# JOSUHA TREE NATIONAL PARK: WHERE DID THOSE SHERDS COME FROM?

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*Lower Colorado Buff and Tizon Brown Ware ceramics from a survey in Joshua Tree National Park were analyzed. Wares, types and regional variants based on temper and clay choice show interesting patterns of geoghraphic distributions that correspond to known territories of protohistoric and historic indigenous groups. Ceramic wares can be assigned to Cahuilla, Serrano, Chemehuevi, known to have lived in or traveled through the Park area in the period just before and during first European contact.*

The UNLV-JOTR 1991-1992 Random Sample Archaeological Inventory resulted in a collection of ceramic sherds from throughout the Park (Warren and Schneider 2000). Phase I of the archaeological inventory of Joshua Tree National Monument provided a ceramic collection of 1,692 sherds distributed over six regions (Warren and Schneider 199). The taxonomy for the purposes of this study needs to be one with attributes that can discriminate ethnic identities. Neither chronology nor function are of primary concern it the present study. Therefore we focus on sherd types as determined by temper. Regionally, the vast majority of ceramic vessels are undecorated and manufactured using the same technique. The analysis uses temper type under the assumption that temper and clay will be an indicator of origin.

The general characteristics and rationale for naming sherds in the ceramic collection resulting from the archaeological inventory is first presented, followed by an analysis focused on addressing the problems of identifying ethnic boundaries in Joshua Tree National Park. With this methodology, we use contrasting types and frequencies within the regions and the vegetation zones, to begin to develop the spatial relationships of and ethnic boundaries between groups of people.

## METHODS AND GOALS

Primary goals in the analyses of the ceramic sample from the Random-Sample Inventory Project were: (1) to describe and characterize the ceramic assemblage(s) collected during the survey; (2) to attempt to determine geographic origins of those non-local Lower Colorado River Buff Wares and the Brown Wares found throughout Joshua Tree National Monument. The intrasite distribution of Triple House ceramics, have been addressed elsewhere (Seymour and Lawrence 1997; Warren and Schneider 1997).

Based on physiographic and biologic variation, the Park was divided into five regions and one large site (Warren and Schneider 1993). These zones included Covington Flat, Queen Valley/Lost Horse, West Pinto, East Pinto, and Cottonwood (Figure 1). The Triple House (CA-RIV-1950) site is located within the Cottonwood Region but the ceramic assemblage is distinctively different from and eight times larger than ceramic assemblage from the rest of the Cottonwood Region. Because of its size we addressed this site as a distinct region. The sample from the Covington Flat Region included only five sherds is not considered further here.

The ceramics from this project, including the Triple House site, consists of a collection of 1692 sherds. The 674 sherds from the Triple House site ceramic assemblage comprise almost 40 percent of the collection (Seymour and Laurence 1997). In fact, the Triple House ceramic assemblage is about 8 times larger than the ceramic assemblage from the Cottonwood Region as a whole. If not treated as a unique unit, it would bias the sample for the study of distribution of ceramics by region and/or vegetation zone. Furthermore, the ceramic assemblage from the Triple House site is clearly dominated by ceramic types that make it distinctly different from the ceramic assemblage from the Cottonwood Region overall, as well as the ceramic assemblages from the other regions in the Park, described here.

