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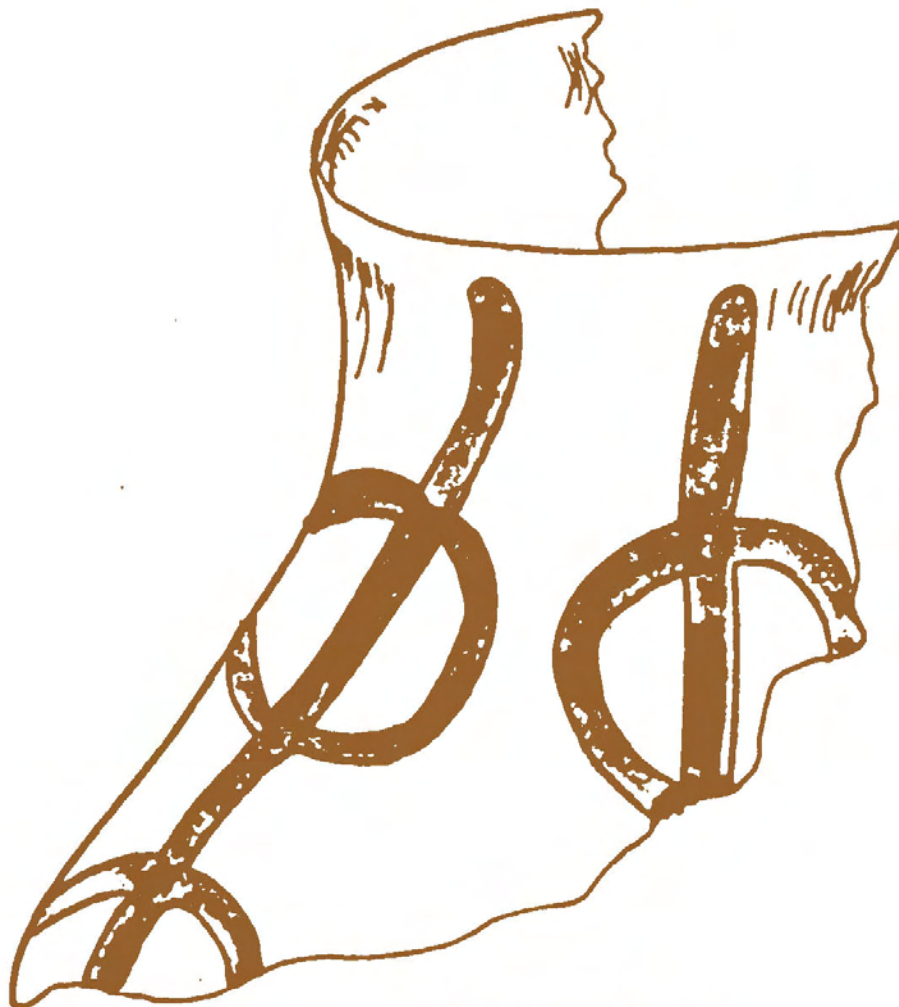
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## A SOUTHERN CALIFORNIA INDIGENOUS CERAMIC TYPOLOGY: A CONTRIBUTION TO MALCOLM J. ROGERS RESEARCH

By Ronald V. May



Salton Red-on-Buff

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The Archaeological Survey Association of Southern California is an organization of amateurs and professionals who have banded together to further archaeological research in Southern California. Its aims are to aid in the preservation of the remains of the prehistoric peoples of Southern California; to study these remains scientifically; to publish information about them; to provide amateur and professional archaeologists with opportunities to meet together and to discuss common problems; to arouse public interest, understanding, and appreciation of archaeological remains. One of the primary functions of the Association is to make available to its members numerous ways of enjoying the pursuit of their interest in a professional manner.

# A SOUTHERN CALIFORNIA INDIGENOUS CERAMIC TYPOLOGY: A CONTRIBUTION TO MALCOLM J. ROGERS RESEARCH

By Ronald V. May

## INTRODUCTION

Archaeologists and historians in California have long been concerned with the time of prehistoric ceramic introduction into the area, origins and mechanisms of transmittal, and its cultural implications. Combining an unpublished typology by the late Malcolm J. Rogers with studies in the Laguna Mountains (May 1975a, 1976a, 1976b, 1977a, 1977b), a typology has been developed to get a handle on this problem. The ceramics from Barrel Springs have been analyzed within this model. The typology extends the types of Lower Colorado River Buff Ware described by Albert Schroeder for east of the Colorado River in 1958 and types of Tizon Brown Ware for upland Arizona described by Robert C. Euler and Henry F. Dobyns in 1958.

### THE PROBLEM

Notes, records, and specimens housed at the San Diego Museum of Man attest to pioneering attempts to attack the problem of classifying samples from different regions by vessel form, construction techniques, and surface treatment. Perhaps in frustration, and more likely desperation, Malcolm J. Rogers published a general overview of this work with a theory of how the ceramic makers entered the Far Southwest (Rogers 1945). However, detailed descriptions of individual types and their meaning were never published, and later archaeologists have inherited his original problem of what to do with collections and what they mean.

### THE THEORY

The meaning of artifact types is relevant only with reference to some particular problem and is not a single, absolute, inherent, and universal characteristic of the artifact class. A more useful approach to the research for behavioral regularities in present and past pottery-making and useage is the development of comparable observational categories or units that can be used by archaeologists alike. Ideally, such categories might be required to be: *identifiable in raw materials* as well as in finished artifacts; independent of temporal, areal, or preservational context; and *capable of precise and objective measurement*. Most of these criteria apply to the component attributes of what is generally referred to as 'paste composition', and thus the 'ware' unit of ceramic analysis could have some potential for bridging the gap between ethnographic and archaeological ceramic studies (Rice 1976:539).

