

48. An Indian Trail Complex of the Central Colorado Desert:

A Preliminary Survey¹

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The following is a report summarizing the first recorded reconnaissance of an aboriginal trail complex, designated as Riv-53T,² extending in a westerly direction from a point on the Colorado River thirteen miles north of Blythe to the San Bernardino Valley region (see Map 1). The entire complex represents a new addition to the trails reported on by Sample (1950). The work, though still in progress, was formally begun November 14, 1952, with the observation of a set of trails running from the site of the animal and humanoid ground relief figures (Riv-46) thirteen miles north of Blythe in Riverside County, westerly into the Big Maria Mountains. The survey was continued on a fairly steady basis in the eastern portion of Riverside County, including site Riv-54, through January 1953. Since that date the work has continued in the western portion of the county and is still under way.

Before describing the trail, sites, artifacts, and features, it might be well to examine in simple geographical and geological terms the area in which this complex occurs. The section of Riverside County involved reaches westerly from the Colorado River to Banning, and is known generally as the Colorado Desert. This desert is separated from the much larger Mojave Desert by a series of hills and mountain ranges. It is at the base of and through these hills that the complex of trails chiefly runs. The first range, called the Big Maria Mountains, rises in a great sweep from the banks of the Colorado River itself. This range appears to be of metamorphic material, heavily eroded, covered with highly patinated gravel and boulders, and devoid of all save tough, desert scrub vegetation. Beyond these mountains and north of Blythe proper is a broad, sandy wash called McCoy Wash, about six miles wide. Next are the McCoy Mountains which are but a smaller edition of the Big Marias. However, on their western face is McCoy Spring, one objective of the trail. Next is another broad wash and sweep of sand called Chuckwalla Valley. This valley really extends about forty miles below Palen Mountains and Palen Dry Lake, which lie to the north, to Eagle Mountains. However, much of the southerly floor of this valley is not sand, but rather hard, solid gravel (probably metamorphic), highly patinated and easy to walk on. The Eagle Mountains form the south face of Joshua Tree National Monument and although again they are great masses of metamorphic and igneous rock, their vegetation is much heavier than that of the previously mentioned hills. There are canyons and washes holding palm and cottonwood groves as well as palo verde, mesquite, and smoke trees. After twenty-five rugged miles the Eagle Mountains join the Cottonwood Mountains without any real break other than the arbitrary Cottonwood Spring. The Cottonwoods bridge about twenty miles to the Little San Bernardinos. However, the trails swing below the San Bernardinos into the Indio Hills which appear to be a vast conglomerate moraine piled up from the erosion of the San Bernardinos. After this fifty mile stretch come the foothills of the true San Bernardino Mountains. This

area beginning at Whitewater Canyon is relatively rich in vegetation and moisture. The soil is denser though full of gravel, and adequate water makes the ground immediately arable. Hence from Whitewater Canyon the next fifty miles into San Bernardino consists of good topsoil, cultivation, and generally greener landscape.

Although the singular word "trail" will be used throughout this paper, in actuality seldom, and then but for brief stretches, did any of the recorded sections contain only one trail. Almost always there were two or more subsidiaries running parallel to what might be considered the main trunk. The trails vary from six to twelve inches in width, and average one inch deep. A specific feature noted wherever enough stones were prevalent was a trail rim or ridge of stones on each side of the trail.

Specifically as to the trails themselves, the first serious observation was made November 14, 1952; during a reconnaissance of the gravel pictographs designated as site Riv-46,³ and also known as the San Diego Museum of Man site 63.⁴ These are located in T4S, R23E, Sections 22, 23, 26 and 27. In reconnoitering on plateaus west of the figures distinct trails measuring six to twelve inches wide and up to one-half inch deep were noted, heading west into what seemed to be a natural pass through the Big Maria Mountains. The trails were followed several miles by the authors and were still clear and bearing west when abandoned.

The relationships of the various features found at the pictograph site to the trails themselves are not yet fully clear according to the reference works cited. No effort will be made in this report to describe these other features as this paper will deal strictly with the trails, features related directly to the trails, and hitherto unrecorded features in the vicinity of the trails. However, as there is currently no reason to doubt that the trails in this area are not of less age than the other features, it may be of interest to note the various cultures known to have once existed in this region. Rogers⁵ mentions Malpais artifacts found in close proximity to the ground figures. He specifies a Yuman culture as the author of later figures at a nearby site (SDM C-64) where their potsherds and petroglyphs were found, and further makes reference to "the main river-trail between Yuma and the Mohave Valley" as passing along by these features.⁶ In historic times the local Indian tribe reported to have occupied this region was the Halchidhoma.⁷

The second section of the trail complex recorded is the one from which the original site designation, Riv-53T, was derived, although the sherd collections from this site are now numbered Riv-71. The trail comes through a small natural pass in the southernmost tip of the McCoy Mountains, known locally as Black Rock, and follows the south base of the range to its western shoulder where it swings north with the range to McCoy Spring. Topographically the trail passes through T6S, R20E, Sections 22, 23, 24. This section of trail is in territory presumably held in historic times by the Halchidhoma Indians, just east of Desert Cahuilla and Chemehuevi territory.