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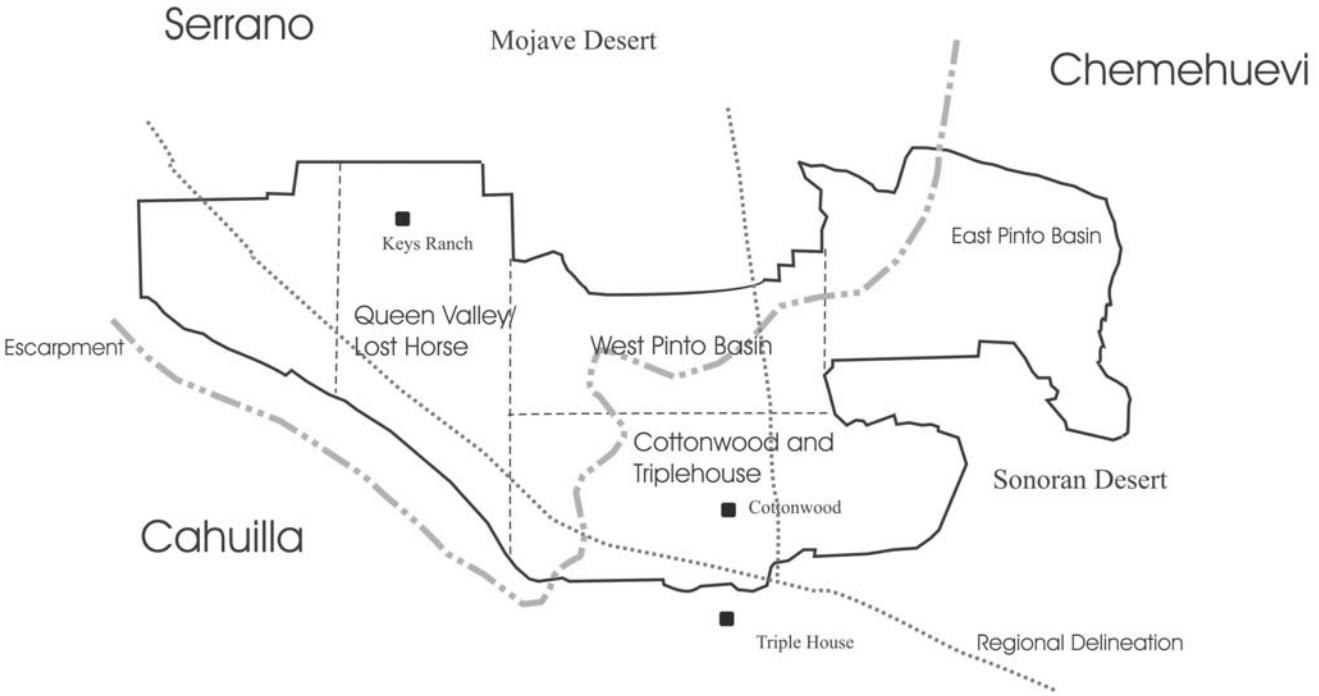



*Figure 1: Map of region, cultural areas, and escarpments within JOTR.*

Following Rogers' lead we postulate that the general origin of the sherds can be determined through temper analysis because general temper sources are geographically specific; the temper source thus indicates probable origins of the pottery types (Rogers 1945; Waters 1982; Seymour 1997). For example, Salton Buff contains beach sands from the shorelines of Lake Cahuilla; tempered buff wares from this area, therefore, should contain these sands. In contrast, pottery made in the Mojave Desert should include granitic temper or inclusions common to the Mojave Desert and rare in the Colorado River Valley and the Salton Basin.

First, we divided the assemblages into two, Buff and Brown wares. Then the Buff sherds were grouped by region, ie north and south. Tizon Brown sherds were similarly defined.

From the taxonomic viewpoint, the northern portion of the distribution of Buff Ware in the region has received little research attention, in recent years. Two important types in the Joshua Tree collection, however, are derived from the northern portion of the distribution area: Topoc Buff, the second most common pottery type recovered, and Parker Buff, one of the types with a smaller number of sherds. Topoc Buff was divided into Topoc and desert Topoc Buff representing desert vs. river origins (Seymour 1997).

Southern Buff Ware types originate from lower end of the Colorado River Valley and the Salton Sea. The three predominant Buff types recovered in these areas are Tumco Buff, Salton Buff, and Colorado Buff (Rogers 1945; Waters 1982; Seymour 1997).