All of Rogers' work (1945) was based upon the premise that *people made ceramics according to traditional customs which were unique to different peoples and their territories*. Rogers noted that as one walked from one region to

another, and as mountains and expansive geographic features parted the regions, the ceramic specimens changed noticeably. This was demonstrated when comparing collections from sites from several regions to one another. This test was repeated by this author in 1972 at the San Diego Museum of Man.

Two primary hypotheses are suggested to account for this phenomenon:

### 1. **Resource Availability**

It is suggested here that geological formations provided unique clays and tempering materials and impurities which vary from one region to another. People desiring to make ceramics were limited to regional sources, and their finished products differed from those of peoples living in other regions *only* due to available resources.

Following this line of reasoning, vessel form differences are said to be merely functional. Form variance might have been limited by the stress capabilities of materials. Hence, some regional materials might be flexible enough for greater style variation than other regional materials.

This does not rule out the possibility for regionally distinct designs being cultural, but the lack of available pigments could explain the presence or lack of decoration from one region to another.

### 2. **Culture Choice and Tradition Development**

It is suggested here that peoples of an unknown culture introduced the technique of ceramic making and that indigenous peoples of previously established territories began local traditions with available resources, but swiftly evoke cultural rules defining precise manufacturing techniques. Such rules could be reinforced by family traditions and social interaction within band units.

Following this second line of reasoning, culture groups maintaining a regional land use pattern throughout a year would naturally *choose* to make ceramics *from clays of their homeland* and would feel most comfortable making ceramics with materials whose properties they understood best. Family rules would be passed from generation to generation, and thresholds of variation would be regulated by social mechanisms. Therefore, clay choice, inclusion purging, addition of temper, surface treatment, rim treatment, and decoration would be traditional.

It is further argued that resource limitations in unknown regions could be overcome by transporting traditional materials over long distances. However, it must be admitted that permanent relocation of family units would have resulted in adaptation to resource limitations. Even in the latter case, however, traditional rules would also adapt to the new regions, resulting in distinct classes of tradition.

Both of these hypotheses can be tested by field archaeology and analysis and rejection of one or both and modifications can be made from the results.

## THE LITERATURE

California undecorated ceramics have been found by almost every archaeologist who has ever worked in this Far Western part of the United States. Harold S. Colton was the first person to attempt to class plain ceramics, and in the 1930's he established the "ware theory" which proposed that geologic formation sources are responsible for two different families or wares of ceramics. *Residual* clays are a by-product of decomposing bedrock in the formation of soils. People can mine residual clays in "seams" adjacent to sheets of more resistant feldspar rock and below sandy soil which is freed from the parent rock. Water erosion upon the soils and clays dissolves the clay and transports it in solution down streams and rivers where it settled in ponds in *sedimentary* layers. People can mine sedimentary clays in old alluvial river deposits. Both geologic sources may be millions of years old. The ceramic makers must have understood this geologic principle to predict and find clay sources.

Residual clay ceramics were first identified as "Tizon Brown Ware" by Lunden Hargrave in 1938. Harold Colton (1939) later described "types" of this ware which appeared to be regionally distinct in northwestern Arizona. This typology was modified and improved upon by Robert C. Euler and Henry F. Dobyns in 1958. In that same year, Albert H. Schroeder added a published description of the sedimentary ware known as "Lower Colorado River Buff Ware." Schroeder had included types which appeared to be regionally distinct in central western Arizona.

None of these people, however, attempted to claim with certainty who the ceramic makers were or from where they came. Malcolm J. Rogers opened a controversy in 1945 when he noted that the distribution of both wares coincided with ethnographically historic territorial boundaries of Yuman-speaking peoples. He theorized that Yuman speakers introduced the pottery and spread it across the Far West by various mechanisms of diffusion. Colton (1945) challenged this theory, stating that it was premature to suggest that "Yumans" made the pottery and that such thinking biased numerous lines of research which could test the implications of regional ceramic types over time. Colton suggested the ceramic makers be named "Patayan", which merely means "the old ones".

Clement Meighan found Tizon Brown Ware ceramics at Molpa on Palomar Mountain (1959, 1974) and described a type as "Palomar Brown" which was regionally distinct from the types previously described for Arizona. Euler (1959) confirmed that material as a type variant of that ware.

The next published type of Tizon Brown Ware involved specimens which appear unique to Mission Santo Tomás in Baja California (1973) which were named "Santo Tomás Brown". Four more types were described from the Mission San Buenaventura in Alta California (May 1976). These include "Gritty Brown", "Black Core Brown", "Slipped Brown", and "Straw Temper Brown". It appears that Tizon Brown Ware was made at mission sites during the historic period to augment general kitchen needs and that these types were restricted to California missions. It seems appropriate that this be defined as the "Mission Series".

The literature is particularly lacking in dates for both wares. Rogers (1945) claimed that peoples from western Mexico introduced the craft to southern Arizona around 800 A.D. He then postulated a westward spread to the Gila and Colorado River areas. West and north the ceramic makers carried their craft. Schroeder noted specimens of the wares associated with Lino Black-on-Gray in a strata dated at 700 A.D. at Willow Beach on the Colorado River (Schroeder 1952:92). None of these wares have ever been found in "evolutionary" form and therefore seem to have been introduced after being developed elsewhere.

On the California side of the Colorado River, Lower Colorado River Buff Ware types were reported associated with a firehearth in a sand dune near Split Mountain and just west of the high shoreline of extinct Lake Cahuilla (Weide 1974). This hearth was radiocarbon dated at  $960 \pm 100$  years A.D. Similarly, a charcoal sample from the earliest ceramic-bearing strata in the Lagunas was dated  $960 \pm 80$  (May 1976). However, it might also be added that no ceramics were found in a layer dated 1300 A.D. at Rattlesnake Rockshelter in the Jamul Mountains near San Diego, California (Paul Chace, personal communication).