The most interesting feature of this stretch of trail was the potsherd groupings. In the two mile long center section for which the survey

record was specifically made, there were eight separate sherd groupings. Generally these were concentrated about a collection of three or four large stones (each stone averaged about six inches in diameter). At first it appeared that at each grouping the remains of one entire vessel had been intermixed with a few unrelated sherds from other vessels and that it would be relatively simple to reconstruct the one whole vessel from any given sherd group. However, this was not the case and it soon became apparent that none of these separate piles could produce a single whole vessel. The 119 sherds from this site probably represent not more than 26 vessels of both Lower Colorado Buff Ware (with varied surface treatments) and Tizon Brown Ware (see Table 1 and Appendix). One probable jar lid, 55 mm. in diameter, with chipped edges was made from a plain Buff Ware sherd. According to Harner⁸ the sherd groupings about the cairns characterize trailside shrines in general in southeastern California.

In addition to the sherds, grouped, unrelated, and isolated, a few other features were noticed at site Riv-71. There were many quartz spalls scattered along the trail. At one point a large, heavy igneous or metamorphic rock seemed to have been used in the capacity of an anvil as there was a great concentration of spalls about it. Along the south slope of one of the small hills at the east end of the site a partially formed dart or arrow point was found seemingly abandoned in the course of manufacture. Although neither specific house pits nor rock rings were found, cleared circles of tamped gravel averaging six or eight feet in diameter were obvious along most of this section. Also one cobblestone very similar to those found several miles to the south and east along the east bank of the Colorado River was noted.

The next length of trail was first noted March 29, 1953, in historic Desert Cahuilla territory. The site designation is Riv-72 owing to the separate sherd groupings found there. Geographically it is located exactly four and eight-tenths miles west of the cafe in Desert Center, about one-hundred-fifty yards north of and parallel to U. S. Highway 60-70. Three features in this area were noted. First, the trail itself passing as usual across a well patinated, hard, gravel spread. This was followed for about one mile and was then lost in the sand and washes. The more spectacular feature is the presence of thirteen large rock cairns. The rocks are indigenous to the region, average four inches in diameter, and form piles up to three feet high. The third feature was the few small and deeply weathered sherds found at the largest cairn; the single classifiable sherd was Tizon Brown Ware.

An interesting point concerning this section of trail Riv-53T is the proximity and relationship of other sites in the general area. To the southeast are the Chuckwalla Mountains containing Corn Spring with the campsite Riv-32 and Steward's petroglyph site 128.⁹ This is one of the most prolific petroglyph sites in the whole of Steward's Area A. Also, however, in this same canyon, beyond Aztec Well and probably in Irish Wash, is a cave containing pictographs. This information was supplied by a local resident and has not been recorded as yet. These sites would be about ten miles direct from Riv-72, though a branch trail is reported to pass through the Chuckwalla Mountains, as shown on Map 1.

Northeasterly from the trail at Riv-72 along the Desert Center-Rice road, somewhere above Palen Dry Lake, there is reputed to be a burial ground. Employees of the Metropolitan Water District reported striking the cemetery during work on the aqueduct, but the authors were unable to find any trace of it on the one reconnaissance they were able to make into the region. Below Palen Lake is Gruendike Well, also rumored to be an Indian campsite. The authors have as yet been unable to investigate this.

Closer and of possible connection with trail Riv-53T is the petroglyph site Riv-49, another occurrence of Steward's Area A elements. Also reported at this site though not as yet found by the authors are bedrock mortars. This site is located about three miles northwest of the recorded trail section.

When the trail at Riv-72 became untraceable in the sand it was bearing westerly toward site Riv-76, a campsite to the northeast of Hayfield Reservoir (dry) which is now blocked by the aqueduct canal along the base of Eagle Mountains. The site was visited once by the authors when the canal was under construction. Water District employees reported house pits ringed by large stones in addition to many artifacts which were kept by various individuals.

As regards the local aborigines this entire region was occupied in historic times by the Desert Cahuilla. However, an interesting suggestion is raised by Steward¹⁰ who states: "It would seem that the petroglyphs of both Areas A and B date back at least to the periods of the early beginnings of Pueblo culture in the Southwest. Perhaps some are Basket Maker culture . . . Most groups are probably as recent as early Pueblo." The present authors have noted the superimposition of one petroglyph style (humanoid) on another (curvilinear) at Corn Spring. Concerning site Riv-76, Rogers¹¹ relates circular rock rings to the early Malpais industry and also to the later Playa culture.

The trail is taken up again nearly fifty miles further west, this time in the Coachella Valley. The complex here involves T4S and R6E (Sections 12, 13, 14) and R7E (Sections 6, 7, 8, 18). Geographically it is in the central region of the Indio Hills concentrating around Thousand Palms Oasis (site Riv-56), Bee Rock Mesa (site Riv-51), site Riv-54, and extending from Pushawalla Canyon (site Riv-63) to Willis Palms.

Features in this broad concentration are both many and varied, including at least two definite campsites, one probable camp or ceremonial site, innumerable rock features, and a veritable maze of trails of which only the primary routes are shown on Map 1. No effort will be made in this paper to describe the sites or findings in detail, and the one trail which is most likely a continuation of Riv-53T will be emphasized.

