMBER 1.

DATUM PLANE

Ground Level

120"

North

Scale

1" = 1 foot
THE EXCAVATION AREA ENCLOSED THE CAIRN
FIGURE # 4

TRENCH "A"
FIGURE # 5

TRENCH "B"
The burial site before excavation...a pile of cobbles stones on desert pavement. This is a distinctive feature from the rest of the area. Note the proximity of the road in the right background heavily traveled by off-road vehicles.

A view of the burial site looking east. Note the concentration of stones. It is assumed that the stones covering the burial were originally gathered from the adjacent denuded areas.
The burial site after the 15' X 13' excavation pit has been staked off. The dimensions of the rock cairn covering the burial measure 12'8" X 10'.

A closer view of the burial. Observe the varied sizes of the stones. Some were broken by human agency, and some were probably broken due to thermal fracturing.
The first 6" level of stones has been removed and piled off to the side for later inspection.

Level #2 (6" - 12") is exposed. Almost all of the stones have been removed. The soil texture in this level is sand mixed with fine silt.
This is a view of trench "A", 12' long X 3' wide, cut crosswise through the north end of the stone cairn. The depth at this point is 18" below the datum plane. The stone pile in the left background is the material removed from level #1 (datum plane - 6"). The pile on the left is from level #2 (6" - 12").
A close-up view of trench "A". The floor of the 14" deep trench is 27" below the datum plane. A calcium carbonate deposit (caliche) is visible in the left front portion of the trench floor.
Trench "A" 48" below the datum plane. Note the presence of calcium carbonate deposits on the floor and a lens deposit visible along the right wall of the trench.

Trench "B" (3' wide), bisecting trench "A", was begun on the south wall of the first excavation.
The first indication of skeletal material, a fragment of the left femur found at the south end of trench "B" 16" below the datum plane, is shown between the ruler and paintbrush.

The fragments in the center of the photo are metacarpals from the right hand.
Students exposing fragments of leg bones. Some cobble size stones were resting directly on the bones.

The partially exposed skull is shown relative to its position from the south wall of trench "A". The skull was only 5" from the original trench "A" excavation. Note the fractured condition of the skull. Its configuration was kept fairly well intact, however, by the supporting soil matrix.
The partially exposed skull is visible near the edge of trench "A". Note the alignment of the stones covering the right shoulder and thorax, and the thick layer of calcium carbonate visible on the north wall of the trench.

The fully exposed skull. The slight distortion is due to lateral pressure and slipping of the calvarium.
The skull is shown resting in a 3/4 position on the left side facing east. The remainder of the axial skeleton, however, was not rotated to the side. The arms are folded over the lower chest.
The view of the entire exposed skeleton. It seems to have been placed on uneven ground with the pelvis being in the lowermost position. In such an instance, water working with an acidic soil could have differentially dissolved portions of the skeleton. Note the orientation of the femora to the rest of the skeleton. It seems the legs were placed slightly angled to the left.
The bones were picked up with clean forceps and individually wrapped in aluminum foil to avoid contamination for purposes of carbon 14 dating.
4-IMP-115-L3.2 Plane scraper type tool. A thick ovate flake of green porphery with a flat unworked bottom. Flakes have been taken from the upper face, but weathering has reduced the sharpness of some of the facets. It has a high domed back, and one tapered end. The edges have been slightly retouched in some places.
4-IMP-115-L3.2 Plane scraper---bottom view.
4-IMP-115-L3.2 In reference to photo #20, this is a view of the right side of the plane scraper.

Left side of plane scraper 4-IMP-115-L3.2
4-IMP-115-L3.4 Front view of a chopper-scaper tool. It is a small core of a very thick flake of green porphery. The bottom is unworked with an upper face keeled by long percussion; that is, the flake channels begin at the lower edge and are fairly well distributed around the whole periphery. The slightly retouched edges, dome-shaped back, and smooth bulbar face, suggest it may have been used for skin fleshing or chopping.
Another front view of the chopper-scraper 4-IMP-115-L3.4.
Another front view of the chopper-scaper 4-IMP-115-L3.4.
Right lateral view of chopper-scraper tool 4-IMP-115-L3.4 in reference to photo #24a.
Left lateral view of chopper-scraper tool 4-IMP-115-L3.4 in reference to photo #24a.
Another left lateral view of chopper-scraper tool 4-IMP-115-L3.4 in reference to photo #24.
Top view of chopper-scaper tool 4-IMP-115-L3.4.
This view shows the flat nature of the bottom of chopper-scraper tool 4-IMP-115-L3.4.
## ARCHAEOLOGICAL SITE SURVEY RECORD

1. **Site**: IMP-115  
2. **Map**: USGS Coyote Wells  
3. **County**: Imperial

4. **Twp.**: 17 S.  **Range**: 11 E.  **SE**: 1 of NE 1 of Sec. 7

5. **Location**: West Yuha Desert—Imperial Valley, California

6. **On contour elevation**: 440 feet above sea lev.