It would appear that the craft of ceramic making was introduced by unknown peoples from western Mexico or southern Arizona prior to 700 A.D. and then spread through the Far West after that time. The literature suggests that the Split Mountain sand dune was occupied about the same time the Colorado River overflowed its banks and formed extinct Lake Cahuilla up to the 40 foot contour between 950 A.D. and 1000 A.D. (Weide 1974). Ceramics were also introduced into the Laguna Mountains at least by 990 A.D. (May 1976), but appear not to be found along the coast until after 1300 A.D. Benjamin E. McCown (1955) has suggested that ceramics did not reach Palomar Mountain until after that time as well.

However, let us not overlook the many years of unpublished work of Malcolm J. Rogers on the subject of dating the ceramics. Research of the archives stored at the San Diego Museum of Man between fall of 1971 and fall of 1972 revealed an unpublished manuscript prepared by Rogers which was presented to the American Association for the Advancement of Science at Flagstaff, Arizona, in April of 1936. Rogers stated the following:

As a result of archaeological investigations by the San Diego Museum, I have been able to classify Yuman pottery into three broad time groups, namely Yuman I, II, and III. Without tree-ring dating, it has been impossible to devise a chronology, but through stratigraphical studies and the association of Hohokam and Puebloan potsherds with Yuman cultural material it has been impossible to date roughly the three periods and to determine that some Yuman group was making pottery as early as 900 A.D. in the lower valley of the Colorado River (Rogers 1936:2).

Rogers further suggested that the earliest ceramic makers were "culturally connected with the Hohokam of the Sedentary Period in order to account for that portion of more refined wares associated with the Yuman I assemblage" (Rogers 1936:4). This history has recently been reinforced by the discovery of a

Hohokam-like cremation at Kitchen Creek in the Laguna Mountains of Southern California (May 1974).

Rogers (1936, 1945) suggested that vessel forms and surface treatment of the Yuman I period were very similar to Sedentary Period Hohokam ceramics. Notably present are the "Gila shoulders" and burnishing of surface clays. Furthermore, paddle and anvil construction is shared by both groups. He also pointed out non-Hohokam characteristics such as "basket-molding, hand modeling, rim notching, punctate body designs, neckless ollas, lug handles, and tubular pipes." He claimed that non-conformity and relative crudeness characterized the California assemblage. He further argued that several different groups were represented by different traditions and that some were earlier than others. He noted that two different pastes occur and both are heavily tempered: "One is the beige ware and the other pinkish with a buff surface" (Rogers 1936:4). Since he could not demonstrate stratigraphically a distinction in time between these styles, he lumped them under the name "Colorado Beige I". This Yuman I type spanned from 900 A.D. to 1000 A.D.

Following 1000 A.D. and the formation of Lake Cahuilla, all the Hohokam-like traits were said to have disappeared. Rogers (1936, 1945) postulated that "vanguards" of ceramic makers diffused throughout the Far West in pioneer-like expansions. It is possible that coinciding with the stability of Lake Cahuilla was an environmental wet period of plenty. Rogers noted that numerous distinct types from this period can be found around dry lakes in the Mojave Desert as well as along the shoreline of Lake Cahuilla. It was this period when Tizon Brown Ware diffused to the Cohonino Branch of the Havasupai, where it stratigraphically coincides with San Francisco Gray Ware (Euler 1956:5-7) and is dated between 1100 and 1150 A.D.

Rogers noted that Yuman II types exhibit much coarser temper inclusions of a "quartzose nature" and that surface mottling is most common. Vessel forms include several unique to the period, such as duck-shaped canteens, scoops, seed jars, and bowls with recurved sides. He also gave this interesting account:

A unique type of cooking bowl was devised by plastering the bottom and sides with a rough stucco-like coat of fine gravel mixed with clay and water. The purpose of the treatment was to prevent the bowl from cracking when subjected to intense heat (Rogers 1936:5).

Rogers went on to state that a tremendous drought terminated the Yuman II period which resulted in the drying of Lake Cahuilla, Cronese Lake, and traumatized the Mojave and Colorado Deserts. David Weide (1974) has suggested this began about 1300 A.D. and was complete by 1450 A.D. Lowering of the Colorado River eliminated flow into Lake Cahuilla and it evaporated to a saline puddle, much as the Salton Sea remains today.

Malcolm Rogers suggested that ceramic makers did not go to the Western Peninsular Mountain Range and beyond until Yuman III following 1450 A.D. (1936:5-6, 1945). While the date at Rattlesnake Rockshelter of 1300 A.D. supports this contention for the coast, the findings in the Laguna Mountains at Cottonwood Creek and Kitchen Creek cast doubt upon this. Abundant ceramics in the seven levels above the dated Level VIII of 990 A.D. at Cotton-



wood Creek and the Hohokam-like cremation at Kitchen Creek suggest that late Yuman I and/or Yuman II ceramic makers inhabited the Peninsular Mountains.

This discrepancy in theories can best be understood when one considers that Rogers made no distinction between ware classes. Recall that Euler found Tizon Brown Ware types associated with San Francisco Gray Ware in sites in the mountains of northwestern Arizona around 1100 to 1150 A.D. The only ware present in the lower levels at Cottomwood Creek and Kitchen Creek was Tizon Brown Ware. A quantified analysis of ceramics from the acorn leaching camp at Kitchen Creek (May 1975) revealed types of Lower Colorado River Buff Ware beginning to occur only in the upper levels.