Tizon Brown Ware is highly variable and is widely distributed geographically and chronologically (Lyneis 1988). Some researchers have made distinctions within this Brown Ware, naming them for instance Salton Brown (Rogers 1945; Schaefer 1995). This type appears to have originated along the shores of Salton Sea. It is our opinion that Tizon Brown Ware can be assigned no region of origin other than to more mountainous regions or other areas flanking the Colorado River Valley and the Salton Basin.

## ETHNOGRAPHIC BOUNDARIES AND PREHISTORIC CERAMIC DISTRIBUTIONS

In late prehistoric times the territories of the Serrano, Cahuilla, and Chemehuevi incorporated portions of what is now Joshua Tree National Park (Figure 1). The Cahuilla held territory to the south and west of the Park and the northern boundary of their territory crossed through the Park. From a point near Hayfield Dry Lake, this boundary extended northwestward along the crest of the Little San

Bernardino Mountains, apparently crossing over the crest of the mountains near the western end of the Park. The major part of the Chemehuevi territory was east of Joshua Tree National Park, extending from sourthern Nevada to a point a short distance south of the Park. The western edge of the Chemehuevi territory runs across the upper reaches of the Pinto Basin from near Pinto Mountain on the north to a point also near Hayfield Lake where it meets the northern boundary of the Cahuilla. The Serrano occupied territory to the north and east of Joshua Tree National Park and their eastern boundary and southern boundary correspond with the Chemehuevi western boundary and the Cahuilla northern boundary respectively (Kroeber 1925; King 1975; Bean 1978; Bean and Smith 1978).

As King (1975:21) notes, the Chemehuevi are the least well-represented in the ethnographic literature, their relationship with the Park is somewhat obscure, and their time depth within the Park area may be short. The Chemehuevi were originally occupants of the high desert and closely related to the Southern Paiute. Their prehistoric territory is not established with certainty, but shortly before the historic period they occupied the eastern half of the Mojave Desert and a portion of the Colorado Desert west of the Colorado River. The Cahuilla and the Serrano appear to have a much longer relationship with Joshua Tree National Park, going well back into prehistoric time (Trafzer *et al*. 1997).

Boundaries between the territories of these groups should not be assumed to be as well-defined and protected as modern political borders. These boundaries circumscribed areas of resource exploitation reserved by particular groups. Individuals and groups, familiar with the region through use of its resources, undoubtedly were familiar with the boundaries of their territory. On the other hand, trade was important to all of these groups and their neighbors. People of the desert traveled long distances crossing boundaries and carrying with them material items from others' territories. The development of trade is often a means of compensating for an uneven distribution of resources. For example, the resources in Cahuilla territory were unevenly distributed, with pinyon at high elevation and mesquite at low elevation. The Cahuilla responded to the uneven distribution with a well-developed system of exchange. Bean and Saubel (1963:65) note that among the Cahuilla, the balance of food sources was maintained through regular trade with other Cahuilla and neighboring Serrano, Luiseño, and Diegueño groups. The desert Cahuilla, for instance, had fewer acorns than the mountain-oriented groups, but the desert Cahuilla had more mesquite. The surplus foods of each group were used to trade for other foods and materials needed.

The Serrano appear to have a settlement and economic pattern similar to that of the Cahuilla. Desert groups annually traveled into the foothills to collect nuts of various kinds and to trade their desert fruits and seeds for products not available in the desert (Bean and Smith 1978:571). There was also long-distance trade across the deserts of California by which items such as shell beads, turquoise, and pottery vessels were transported long distances. Many such items were traded over short distances as well. Ford (1983:713) stated that "finished goods were identifiable to individual villages and in some cases to a particular artisan. Pottery, basketry, textiles..., leather goods, and utensils all circulated among groups...Papago, Maricopa, and Mohave produced trade wares for tribes in the western area." Ford also noted:

> Major trails connecting villages were well-known and sometimes marked by shrines, petroglyphs, and debris (potsherds)...The marine-shell trails are among the better documented. One originated near Los Angeles and crossed the desert to Needles and then followed the Gila before branching to major villages and Pueblos (Farmer 1935)...Brand (1938) and Colton (1941) have shown how these trails formed a network of interaction in the southwest...Though individual traders did go considerable distances along them, mostly the trails were maintained by a trade-chain linking one group to the next. To illustrate, Hopi blankets reached the Quechan through exchange from the Havasupai, Walapai, and Mohave. Sea shells, on the other hand, reached the Hopi through the Chumash, Mohave, Walapai, and Havasupai (Ford 1983:717-718).