The terrain through these hills, except in the canyons, washes, and towards Willis Palms, is again hard, highly patinated desert gravel of igneous and/or metamorphic formation. There is a campsite, Riv-63, at the mouth of Pushawalla Canyon where house circles (now destroyed), sherds, manos, portable metates, and projectile points were found.¹² Nearby an easily

distinguished trail six to twelve inches wide and one-half inch deep goes up the west wall of Pushawalla Canyon where it borders Section 18. Proceeding westerly about one hundred feet from the edge of the canyon the trail makes a right-angle intersection with another trail which leads down out of Joshua Tree National Monument. This intersection is locally called "Four Corners" and is designated as Riv-54 (Plate 1a). At each of the four corners of this crossing is a pile of relatively small stones about three inches or less in diameter. The piles stand about nine inches high and are around one foot in diameter at the base. As shown in Plate 1a, there is a cleared, tamped circle, twenty-four feet in diameter, just to the east of the four corners, which is crossed by the trail leading to Pushawalla Canyon. There is a small cairn of three or four stones of about four inches diameter within the clearing near the east edge. A similar clearing, with no cairn, occurs nearby to the south of the four-corners intersection and is connected by a secondary trail, twenty-four feet long, branching off at right angles to the east of the main trail to Bee Rock Mesa.

After leaving Four Corners perhaps less than a hundred yards are covered southerly and westerly until a choice of several routes is presented. One trail works its way more or less directly to a lower area about one mile to the southwest called Bee Rock Mesa and designated site Riv-51. Here a maze of trails crisscross and run among hundreds of cleared circles and stone rings (Plate 1b) which are similar to Roger's description of Malpais house or sleeping circles.¹³ An arrow straightener with two grooves was found here. At least two more prominent trails extend the half mile or so of plateau to its west end where they form two sharply descending trails to the canyon floor where they are lost. One trail extends from the west face across the plateau to descend the broken and eroded east face to Hidden Palms, a large grove on the valley floor at the south base of the Indio Hills. Along this trail are sixty-four cairns of varying numbers of stones and height (Plate 1d, e). Some are two to three feet high with a base diameter of four feet. Most are smaller. Lower Colorado Buff Ware sherds were scattered around this locality, only a sample of which was collected. The sherd occurrence is quite variable. One small sherd was found forty-three cairns from the west end of the trail. Just to the east of this there is a small wash and two reddish sherds were found thirty and fifty feet north in this wash. Just over the east ridge of the plateau was a large spread of red to brown sherds.

A second trail leads northeasterly from the Four Corners up the sharp ridge of a prominence which passes through T4S, R7E, Section 18. This is known locally as "Gaunt Ridge," for obvious reasons. This trail passes one interesting feature, a circle of large stones each about six inches in diameter, the ring itself having a diameter of three to four feet. The stones are half buried in the sand and gravel. This ring is very similar to one found in Thousand Palms Canyon at site Riv-56. The Gaunt Ridge trail extends perhaps two miles and eventually leads alternately to Bee Rock Mesa and over to Thousand Palms Canyon.

Both Lower Colorado Buff Ware and Tizon Brown Ware sherds were found at the campsite around Thousand Palms Oasis (Riv-56). One white-slipped Buff Ware sherd had been worked into a disc 40 mm. in diameter, with ground

edges and a central biconically drilled perforation 6 mm. in diameter. One plain Buff Ware sherd of irregular outline had a conically drilled perforation 6 mm. in diameter. Non-ceramic artifacts include two arrow points, a possible drill fragment, and two probable bone awls. One point is side-notched with a concave base (Fig. 1a, yellow jasper, weight 1.4 gm.) and the other is shouldered with a straight stem (Fig. 1b, obsidian, weight 1.5 gm.). A chalcedony tip fragment may represent a drill. One bone awl is 10.6 cm. long and is made from the distal end of a cannon bone with the complete articular end intact. A similar distal fragment probably represents an awl. An unusual feature noted only at this campsite was two concentric rings (maximum diameter 30 inches) of small cobbles with a small boulder in the center (Plate 1c).

The historic occupants of this territory around Pushawalla Canyon and Thousand Palms Oasis were the Desert Cahuilla. However, it is reported that Barrows suggested that this area represented a meeting and mixture of the Cahuillas with the Serranos.¹⁴ For a suggestion of older occupation Rogers,¹⁵ on his maps, shows as nearby cultures both Malpais and Pinto-Gypsum.

The next section of the trail is quite obviously its westward extension out of the above complex. The trail begins somewhere along the west wall of Thousand Palms Canyon, perhaps 250 yards south of the oasis.¹⁶ That it at one time extended into the oasis is without doubt as is the fact that portions have been destroyed by erosion and man. From this point the trail proceeds south along the wall onto a broad rolling plateau. Again there is found a heavy layer of patinated desert gravel. Immediately at the break between the wall and plateau is a small cairn, now apparently partially destroyed (Plate 1f). There are a few small, eroded sherds along this portion of the trail. From here the trail runs directly to Willis Palms passing through portions of Sections 11, 13, and 14 of T4S, R6E on contour 500 feet. Willis Palms is actually at the mouth of a broad wash between two sets of hills. The wash comes down out of clay and gravel hills spreading out almost like an alluvial fan. In the graveled areas on either side of the trail are several cleared areas with the usual intersecting trails. In one such area about one hundred yards west of the canyon rim a blade-like artifact of quartz (51 mm. long, 58 mm. wide) was found. Before reaching Willis Palms and just before the wash an arm of the trail breaks off and heads north into the hills.