This researcher would advance a new theory that:

a culturally distinct group of ceramic makers which was economically adept at operating seasonal rounds in mountain drainages, and steeped in the tradition of mining residual clays for ceramics, instinctively colonized upland mountain areas at the beginning of Yuman II between 950 and 1100 A.D., while a related culture group of ceramic makers whose economic base was riverine horticulture and seasonal round, colonized desert lakes and drainages surrounding them. This latter group was steeped in the tradition of mining sedimentary clays and living in sand dune sites.

This is supported by the observation that sand dune sites around Clark Dry Lake in the Anza-Borrego Desert contain predominantly Lower Colorado River Buff Ware types, while nearby mountain canyon sites contain a predominance of Tizon Brown Ware types (Jan Townsend, personal communication). This has been further observed at Barrel Springs near Ocotillo Wells (May 1976c) at a typical sand dune in San Felipe Creek just one and a half miles west of the Lake Camuilla shoreline. The predominance of Tizon Brown Ware in upland desert sites has been documented at nineteen villages and camps around Table Mountain near Jacumba in the Peninsular Mountains (May 1976d), which is just eight miles west of the Lake Camuilla shoreline.

Following the above lines of reasoning, it is further suggested that Rogers' Yuman III did in fact occur between 1300 and 1450 A.D. That wave of displaced peoples pushed the craft of ceramic making outward even further. It was then that the ceramic makers joined groups of people along the Pacific coast and northwest to Palomar Mountain and the Santa Ana Mountains. North of the Mojave Desert, the record remains unclear. However, it can be surmised that ceramics will be found following well watered drainages high in the San Bernardino Mountains and the Sierras as well.

## **CULTURAL STRUCTURE**

It might have been noted that this researcher has avoided the controversy as to whom the ceramic makers were or might have been. While Malcolm Rogers called them Yuman, Colton argued quite persuasively that the use of linguistical terms was scientifically unfindable and dangerously biased. Furthermore, it can easily be demonstrated that Uto-Aztecan or Shoshonean speakers were responsible for ceramics in the Santa Rosa Mountains, in the Palomar Mountain area, and much of the Mojave Desert. This researcher

tends to agree with Colton.

In the summer of 1957, a number of archaeologists interested in this problem met at the Pecos Conference and jointly agreed to utilize the term "Hakataya Folk Tradition" in place of Yuman or Patayan (Schroeder 1957:176). A model has been presented by Schroeder which ties both wares together under the folk tradition. Hakataya is said to be the "root" from which the "Patayan Stem" and the "Laquish Stem" originated. Patayan is characterized by Tizon Brown Ware and Laquish is characterized by Lower Colorado River Buff Ware. Regional branches developed probably from repeated seasonal rounds of territorially based traditions. The branches can be characterized by *types* of stem wares which are quantitatively common to regions. It is likely that "series" of types represent regional sub-traditions linked together by a common tradition.

**The Hakataya Folk Tradition Model** can best be illustrated by a demonstration. The region west of the Salton Sea to the top of the Peninsular Mountains covers two distinct environmental zones. These are the mountains and the low desert. Archeological sites can be found at natural springs, along ancient shorelines, and major drainages. Usually this can be found to coincide with sand dunes and populations of mesquite. The Patayan stem encompasses the major drainages and meadows which cross the California Peninsular Mountains and upland northwestern Arizona. In these places, the archaeological sites are close to well drained areas forested in oak with subsidiary resource camps radiating out from villages like "spokes from the hub of a wheel" (May 1975b).

Following this theoretical pattern, branches can be found within the stems. These branches are evidenced by regional ceramic types and regional series of types which seem to be quantitatively dominant. What this means culturally has yet to be determined. Rogers argued that stratigraphic evidence placed series of types in a linear and evolutionary pattern in time. While his only published evidence appears to be a stacked cairn (Rogers 1945), an upward florescence of types was demonstrated at Kitchen Creek (May 1975a). There is not enough evidence to support or refute hypothesis 1 or 2 at this time.

Correspondence with a Schroeder (personal communication) has established that a "Salton Branch" has been suggested for the low desert areas surrounding the Salton Sea and the Lake Cahuilla drainage system. This researcher has assumed that the Salton Branch joins the Colorado Branch in the Laquish Stem. Furthermore, it is suggested that a "Salada Branch" be tentatively considered for the area south of the Salton Branch and that it may extend along the west shore of the Gulf of California as far south as Isla de Los Angeles. Logically, the ceramics found in "Seri land" around Kino Bay, Sonora, Mexico, would seem to be an eastern extension across the Gulf.

The problem of addressing the development of ceramics in the Peninsular Mountains and coastal area has been tentatively solved by naming the area "Peninsular Branch" (May 1975a, b). It does appear that upland Tizon Brown Ware in California is quite different from the types found in the Cohonino and Cerbat branches of the Patayan Stem in northwestern Arizona (Euler and Dobyns 1958).

The Mojave Desert area, however, presents a problem of its own. The area is relatively unknown and the distribution and quantity of types is only demonstrated by Malcolm Rogers' work in the 1920's and 1930's. For this reason, a tentative name of "Mojave Branch" is suggested. This branch may well include brown ceramics found in the Owens Valley, but this has not been determined as yet. It certainly extends south to the northern extremes of the Salton Branch, but again this boundary is relatively unknown. Clearly, the Mojave Branch is poorly understood.

## **THE WARE STRUCTURE**

Given the above, it is further suggested that the cultural structure might have coinciding "ware series". Five series are suggested which appear to include types of Tizon Brown Ware, and two series are suggested to have types of Lower Colorado River Buff Ware. Four of the Tizon Brown Ware Series are prehistoric and the other clearly is mission ceramics made by neophyte ceramists between 1770 and 1850 A.D. The Lower Colorado River Buff Ware Series are prehistoric.