7. **Previous designations for site**: None

8. **Owner**: Federal

9. **Address**: None

10. **Previous owners, dates**: None

11. **Present tenant**: Bureau of Land Management

12. **Attitude toward excavation**: Excellent

13. **Description of site**: A low pile of small boulders that is distinct from its surroundings

14. **Area**: See maps  
15. **Depth**: None

16. **Height above ground level**: 13″ above L. tridentata, F. splendens

17. **Vegetation**: and unclassified weeds

18. **Nearest water**: Yuha Well

19. **Soil of site**: Sandy mixed with stone

20. **Surrounding soil type**: Sandy

21. **Previous excavation**: None

22. **Cultivation**: None

23. **Erosion**: Slight water erosion

24. **Buildings, roads, etc.**: Cairn approx. 5 meters from a dirt road

25. **Possibility of destruction**: Great—dirt road and adjacent areas subject to heavy ORV use.

26. **House pits**: None

27. **Other features**: None

28. **Burials**: See burial record.

29. **Artifacts**: No directly associated material with burial. Much worked stone scattered on surface of site.

30. **Remarks**: Salvage work performed. Antiquities permit no. 72-Ca-001 granted. More locations near this site need to be surveyed.

31. **Published references**: None

32. **UCMA Accession No.**: None

33. **Sketch map**: None

34. **Date**: Oct. 1971

35. **Recorded by**: E. Burton

36. **Photos**: None
Data Record Form 7

ARCHAEOLOGICAL BURIAL RECORD

1. Bur. No. 1. 2. Site 4-IMP-115 3. Excavation Unit Trench "B"

4. Location Southwest of datum Northwest to Southeast

5. Depth from Surface 3" 6. Depth from datum plane 16" to 21"

7. Stratification Undefined

8. Matrix Fine sand, caliche, pebbles. Condition Fair to poor

9. Bones absent (or present) Absent - pelvic & lumbar regions, lower legs

10. Sex Uncertain 11. Age Uncertain

12. Pathology Uncertain

13. Type of disposal Surface burial

14. Position of body On back, extended except for possible flexion at

15. Left side Right side Back X Face Sitting

16. Position of head left side back face, facing East

17. Orientation NW to SE 19. Size of grave 8' x 5'

18. Associated objects (itemize) No directly associated artifacts were recovered, with the possible exception of two unifaced beaked scrapers found 12" from the right femur

20. Remarks Sites such as this are in dire need of recording and salvage. Many are being destroyed by pot hunters and ORV traffic.

21. Remarks

22. Exposed by Arch, Field Class 23. Recorded by E. Burton

BISHOPOGRAPHY

Bishoff, James
1972-73. Personal Communications.
Dr. Bishoff is with the Department of Geological Sciences, University of Southern California. He has on numerous occasions visited both burial sites and examined them from a geological standpoint.

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1964. "Geology of the Imperial Valley."

Jennings, Jesse, D., Norbeck, Edward, eds.
1964. Prehistoric Man in the New World,
University of Chicago Press, Chicago.

Merriam, Richard
Dr. Merriam is a staff member of the Department of Geological Sciences, University of Southern California. He has done considerable fieldwork on the geology of Imperial County.

Moriarty, James, R.

Rogers, Malcolm, J.


Stanley, George, M.  


Taylor, Ervin.  
1972. Press statement attributed to Ervin Taylor of the U. C. R. Carbon Dating Facility, regarding the caliche date for the Yuha Burial in the October 18, 1972 issue of the San Diego Union.

Thomas, Robert, G.  

Treganza, Adan.  

Wallace, W. J.  

Warren, Claude, N.  

Warren, Claude, N., and True, D. L.  
Borrower's Card

Summary report on a Burial excavated in the desert of Imperial County, Calif-