In this manner material items originating in one region were transported to other areas to become part of the archaeological record some distance from their origin and tend to decrease in number with distance from their origin. Although there are no known trade routes that cross Joshua Tree National Park, several major trails skirted the perimeter of the Park to the north and to the south. The trade between the groups involved certainly was important and should be reflected in the distribution of artifacts in the region. Furthermore, the boundaries of these territories were almost certainly not precise and allowed parties from both groups to "penetrate" some distance into territory claimed by neighboring groups. This causes the boundaries to be "fuzzy," marked by the presence of ethnically sensitive pottery attributes from both sides of the "border."

## RESULTS

Results of analysis of ceramics throughout Joshua Tree National Park has revealed in an amazingly clear picture of variations in assemblages that correspond with known territories of protohistoric and historic indigenous groups. The Chemehuevi-Serrano boundary passes through the West Pinto Region and the Cahuilla-Serrano boundary parallels the sourthwestern Monument boundary and includes a portion of the QueenValley/Lost Horse Region, West Pinto Region, and Cottonwood Region. The Cahuilla-Serrano boundary is also in an area of extremely steep escarpment that is uninhabitable and probably was rarely traversed.

Keeping these boundaries in mind, Cahuilla territory, within the southern edge of the Park, should exhibit a dominance of Southern pottery types since most of the Cahuilla territory is to the south of the Park. Chemehuevi territory, at the east end of the Park, should express a dominance of Northern pottery, reflecting the influence from the Colorado River Valley between Blythe and Boulder Dam. Finally, Serrano pottery should reflect the Serrano territorial range of mountains and hills with a dominance of Tizon Brown Ware.

The actual story is probably not as cut-and-dried. The reality is that each of these regions apparently included territory of more than one ethnic group. Therefore, the pottery samples from these regions may contain pottery from more than on ethnic group expressing general trends only. Therefore we present a presence/absence and a decreasing dominance approach to address this problem.

Therefore, the Queen Valley/Lost Horse Region should be clearly Serrano territory. This seems to be reflected in the pottery sample, which includes 76.5 percent Tizon Brown Ware and 14.6 percent Northern wares (Figure 2; Table 1). A similar pattern is found in the Cottonwood Region above the escarpment. Here the sample is 65.1 percent Tizon Brown and 27.9 percent Northern wares.

The Triple House site is located in the Cottonwood Region but is near the southern edge of the Park property. It is below the steep escarpment and adjacent to a wash issuing from the mouth of a canyon at the head of a very long, old alluvial fan or pediment that extends to the bottom of the Shaver/ Chuckwalla Valley. The Triple House site represents a major occupation with evidence of four structures (in spite of its misleading name) and a large sample of pottery was collected from the surface of the site (Table 2). The ceramics from this site are 64.1 percent Southern pottery types with only 15.4 percent Tizon Brown and 20.4 percent Northern wares. The ceramic sample from the Cottonwood Region, excluding the ceramics of the Triple House site, contains only 5.8 percent Southern pottery. However, farther north in the West Pinto Region, Southern pottery increases in frequency to 21.2 percent, suggesting that the Cahuilla may have limited their permanent occupation sites to the area below the southern escarpment but collected resources from marginal sites above the canyons further north.