### **Peninsular Series (Peninsular Branch, Patayan Stem)**

This series is found from Palomar Mountain south to the Sierra Juarez in Baja California, in the Peninsular Mountain Range. The first three types are found on the western side of the mountains and do not appear to be regionally distinct. They are characterized by relatively thin walls, chocolate brown paste, common carbon streaks, and subangular to rounded quartz sands, with mica common at Palomar Mountain and Jacumba. The types within this series are:

1. San Diego Brown I
2. San Diego Brown II
3. San Diego Red on Brown
4. Palomar Brown
5. Hakum Brown

### **Laguna Series (Peninsular Branch, Patayan Stem)**

This series is restricted to the Laguna Mountains from Cuyamaca Mountain south to Pine Valley, east to Tecate Mountain, and west to Guatay. These types are very hard and dense with little carbon streak, but fire clouding sometimes penetrates to the core, rounded sands of equal quartz and feldspar, and some traces of mica, shell, and unidentified black specks. The types are:

1. Sentenec Brown
2. Pine Valley Red
3. Pine Valley Gray

### **Gulf Series (Salada Branch, Patayan Stem)**

This series includes brown ware types found at canyon sites surrounding the Lake Cahuilla shoreline, in the Pinyon Mountains, at Split Mountain, in the northern Cocopa Mountains, along the base of the Peninsular Mountains south through the Laguna Salada to at least the San Pedro Martir. The southern extension remains vague at this time. It appears on Isla de Los Angeles and across to Tiburon Island. This area needs considerably more

definition. The types are generally medium walled, although the types in Laguna Salada tend to be very thin and the Seri types have been nicknamed "egg-shell." Carbon streak is common, a fine silvery mica is often present, and feldspar sand inclusions are common, and the surfaces are often gritty. The types are:

1. Coachella Brown
2. San Felipe Brown
3. Salton Brown
4. Seri Brown

**Mojave Series** (Mojave Branch, Patayan Stem)

This series includes brown ware types found by Malcolm Rogers around various lakes in the Mojave Desert. He actually only defined two types from Cronese Lake and another general type which is found throughout the area. They are typically medium to thick walled vessels with medium to coarse crushed sands of feldspar and quartz. Carbon Streaking is common. The types include:

1. Cronese Brown
2. Crucero Brown
3. Panamint Brown

**Mission Series** (no branch or culture, probably Patayan)

This series seems to be restricted to Spanish and Mexican missions and presidios throughout Alta and Baja California. It appears that neophytes from some Southern California mission were employed to make ceramics for domestic uses to supplement dwindling Galera Ware supplies and that local traditions developed at every site. They vary in uniformity, but historic innovations, such as slipping, lug handles, flat bottoms, and spouts, are common. Specimens at Mission San Buenaventura and Mission Santo Tomas have been found with straw or animal dung inclusions. The types include:

1. Santo Tomas Brown
2. Gritty Brown
3. Sandy Brown
4. Straw Temper Brown
5. Slipped Brown
6. San Luis Rey Brown

**Sierra Series**

The Sierra Series is currently represented by only one known type, since it was only recently discovered by Mr. Robert Schiffer of Bakersfield College in his surveys in the southern Sierras. It is quite distinct from other Tizon Brown Ware types by form and surface treatment and is thought to have been made by people whom received the craft via contacts with Paiute people in the eastern deserts. Far more research in the area will be needed before this series can be properly understood.

1. Sierra Brown

**Salton Series** (Salada Branch, Laquish Stem)

This series seems to be found all around the Lake Cahuilla shoreline. Both

Salton Buff and Salton Red on Buff are characterized by medium coarse, angular crushed quartz temper, a rough to slipped-like surface, some crazing when slipping is present, slight burnishing on painted surfaces, and many surface finds being sand blasted to a coarse gritty surface. The types are:

1. Salton Buff
2. Salton Red on Buff
3. Cahuilla Buff
4. Ocotillo Buff

**Carrizo Series** (Salada Branch, Laquish Stem)

This series seems to be found along the western shoreline of Lake Cahuilla and at springs in the Carrizo Gorge. This is a very common variety in the Jacumba area (May 1976d) and is among the most common of the Lower Colorado River Buff Ware types appearing in the earliest strata at Kitchen Creek (May 1975a). It is characterized by fine to almost non-existent angular quartz temper in thin walled sherds with wiped or slightly gritty surface treatment. All types of this series are much finer than the Salton Series and are similar to Tumco Buff (Schroeder 1958), but are finer in temper. They include:

1. Carrizo Buff
2. Carrizo Red on Buff
3. Carrizo Stucco
4. Vallecito Buff
5. Vallecito Red on Buff
6. Soda Buff

It might be added here that Vallecito Buff tends to be slightly sandier and whitish-cream slipping is more common than Carrizo Buff which has a wiped smooth surface which is not gritty to the touch.

**SUMMARY**

In Summary, it might be said that ceramic analysis in Southern California entered its infancy in the 1930's with Malcolm Rogers examining sites all over the Far Southwest. However, he dropped the problem before going into print with a descriptive typology and died before passing on his discoveries. Ceramics found east of the Colorado River have been defined by Euler and Dobyms (1958) and Schroeder (1958), but the study presented here is the first attempt to bring together the work of Rogers and add to it further discoveries. The morphological analysis presented here needs a great deal of refinement and testing from region to region. The basic hypotheses of *regional resources* as opposed to *cultural choice* to explain type clustering in space have yet to be solved. Stratigraphic evidence for dating these types and series has yet to be demonstrated. At best, it can be said that Rogers' Yuman I from 900 to 1000 A.D. may have preceded the filling of Lake Cahuilla and that Yuman II types developed around the Lake *and* in the Peninsular Mountains. Yuman III types are then said to have spread outward following the dessication of Lake Cahuilla between 1300 and 1450 A.D. It is clear that there is a great deal yet to do with ceramics before these questions are answered.