The trail again appears about nine miles west of Willis Palms at the end of Indio Hills in conjunction with Willow Hole, site Riv-58. This is at the northwest end of Coachella Valley and is not to be confused with Steward's site 76, Riv-22, the location of which is uncertain.¹⁷ The trail is bordered on the north by the Little San Bernardino and on the west by the San Bernardino proper. The topographic location is T3S, R5E, Sections 21 and 22. The nearest town is Garnet, three miles west on U. S. Highway 60-70-99.

Only faint tracings of Riv-53T run down out of the Indio Hills toward the campsite (Plate 1g). So slight are the indications of the trail and so absent are any features that it is almost speculation that this is the trunk trail. However, three points need to be considered before it is assumed that the trail could have passed either to the north or the south. First, the entire terrain differs here from that found around Thousand Palms and farther

east. The hard gravel surfaces are lacking and are replaced by softer sand and loose gravel. Particularly is this true to the north and the south while the slope on which the writers feel the trail descends is relatively hard packed sand and much and more firm gravel. Second, Willow Hole is the campsite and it would seem natural for the trail to pass into or very near it. Third, it is the most direct and most passable route from Willis Palms.

Riv-58 is a simple, fairly small site, consisting of a small lake or water hole surrounded by eleven or twelve palms, some unidentified trees, and much tule bamboo. The circling banks are laced with trails, and dotted with hearths, charcoal, Lower Colorado Buff Ware and Tizon Brown Ware (1) sherds, and various stone chips and probable artifacts. One Buff Ware sherd, with red-on-buff decoration, had been broken through a straight, ground, V-shaped groove. A leaf-shaped arrowpoint was also found here (Fig. 1c, jasper, weight 1.4 gm.). The area to the west is very sandy and it was not possible to locate the trail traveling on towards Whitewater Canyon. This site is located in Pass Cahuilla territory just west of the Desert Cahuilla boundary.

A pottery jar (Lower Colorado Buff Ware probably) was found on top of a ridge some 2.5 miles northwest of Riv-58. A continuation of the trail from Willis Palms to Whitewater is probably represented. The jar is now in the Palm Springs Museum.

The final portion of the trail Riv-53T to be examined in this paper extends geographically from the east wall of Whitewater Canyon to a point northeast of Cabazon near site Riv-74 in Stubby Canyon. Topographically the trail passes through T2S, R3E, Sections 31 to 36, and T2S, R2E, Sections 35 and 36. No rock features have been noted along this section of trail. In Whitewater Canyon the trail passes in a northeasterly direction through a draw on the east wall. Sherds from one Tizon Brown Ware vessel were collected at one spot on this section of trail (site Riv-81). Crossing Whitewater Canyon some 2.5 miles north of the town of Whitewater, the trail proceeds up the west face to a small plateau which falls steeply away into a deep, sharp, east-west canyon which forms a pass issuing near the mouth of Cottonwood Canyon (Plate 1h). At the very edge of the west wall of Whitewater Canyon a few Lower Colorado Buff and Tizon Brown Ware sherds were collected (Riv-75).

In Cottonwood Canyon, about one-half mile to the north of the trail, is a campsite (Riv-73) with a bedrock metate and two deep bedrock mortar holes (Plate 1i). One of the mortar holes has a man-made groove extending from it. There are also three incipient mortar holes in the same rock. Sherds of both Lower Colorado Buff and Tizon Brown Wares were collected. A probable jar lid, 80 mm. in diameter, with chipped edges, made of plain Buff Ware, was also found.

The trail continues west along the foothills to the mouth of Stubby Canyon where it intersects a strong deep trail coming south from another campsite higher up in Stubby Canyon, Riv-74. Tizon Brown Ware sherds were more common than those of Lower Colorado Buff Ware at Riv-74. A triangular arrowpoint was also found here (Fig. 1d, jasper, weight 1.3 gm.). One of the Pass Cahuilla clans was located in Stubby Canyon.¹⁸

A probable extension of the Stubby Canyon trail reappears on the south side of San Gorgonio Pass, two miles east of Cabazon, near an extensive campsite, Riv-8, in One Horse Canyon. Sherds of both Lower Colorado Buff and Tizon Brown Ware occur around a spring. At least one hearth was also noted here. Several trails pass to the southeast along the edge of the San Jacinto Mountains. In the general vicinity were found a bedrock mortar with two shallow holes and two cobble pestles, another outcrop with three small bedrock metates and a shallow mortar hole, and two small rock shelters with evidence of occupation. At one of these shelters there is an immense boulder, two sides of which are covered with some forty-two shallow circular pits. Only nine of these pits have been pecked, three of them to a depth of one inch. The remainder are slight depressions which appear to have been formed merely by rubbing with a circular motion. The pits average two inches in diameter. This petroglyph style resembles that of the "rain rocks" of Northern California and the "baby rocks" of Central California,¹⁹ but the cultural significance of such pitted rocks in Southern California is unknown.