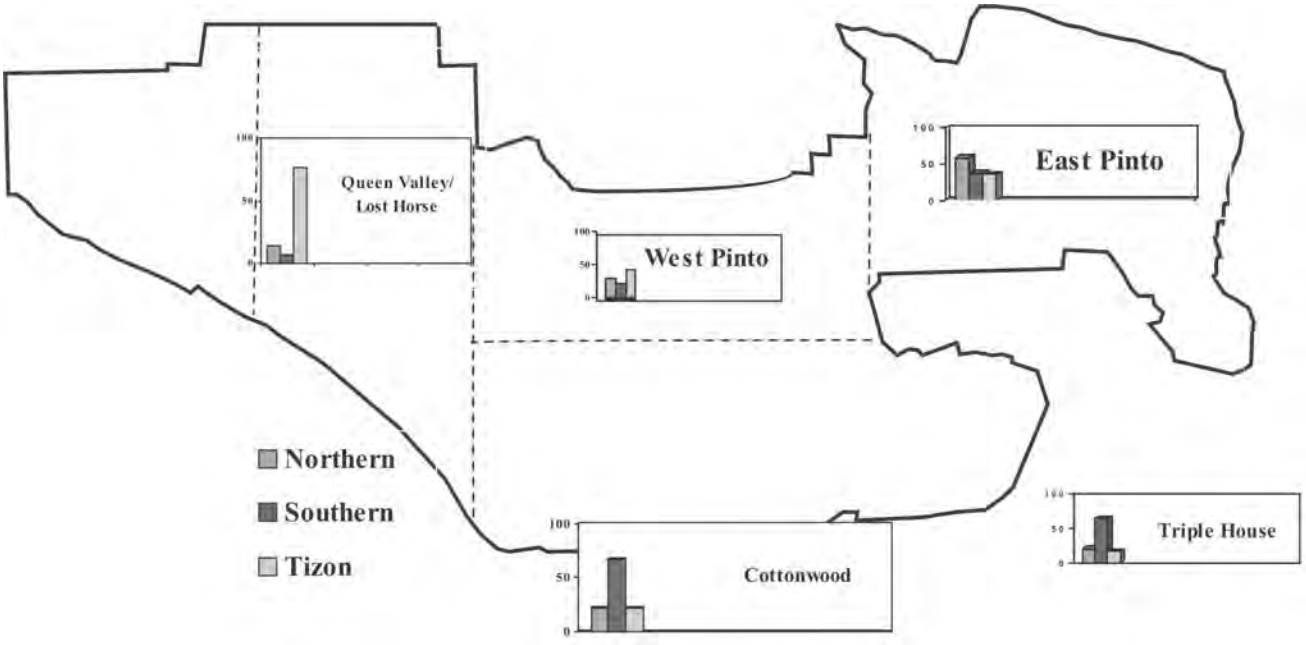
The West Pinto Region seems to reflect use by all three ethnic groups and may contain territory of all three groups. West Pinto pottery includes 41.6 percent Tizon Brown, 27.8 percent Northern Wares, and 22.2 percent Southern Wares, reflecting use by the Cahuilla as well as the Serrano and Chemehuevi (Table 3). East Pinto Region is probably all within Chemehuevi territory. Here, Northern ceramics make up 58.7 percent of the sample compared to 35.9 percent Tizon Brown and only 3.8 percent Southern wares.

Even though territorial boundaries between the Chemehuevi/Serrano and the Serrano/Cahuilla can be recognized in the distribution of pottery across Joshua Tree National Park, the boundaries are not precisely located and are better thought of as areas of interaction that neighboring groups made use of. This is perhaps best illustrated by noting the "decrease in the dominant pottery types" as they are viewed from a perspective of movement away from the territory of origin rather than the "presence of" as noted above. In the Chemehuevi territory of the East Pinto Region, Northern pottery types are dominant, making up 58.7 percent. In the vicinity of the Serrano/Chemehuevi boundary in the West Pinto Region, the occurrence of Northern pottery drops to 27.8 percent, and in the Serrano territory of the Queen Valley/Lost Horse Region, Northern pottery percentage drops further, to14.7 percent. When the direction is reversed, Tizon Brown makes up 76.5 percent in the Queen Valley/ Lost Horse Region and drops to 41.6 percent in the West Pinto Region and to 35.9 percent in the East Pinto Region. Southern pottery dominates the Cottonwood Region at 59.5 percent, when the Triple House ceramics are combined with other data from the Cottonwood Region. In West Pinto Region, the percentage of Southern types drops to 21.2 percent; in Queen Valley/Lost Horse Region to 6.9 percent; and to only 3.8 percent in West Pinto Region. Conversely, Tizon Brown represents 21.0 percent and Northern types only 21.4 percent of the Cottonwood/Triple House ceramic assemblage (Figure 3).