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## **HAKATAYA CERAMIC TYPOLOGY**

### **Tizon Brown Ware**

Peninsular Series (Types 1 to 5)

Laguna Series (Types 1 to 3)

Gulf Series (Types 1 to 4)

Mohave Series (Types 1 to 3)

Mission Series (Types 1 to 6)

Sierra Series (Type 1)

### **Lower Colorado River Buff Ware**

Salton Series (Types 1 to 4)

Carrizo Series (Types 1 to 6)

## THE PENINSULAR SERIES

### **TYPE 1: San Diego Brown I**

**Synonym:** San Diego Brown by Malcolm J. Rogers.

**Described by:** Ronald V. May, 1971.

**Type Specimens:** Anthropological Laboratories, San Diego State University.

**Date:** Unknown.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 10 YR 5-3/1; gray to very dark gray.
  - c. Fired — oxidizing atmosphere, poor control.
  - d. Carbon Streak — frequent.

**Temper:** Crushed white and smoky quartz, opaque feldspar, and subangular sands. Varying amounts of muscovite.

**Texture:** Fine to medium.

**Walls:** 4 mm. to 20 mm. thick, averages 5.5 mm.

- Surface:**
- a. Color — Munsell Color Chart: 10 YR 4-3/1-2; dark gray to very darkish gray.
  - b. Finish — smoothed, but not polished.
  - c. Fire Clouds.

**Forms:** Shallow and medium bowls, a variety of sizes of medium necked jars with flaring lips, and straight necked jars with wide mouths.

**Range:** Coincides with the range of the series.

**Comparison:** This type contrasts with others of the series in that the texture is always medium or finer, the carbon streaks are grayer and thinner, and there is far less muscovite mica. It has finer texture than San Diego Brown II, less mica than Palomar Brown or Hakum Brown, and is coarser in texture and browner than Coachella Brown.

**Remarks:** This type is strikingly similar to Cerbat Brown from the east side of the Colorado River. Euler (1959) advised against adopting the same names for types found on the west side, hence this name. It is the most common type found in the west. It is most abundant in the lowest levels at Cottonwood Creek.

## THE PENINSULAR SERIES

### **TYPE 2: San Diego Brown II**

**Synonym:** San Diego Brown by Malcolm J. Rogers.

**Described by:** Ronald V. May, 1971.

**Type Specimens:** Anthropological Laboratories, San Diego State University.

**Date:** Unknown.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 10 YR 5-3/1; gray to very dark gray.
  - c. Fired — oxidizing atmosphere.
  - d. Carbon Streak — occasional.

**Temper:** Crushed opaque quartz, feldspar, and occasional mica.

**Texture:** Irregularly medium to coarse.

**Walls:** 4 mm. to 15.9 mm. thick, averages 5.9 mm.

- Surface:**
- a. Color — Munsell Color Chart: 10 YR 4-3/1-2; dark gray to very darkish gray.
  - b. Finish — smooth, not polished.
  - c. Fire Clouds — common.

**Forms:** Large storage jars with narrowed necks, three-quarter bowls, and smaller jars with better than a two gallon capacity.

**Range:** Rarely found in non-mountainous areas. Usually in areas which could hide large storage jars.

**Comparison:** This type is very similar to Aquarius Brown on the east side of the Colorado River. It is also very similar to San Diego Brown I, but the carbon streaks are less common and the temper is much larger. It may not have been so important to control the temper size for storage jars.

## THE PENINSULAR SERIES

### **TYPE 3: San Diego Red-on-brown**

**Synonym:** none.

**Described by:** Ronald V. May, 1972.

**Type Specimens:** Anthropological Laboratories, San Diego State University.

**Date:** Unknown, but suspected to be post-contact.

#### **Description:**

**Core:** a. Construction — paddle and anvil.

b. Color — Munsell Color Chart: 10 YR 5-3/1; gray to very dark gray.

c. Fired — oxidizing atmosphere, poor control.

d. Carbon Streak — frequent.

**Temper:** Crushed white and smoky quartz, opaque feldspar, and subangular sands. Varying amounts of muscovite.

**Texture:** Medium.

**Walls:** Average 5.9 mm. thick.

**Surface:** a. Color — Munsell Color Chart: 10 YR 4-3/1-2; dark gray to very darkish gray.

b. Finish — smooth.

c. Fire Clouds — common.

d. Pigment — Red hematite pigment has been added to form a series of "zig-zag" or straight lines in vertical directions on vessel outer walls. No pattern has ever been noted around an entire vessel. Most designs are on the upper vessel shoulder.

**Forms:** Only a few wide mouthed jars and deep bowls are known to have the pigmentation.

**Range:** The type seems to be restricted to the eastern slopes of the Peninsular Mountain Range. It may be a transitional type between San Diego Brown I and decorations on Carrizo Buff, a type of Lower Colorado River Buff Ware.

## THE PENINSULAR SERIES

### **TYPE 4: Palomar Brown**

**Synonym:** Pinon Brown by Malcolm J. Rogers. Mountain Ware by Adan Treganza (1942).

**Described by:** The description is a combination of efforts by Meighan (1959), M. J. Rogers field notes, and Ronald V. May.

**Type Specimens:** Anthropological Laboratories, San Diego State University.

**Date:** Unknown, but Meighan suggests post-1500.

### **Description:**

**Core:** a. Construction — paddle and anvil.

b. Color — The core is usually a dark black or gray. Munsell Color Chart: 10 YR 4-2/1-2; dark gray to black and very dark brown. There is often little oxidation on the outer and inner surfaces. Temper materials highlight the core.

c. Fired — oxidizing, possibly smothered.

d. Carbon Streak — nearly always present.