Two other small campsites, Riv-82, -83, occur to the east, on Snow Creek at the north edge of the San Jacinto Mountains. Rare sherds of Lower Colorado Buff Ware were collected at both sites. A Pass Cahuilla clan was located in Snow Creek Canyon.²⁰

From the Stubby Canyon region the trail Riv-53T probably proceeds to Potrero Creek on the Morongo Indian Reservation, which was a central gathering place of Serrano clans in the early historic period.²¹ The trail then proceeded across the Reservation, through Banning and Beaumont, down San Timoteo Canyon and into San Bernardino Valley. Early sources and local history²² tend to corroborate this. In addition, the authors have noted short sections of the trail in these now populated and cultivated valleys.

A small campsite, Riv-84, was found in Deep Canyon, three miles north of Cabazon. One classifiable sherd of Lower Colorado Buff Ware was found here. Riv-17 is another small campsite, about two miles south of Cabazon. There were ten bedrock mortar holes (6 are incipient) and four pestles at this site, but only two Tizon Brown Ware sherds could be found. A large campsite, Riv-57, occurs at the base of the hills south of Banning. Here were found at least five house pits, some thirty-one bedrock mortar holes, five bedrock metates (Plate 1j), and a number of manos and pestles. All of the sherds were Tizon Brown Ware.

The campsites around Cabazon have been referred to as Serrano by Hughes.²³ However, Swanton²⁴ specifically designates as Cahuilla a site located at Cabazon, called Palseta. Kroeber assigns San Gorgonio Pass to the Pass Cahuilla, but the exact tribal boundaries in this region are uncertain.²⁵

In summary, the authors have been able to follow aboriginal trail sections which appear to represent a single trail complex, designated Riv-53T, running from the San Bernardino Valley region across the Colorado Desert to the Colorado River. Averaging one inch deep, these trails range from six to twelve inches in width, and they frequently are lined on each side by a ridge of stones. Two or more subsidiary trails usually run parallel to the main trunk. Isolated potsherds are frequently found along the trails, with

occasional large spreads of sherds, in addition to a common association of sherds with rock cairns as trail shrines. Rock cairns, varying in number from one to sixty-four, and ranging in height from nine to thirty-six inches, were found along four sections of trail between Willis Palms and Desert Center, in historic Desert Cahuilla territory. Similar cairns occurred just to the east of the tribal boundary of this group, at Riv-71, on land presumably held historically by the Halchidhoma. Some eleven large and small campsites are connected by the trail, or by short subsidiary trails. These campsites are characterized by potsherds (abundant at the larger sites), charcoal and hearths, with occasional non-ceramic artifacts. In the San Gorgonio Pass region, where suitable rocks were available, bed-rock mortars and metates are associated with these campsites. In addition, the cleared circles at sites Riv-51, -54, and -71, may represent dwelling sites. This trail complex passes through territory occupied in historic times by the Serrano, Pass Cahuilla, and Halchidhoma (or Chemehuevi?). The artifacts which have been found to date can probably be associated with these groups, or their immediate ancestors, but there need be little doubt but that use of these trails has persisted from remote prehistoric times.

Notes

1. Edited by J. A. Bennyhoff, who also prepared the map, tables, and illustrations.
2. All sites designated by three-letter county symbols refer to sites recorded in the University of California Archaeological Survey files. Riv- is the abbreviation for Riverside County.
3. Harner, 1953; Setzler, 1952.
4. Rogers, pp. 14, 15.
5. Ibid., p. 15.
6. Ibid., p. 13.
7. All tribal boundaries shown in Map 1 are taken from Kroeber, 1925, Plate 1. The location of specific boundary lines is a difficult problem in this desert region. The territory of the Halchidhoma Indians west of the Colorado River is particularly uncertain, with the possibility of Chemehuevi occupation prior to, or even instead of, the Halchidhoma, but this problem cannot be dealt with here (ed.).
8. Harner, 1953, endnote 23. Also personal letter from Harner to the authors, 1953.
9. Steward, p. 95.
10. Ibid., p. 232.
11. Rogers, p. 7, Plate 10.
12. Lawbaugh, 1949. Typical manos and metates are illustrated, as well as a Lower Colorado Buff Ware jar with impressed rim decoration.
13. Rogers, pp. 7, 8.
14. In private conversation with Paul Wilhelm, owner of Thousand Palms Oasis. David P. Barrows is the author of the Ethnobotany of the Cahuilla Indians of Southern California, University of Chicago, 1900.
15. Rogers, Map 1.
16. Defined as beginning in the south where the stream crosses the county road.
17. Steward, p. 91, and letter from the University of California Archaeological Survey to the authors, March 23, 1954.