| Pottery Type | Queen Valley/ Lost Horse n (%) | Cottonwood n (%) | West Pinto n (%) | East Pinto n (%) | Triple House n (%) | Other n | TOTAL |
|---|---|---|---|---|---|---|---|
| Tizon Brown | 547 (76.5) | 56 (65.1) | 30 (41.6) | 47 (35.9) | 104 (15.4) | 9 | 793 |
| Salton Brown | — | — | — | — | 71 (10.5) | — | 71 |
| Total Brown | 547 (76.5) | 56 (65.1) | 30 (41.6) | 47 (35.9) | 175 (25.9) | 9 | 864 |
| Tumco Buff | 8 (1.1) | — | 4 (5.5) | 3 (2.3) | 116 (17.2) | 1 | 132 |
| Salton Buff | 4 (0.6) | — | — | 2 (1.5) | 115 (17.1) | — | 121 |
| Colorado Buff | 37 (5.2) | 5 (5.8) | 12 (16.7) | — | 104 (15.4) | 1 | 159 |
| Topoc Buff | 72 (10.1) | 18 (20.9) | — | 52 (39.7) | 71 (10.5) | 3 | 216 |
| Desert Topoc Buff | 8 (1.1) | 3 (3.5) | — | — | 65 (9.6) | — | 76 |
| Hedges Buff | — | — | — | — | 26 (3.9) | — | 26 |
| Parker Buff | 25 (3.5) | 3 (3.5) | 20 (27.8) | 25 (19.0) | 2 (0.3) | — | 7 5 |
| Total Buff | 154 (21.5) | 29 (33.7) | 36 (50.0) | 82 (62.5) | 499 (74.0) | 5 | 805 |
| Other | 14 (2.0) | 1 (1.2) | 6 (8.3) | 2 (1.5) | — | — | 23 |
| Total | 715 (42.3) | 86 (5.1) | 72 (4.3) | 131 (7.7) | 674 (39.8) | 14 (0.8) | 1692 |

*Table 1: Distribution of all ceramic sherds from sites and isolated sherds from survey transects. Percentages of total collection.*