**Temper:** The material is crushed angular white quartz mixed with an even amount of subangular white sands. There is a high mica content which ranges between 10 percent and 30 percent.

**Texture:** Medium to fine.

**Walls:** 3.5 mm. to 11.2 mm. thick, averages 5 mm.

**Surface:** a. Color — Munsell Color Chart: 10 YR 5-4/1-2; gray to dark gray/grayish brown to darkish brown.

b. Finish — smoothed, with some wiping streaks. Mica often stands out on the surface.

c. Fire Clouds — common.

**Forms:** Deep bowls, out-curved necks on two or more gallon jars, and some storage jars.

**Range:** This type is common all around Mount Palomar and the associated water courses. It has been found in the foothills which strike to the northwest and east as far as San Jacinto Mountain. It is found in less frequency south of the San Dieguito River, but has been found in the Sierra Juarez of Baja California. Only small percentages were found at Cottonwood Creek.

**Comparison:** This type is often associated with both San Diego Brown I and II. Palomar Brown contrasts with its dark core and pronounced yellow mica with white quartz temper.

## THE PENINSULAR SERIES

### **TYPE 5: Hakum Brown**

**Synonym:** Mountain Ware (Treganza 1942).

**Described by:** Sketchy notes by Malcolm J. Rogers named the type as distinct from Palomar Brown. Most of this description is by Ronald V. May.

**Type Specimens:** Anthropological Laboratories, San Diego State University.

**Date:** Unknown, but was still made by Rosa Lopez by 1930.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 10 YR 5/1-3; gray to grayish brown and brown.
  - c. Fired — oxidizing.
  - d. Carbon Streak — light gray to none.

**Temper:** Subangular to rounded white quartz and feldspar sands and large amounts of muscovite mica. Some black biotite mica is also present in traces.

**Texture:** Medium.

**Walls:** 4 mm. to 18.5 mm. thick; averages 6 mm.

- Surface:**
- a. Color — Munsell Color Chart: 10 YR 5-4/1-3; gray to dark gray.
  - b. Finish — smoothed, but often rough from sand blasting. Shiny mica occasionally shines through.
  - c. Fire Clouds — uncommon.

**Forms:** Shallow trays, bowls, effigy trays, narrow necked jars, some large storage jars.

**Range:** This type centers around the Jacumba Mountains and the In-Ko-Pah Mountains, but can be found in the eastern Sierra Juarez Mountains of Baja California and the foothills west of Laguna Salada.

**Comparison:** Hakum Brown is similar in many respects to Palomar Brown temper, but the light brown clay and vessel forms are more similar to Lower Colorado River Buff Ware. However, the clay is undoubtedly residual in origin. The type is lighter than Palomar Brown, has more mica than San Diego Brown I and II, seems to lack pigmentation, and is softer than Coachella Brown.

**Remarks:** This type is found in the high desert country and may have been made by desert Kamia clans who married into mountain Kumeyaay clans, which would have resulted in a merger of clan traditions. Sherds have been found as far west as the Pacific Ocean coast, but are unusual if not rare.

## THE LAGUNA SERIES

### **TYPE 1: Sentenac Brown**

**Synonym:** Stewart Springs Ware (Townsend 1960).

**Described by:** Malcolm J. Rogers, Ronald V. May, 1971.

**Type Specimens:** San Diego Museum of Man; Drawer 425:SL-65W.

**Date:** Unknown.

### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5YR 6/4-1 and 4/2; light gray to pinkish gray and dark reddish gray.
  - c. Fired — uncontrolled.
  - d. Carbon Streak — common.

**Temper:** Fine sand, mostly hornblende, crushed tourmaline and biotite. Red ochre, clay globs, and bits of shell are occasionally present.

**Texture:** Medium.

**Walls:** 3 mm. to 6 mm. thick, averages 5 mm.

- Surface:**
- a. Color — Munsell Color Chart: 10 YR 7-5/2; light brownish gray to light gray.
  - b. Finish — Smooth, with sandy grit.
  - c. Fire Clouds — occasional.

**Forms:** Shallow bowls, scoops, small storage jars.

**Range:** This type is found along the eastern slopes of the Laguna Mountains as far east as the San Felipe Valley Drainage. It apparently is found in all the low mountain-high desert sites on the east slopes of the range.

**Comparisons:** The crushed shell and dark sands make it very similar to Salton Brown, but this type is more sandy and is darker colored. Further study may reveal that they are one and the same.

**Remarks:** See above.



## THE LAGUNA SERIES

### **TYPE 2: Pine Valley Red**

**Synonym:** Mountain Ware (Treganza 1942).

**Described by:** Ronald V. May, 1971.

**Type Specimens:** San Diego State University, Department of Anthropology, Archaeology Laboratory.

**Date:** Unknown.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 4-5/6-8; yellowish-red.
  - c. Fired — uncontrolled, but apparently more control than is usual.
  - d. Carbon Streak — rare.

**Temper:** Fine to medium quartz and white feldspar sands, traces of dark sands, some muscovite mica, and an occasional glob of hematite.

**Texture:** Medium.

**Walls:** Averages 4.5 mm. thick.

- Surface:**
- a. Color — Munsell Color Chart: 5 YR 4/2-6; dark reddish gray to reddish brown to yellowish red brown.
  - b. Finish — gritty to somewhat smoothed.
  - c. Fire Clouds — unusual.