18. Strong, p. 91, No. 8.
19. Loc. cit., No. 7.
20. Heizer, 1953. In addition to the Central California sites listed on page 36, the distribution of these pitted boulders has recently been extended south of San Francisco Bay with the recording of sites Mnt-15, Sta-33, and Sta-118 (ed.).
21. Hughes, 1938. This region probably represented Pass Cahuilla territory prior to the disruption caused by Spanish contact.
22. Williamson, 1853; Hughes, 1938.
23. Hughes, 1938.
24. Swanton, p. 482.
25. Kroeber, 1908, p. 33. Conflicting sources are reviewed by Kroeber, 1907, pp. 132, 133. See also Strong, pp. 6-10.

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Appendix:

Potsherds and the Tentative Dating of the San Gorgonio - Big Maria Trail

Michael J. Harner

The Johnstons collected a total of 322 surface sherds from 11 campsites and 4 trail features scattered across the Colorado Desert from San Gorgonio Pass in the west to the Big Maria Mountains on the Colorado River in the east. No intensive analysis of the ceramics into types will be attempted at this time, but the following observations may give a general indication of the nature of this collection.

The potsherds found by the Johnstons on the San Gorgonio Pass - Big Maria Mountains trail represent two wares: Lower Colorado Buff Ware (cf. Schroeder, 1952, pp. 16-17) and Tizon Brown Ware (cf. Colton, 1939, p. 8). Lower Colorado Buff Ware is the characteristic ceramic product of the tribes inhabiting the lower Colorado River valley, while Tizon Brown Ware appears to be the characteristic ceramic product of at least several of the tribes inhabiting the deserts and uplands of southern California and northwestern Arizona.

All of the Tizon Brown Ware sherds are plain, without any decoration or slip. Of the Lower Colorado Buff Ware, 76.2% are classifiable as buff (i.e., plain). White slips are found on 17.2% of the Lower Colorado Buff Ware sherds, while 3.3% have red slips. One vessel (represented by 2 sherds) from Riv-71 is classifiable as "red-over-white," having a thin red slip coating a white slip. One sherd from Riv-73 has stucco treatment. Red-on-buff, the only painted decoration noted, occurs on five small and faded sherds (2%) from three sites. One such sherd, from Riv-56, bears a large dot, three sherds display groups of parallel lines (Riv-58, Riv-83), and one from Riv-56 shows the angle of a line chevron or triangle. All slips, stucco, and decoration were on the exterior surfaces of the original vessels. For the site occurrence of these different surface finishes, see Table 1. Figures enclosed by parentheses in this table represent the probable maximum number of vessels from which the sherds came.

Sherds from the same vessel which fitted together have been counted as one sherd; a 9% reduction in sherd number resulted from these old breaks. If the probable number of vessels is considered instead of the sherd count, a slight increase in the Tizon Brown Ware frequency results:

	Sherd Count	Percent	Vessel Count	Percent
All Lower Colorado Buff Ware	244	75.8	98	69.0
All Tizon Brown Ware	78	24.2	44	31.0

The frequency of wares by historic tribal area is shown in Table 2. Lower Colorado Buff Ware is more abundant than Tizon Brown Ware in all areas, and the highest frequency of Tizon Brown Ware occurs at the west end of the

trail. However, the present sample is probably too small to be representative, and speculation on the possible meaning of the different frequencies would be unwarranted at this time.

Rim sherds, so essential to the dating of pottery in this area, are represented by only eighteen vessels. Of these, ten are Lower Colorado Buff Ware (5 plain bowls, 3 plain jars, 1 white-slipped jar, and 1 red-over-white jar) and eight are Tizon Brown Ware (2 bowls, 6 jars). Only ten of these rim sherds are complete enough to merit illustration (Figure 1 e-m). The Lower Colorado Buff Ware and Tizon Brown Ware sherds are illustrated separately since it is improbable that the vessel form sequence is identical in the two wares. The Lower Colorado Buff Ware forms present are basically two: narrow-necked jars with either vertical or flaring lips, and a shallow bowl with a very slight flare. These forms are typical of Bouse Phase 2 (Harner, Ms.).

The Tizon Brown Ware forms collected include jars and deep bowls with flaring to almost vertical lips, and a slightly more than hemispherical bowl. These are not assignable to any phase as yet at this stage of research on the Tizon Brown Ware problem.

Some of the Lower Colorado Buff Ware sherds from this trail may be approximately dated on the basis of data derived from the excavation of a site at Bouse, Arizona (Harner, Ms.). At this site Lower Colorado Buff Ware pottery was found in stratigraphic association with certain dated Southwestern pottery types, making possible the cross-dating of the associated Lower Colorado Buff Ware. From this data, the tentative statement may be made that except for one sherd, all of the chronologically diagnostic Lower Colorado Buff Ware specimens from the San Gorgonio - Big Maria trail fall within the range of Bouse Phase 2 which dates from approximately 900 to 1300 A.D. The exception, a stucco-surfaced sherd from Riv-73, could date anywhere from approximately 1300 to 1900 A.D. Conclusions of a more specific nature would require a larger sample of potsherds and other cultural materials from this trail than is now available.

Little is yet definitely known about the Tizon Brown Ware chronological diagnostics or regional variations. The known time range of this ware is from approximately pre-900 A.D., at least in western Arizona (Harner, Ms.), to historic times both in northwestern Arizona (Dobyns and Euler, 1956; Euler and Dobyns, 1956) and in southern California (Dobyns and Harner, sherd comparison conference, 1956).