*Figure 2: Graphs delineating numbers of ceramics by region.*



| Type | House Pit 1 | House Pit 2 | House Pit 3 | House Pit 4 | House Pit Total | Other | SITE TOTAL |
|---|---|---|---|---|---|---|---|
| Salton Brown | 16 (12.3%) | 14 (15.4%) | 26 (17.6%) | 8 (6.4%) | 64 (13.0%) | 7 (3.9%) | 71 (10.5%) |
| Tizon Brown | 28 (21.5%) | 15 (16.5%) | 22 (14.9%) | 9 (7.2%) | 74 (15.0%) | 30 (16.7%) | 104 (15.4%) |
| Salton Buff | 20 (15.4%) | 12 (13.2%) | 17 (11.5%) | 17 (13.6%) | 66 (13.4%) | 49 (27.2%) | 115 (17.1%) |
| Tumco Buff | 23 (17.7%) | 9 (9.9%) | 34 (23.0%) | 32 (25.6%) | 98 (19.3%) | 18 (10.0%) | 116 (17.2%) |
| Topoc Buff | 26 (20.0%) | 9 (9.9%) | 11 (7.4%) | 11 (8.3%) | 57 (11.5%) | 14 (7.8%) | 71 (10.5%) |
| Colorado Buff | 10 (7.7%) | 15 (16.5%) | 29 (19.6%) | 26 (20.8%) | 80 (16.2%) | 24 (13.3%) | 104 (15.4%) |
| Desert Topoc Buff | 5 (3.8%) | 14 (15.4%) | 2 (1.4%) | 20 (16.0%) | 41 (18.3%) | 24 (13.3%) | 65 (10.0%) |
| Parker Buff | - (0.0%) | 1 (1.1%) | - | - | 1 (0.2%) | 1 (0.6%) | 2 (0.3%) |
| Hedges Buff | 2 (1.5%) | 2 (2.2%) | 7 (4.7%) | 2 (1.6%) | 13 (2.6%) | 13 (7.2%) | 26 (3.9%) |
| TOTAL | 130 (100%) | 91 (100%) | 148 (100%) | 125 (100%) | 494 (100%) | 180 (100%) | 674 (100%) |

*Table 2: Ceramics at the Triple House site (Ca-Riv-1950).*

*Table 3: Distribution of ceramics by region and "origin."*

| | Queen Valley/ Lost Horse n/% | Cottonwood n/% | West Pinto n/% | East Pinto n/% | Other n/% | TOTAL n/% |
|---|---|---|---|---|---|---|
| Tizon Brown | 547/6.5 | 160/21.1 | 30/41.6 | 47/35.9 | 9/64.3 | 793/46.9 |
| Northern Pottery | 105/14.7 | 162/21.3 | 20/27.8 | 77/58.7 | 4/28.5 | 368/21.8 |
| Topoc Buff | 72/10.1 | 89/11.7 | — | 52/39.7 | 3/21.4 | 216/12.8 |
| Desert Topoc Buff | 8/1.1 | 68/8.9 | — | — | — | 76/4.5 |
| Parker Buff | 25/3.5 | 5/0.7 | 20/27.8 | 25/19.0 | 1/7.1 | 76/4.5 |
| Southern Pottery | 49/6.9 | 437/67.5 | 16/21.2 | 5/3.8 | 1/7.1 | 508/39 |
| Colorado Buff | 37/5.2 | 109/14.3 | 12.1.7 | — | — | 158/9.3 |
| Tumco Buff | 8/1.1 | 116/15.3 | 4/5.5 | 3/2.3 | 1/1.1 | 132/7.8 |
| Salton Buff | 4/0.6 | 115/15.1 | — | 2/1.5 | — | 121/7.2 |
| Salton Brown | — | 71/9.3 | — | — | — | 71/4.2 |
| Hedges Buff | — | 26/3.4 | — | — | — | 26/1.5 |
| Other | 14/2.0 | 1/0.1 | 6/8.4 | 2/1.5 | — | 23/1.4 |
| Total | 715/42.3 | 760/44.9 | 72/4.3 | 131/7.7 | 14/0.8 | 1692 |