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Explanation of Illustrations

Plate 1. Trail Views and Features. (Terminal figures represent date of photograph)

- a. Riv-54, Four Corners, looking easterly. The trail at the left edge of photo continues to Joshua Tree National Monument; the lower right trail proceeds to Gaunt Ridge; the middle right trail goes to Bee Rock Mesa; trail at top extends into Pushawalla Canyon. Cleared, tamped circle in background, with cairn; cairns at each corner of intersection. 1/1/53.
- b. Riv-51, Bee Rock Mesa, looking northeasterly. Trail passes through center; rock circle in foreground. 1/1/53.
- c. Riv-56, Thousand Palms Oasis, facing north up canyon towards oasis. Trail at base of Squaw Hill in upper right corner. Concentric rings in foreground. 1/10/54.
- d. Riv-51, looking northerly towards Squaw Hill. Cairn in center, trail in foreground marked by lapboard (13"x 9"). 1/1/53.
- e. Riv-51, looking northeasterly. Trail in center passes tumbled cairns with lapboard between them. 1/1/53.
- f. Riv-53T, Willis Palms route, south of Riv-56, facing westerly. Trail at upper left. Lapboard by cairn. 12/5/54.
- g. Riv-53T, easterly and above Riv-58, Willow Hole. Trail visible as faint line extending up and right from figure of Pat Johnson in middle extreme left. 2/13/54.
- h. Riv-53T, 1/2 mile below Riv-73, Cottonwood Canyon, looking easterly. Trail enters Goat Pass in distance and passes through to Whitewater Canyon. Modern road crosses trail in mid-center. 11/15/55.
- i. Riv-73, Cottonwood Canyon. Bedrock mortars in rock three feet above ground level. Tape about 36". Note groove extending up from mortar hole at right. 11/15/55.
- j. Riv-57, near Banning. Bedrock metate and manos, 4'8" above ground level. Tape at 24". 2/20/54.

Figure 1. Points and Sherds From Trail Sites. (All drawings are actual size; Catalogue numbers are those of University of California Museum of Anthropology.)

Points.

- a. Yellow jasper. Riv-56. 1-174349.
- b. Obsidian. Riv-56. 1-174351.
- c. Jasper. Riv-58. 1-174361.
- d. Jasper. Riv-74. 1-142716.

Lower Colorado Buff Ware.

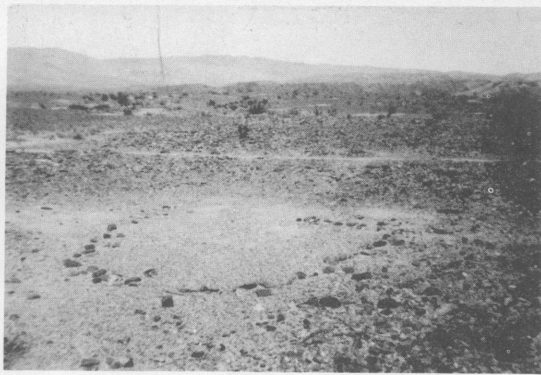
- e. Jar, red over white slip. Riv-71. 1-174340c, d.
- f. Jar, plain. Riv-56. 1-174354c.
- g. Jar, plain. Riv-73. 1-142700.
- h. Bowl, plain. Riv-56. 1-174354f.

Tizon Brown Ware.

- i. Jar. Riv-71. 1-174340a.
- j. Jar. Riv-56. 1-174354e.
- k. Jar. Riv-71. 1-174340b.
- l. Jar. Riv-56. 1-174354a.
- m. Jar. Riv-56. 1-174354b.
- n. Bowl. Riv-56. 1-174354d.