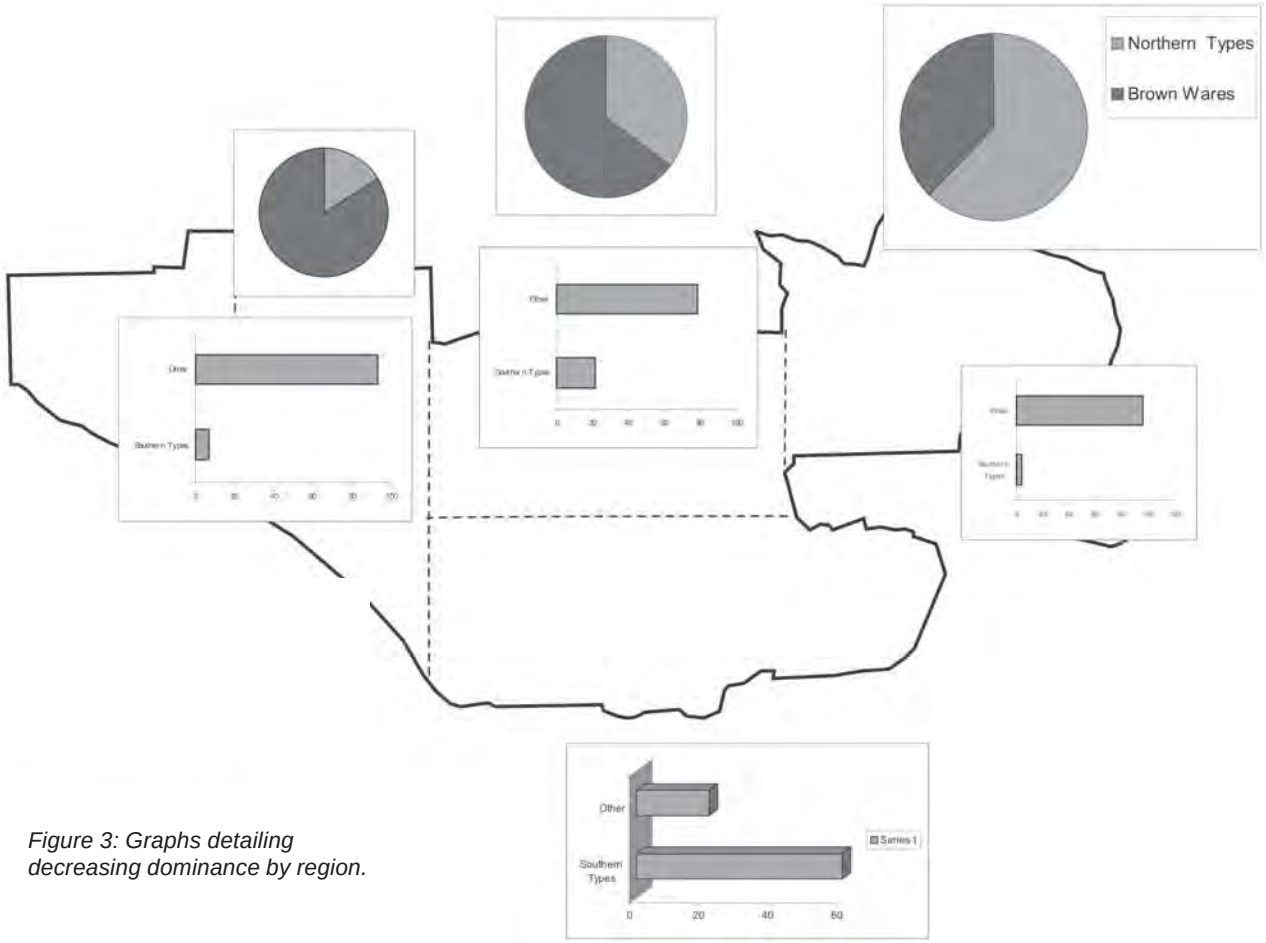



*Figure 3: Graphs detailing decreasing dominance by region.*

## Conclusions

We can see that ceramic types collected from Joshua Tree National Park correspond with approximate boundaries of Native groups during the late prehistoric and historic periods. Although the methods used are somewhat statistically unsophisticated, this study produced some surprising data. The methods used certainly need refinement and the research design needs modification so as to address problems of sampling. The ceramic assemblages consist of all the pottery found and collected on the sample transects in each Region. These data include isolated sherds, "pot drops," sherd scatters, concentrations in rockshelters and carefully mapped and recorded collections of sherds from relatively complex open sites. The many variables that might affect the sample under these conditions were not considered when developing the sampling strategy. This project has produced interesting results, but a well-considered sampling strategy to test the validity of the association of pottery types with territories of historic and prehistoric indigenous peoples is needed before we can know how far we can trust our assumptions and results.

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