a



b



c



d



e



f



g



h



i

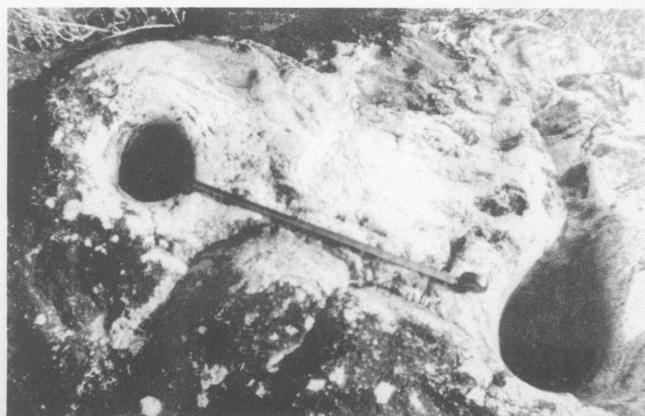


Plate I
TRAIL VIEWS
AND
FEATURES

j

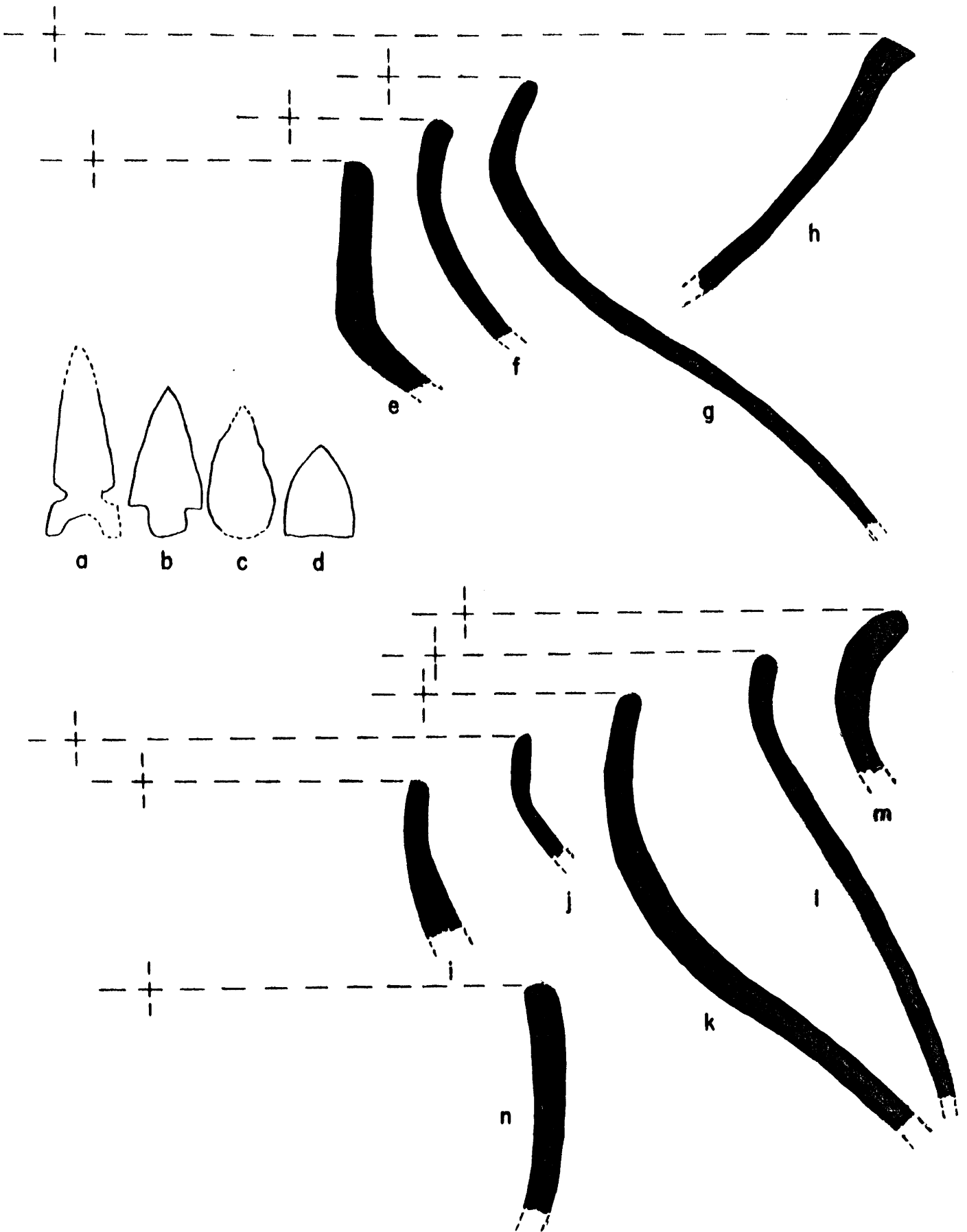


Fig. 1

Historic Tribe	P A S S C A H U I L L A													DESERT CAHUILLA		HALCHIDHOMA	TOTALS
	57	17	84	8	82	83	74	73	75	81	58	56	51	72	71		
Archaeological Site, Riv-			1	13(9)	7(3)	5(3)	8	25(16)	4		17(12)	54(17)	6(2)		104(23)	244 (98)	
LOWER COLORADO BUFF WARE			1	6	6(2)	3(1)	5	18(9)	3		12(7)	49(12)	6(2)		77(15)	186 (63)	
plain				7(3)	1		2	2	1		4	3			22(4)	42 (20)	
white slip							1	4							3	8	
red slip															2(1)	2(1)	
red-over-white																5	
red-on-buff						2						2					
stucco																1	
TIZON BROWN WARE	2(9)	2	6				10	6	1	11(1)	1	4		1	15(3)	78 (44)	
TOTALS	2(9)	2	19(15)	7(3)	5(3)	18	3(22)	5	11(1)	18(13)	58(21)	6(2)	1	119(26)	322 (142)		

Parenthetical entries = probable maximum number of vessels.

Table 1. Sherd and Vessel Counts By Site

	HISTORIC PASS CAHUILLA TERRITORY		HISTORIC DESERT CAHUILLA TERRITORY		HISTORIC HALCHIDHOMA TERRITORY	
	No. of sherds	%	No. of sherds	%	No. of sherds	%
Total sherds	138	42.8 %	65	20.1 %	119	37.0 %
Lower Colorado Buff Ware	80	60 %	60	92 %	104	87.4 %
Tizon Brown Ware	58	40 %	5	8 %	15	12.6 %

A = percent of sherds from within tribal territory.

B = percent of all sherds from entire area (322 total).

Table 2. Sherd Frequencies By Tribal Territory