**Forms:** Wide mouthed jars, storage vessels, tubular pipes, and effigies have been noted thus far.

**Range:** This type is very common in the Laguna Mountains, especially within five miles of Pine Valley. It is unusual in the Mount Palomar and Mount San Jacinto regions to the north, but is common in the Sierra Juarez.

**Remarks:** This type probably is made of a clay which is exceedingly high in iron. It may have been fired under a rock cairn or some such feature which could have added the control necessary to produce the even oxidation throughout the pieces. Many pipes and effigies belong to this type.

## THE LAGUNA SERIES

### TYPE 3: Pine Valley Gray

**Synonym:** Mountain Ware (Treganza 1942).

**Described by:** Ronald V. May, 1971.

**Type Specimens:** San Diego State University, Department of Anthropology, Anthropological Laboratory.

**Date:** Post-1000 A.D.

#### Description:

**Core:** a. Construction — paddle and anvil.

b. Color — Munsell Color Chart: 10 YR 6/1-3 and 5/2-3; light gray to grayish brown and pale brown.

c. Fired — somewhat controlled.

d. Carbon Streak — very faint light gray.

**Temper:** Fine angular quartz and feldspar sands with occasional traces of mica and dark sand specks. The latter may prove to be crushed tourmaline, but this has not yet been proven.

**Texture:** Medium.

**Walls:** 3 mm. to 5 mm. thick, averages 4 mm.

**Surface:** a. Color — Munsell Color Chart: 10 YR 6-5/1; light gray to gray.

b. Finish — smoothed, with some wipe marks.

c. Fire Clouds — unusual.

**Forms:** Large and small wide necked jars.

**Range:** This type is found particularly wherever there are boulder strewn mountains in the Laguna Range and the northern part of the Sierra Juarez. It is not common along the coast, in the desert, north of the town of Julian, nor south of La Huerta, Baja California, Mexico.

**Comparison:** This type is consistently more gray than other Tizon Brown Ware types. It contrasts with all other types.

**Remarks:** This type may represent particular care in firing better storage jars. There is no evidence that it was a common utilitarian item, nor is it common where storage is unlikely.

In a 1928 conversation with Kumeyaay potters at the Manzanita Reservation, Malcolm Rogers reported in his notes that both Owas Hilmowa and Rosa Lopez said, "Gray firing pottern is low in mica and found on the east side of Manzanita Creek" (Range 6E, Township 16S, Section 25). Such clay contained biotite and pegmatite. Owas Hilmowa further stated that, "Pottery was made in the summer when the ground and fuel was most dry." Regarding the theoretical question as to whether any local clay or special traditional clays were used, Hilmowa added that, "Certain clay beds were renounced and women went long distances to procure them, adding yerba santa or cactus (*Opuntia*) to the clay for souring" (M. J. Rogers' lab notes, San Diego Museum of Man).

## THE GULF SERIES

### **TYPE 1: Coachella Brown**

**Synonym:** None.

**Described by:** Malcolm J. Rogers isolated the type at the San Diego Museum of Man and named it, but no description was to be found. Ronald V. May described his specimens in 1971.

**Type Specimens:** San Diego Museum of Man; Drawer 428-SL:67.

**Date:** Unknown.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 5/3 and 10 YR 6/1-2; reddish-brown and light gray to grayish brown.
  - c. Fired — oxidizing atmosphere.
  - d. Carbon Streak — common.

**Temper:** Fine to medium fine subangular quartz, feldspar, and traces of muscovite mica.

**Texture:** Fine to medium fine.

**Walls:** 2 mm. to 6 mm., averages 4.5 mm.

- Surface:**
- a. Color — Munsell Color Chart: 7.5 YR 5-3/0; gray to very dark gray.
  - b. Finish — smooth, but not polished.
  - c. Fire Clouds — unusual.

**Forms:** Shallow trays and bowls, some wide necked jars, tab handle scoops, and some tall storage jars without curved rims.

**Range:** This type is found all through the Coachella Valley. It is common at the north end of the Salton Sea and on the east slopes of Mount San Jacinto.

**Remarks:** This type undoubtedly was made by prehistoric Cahuilla and Serrano cultures. It may well have been traded to the Luiseno, but is almost nonexistent in the Peninsular Mountain Range.

**Comparisons:** This type differs from San Diego Brown I and II in the finer temper materials, the more pronounced carbon streak, and the pinker surface color. The temper has a fine "sugar" appearance. It has far less mica than either Hakum Brown or Palomar Brown. Like Hakum Brown, it may have been made by desert dwellers who preferred residual clays, perhaps as a matter of tradition.

## THE GULF SERIES

### **TYPE 2: San Felipe Brown**

**Synonym:** None.

**Described by:** Malcolm J. Rogers (notes, 1945).

**Type Specimens:** San Diego Museum of Man; Drawer SL 64-W.

**Date:** Unknown.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 7.5 YR 2/0; black.
  - c. Fired — uncontrolled, heavy oxidation on the outer and inner surfaces.
  - d. Carbon Streak — almost always.

**Temper:** As much as 30 percent is finely ground muscovite mica which is silvery in appearance. Fine to medium fine white and pearly translucent feldspars comprise most of the remainder of the temper. A few angular sands can also be found. All temper stands out against the core.

**Texture:** Medium to fine.

**Walls:** Averages 5 mm. thick.

- Surface:**
- a. Color — Munsell Color Chart: 7.5 YR 5-6/2; pinkish gray to brown.
  - b. Finish — well smoothed, but not polished.
  - c. Fire Clouds — rare.

**Forms:** Cantenns, rounded one-quart size jars with narrow necks, small necked jars, bowls with re-curved necks, scoops, small jars, cooking pots. Handles, pouring spouts, and ring bases are probably historic innovations.

**Range:** The focal point is the eastern base of the San Pedro Martir Mountains in Baja California, Mexico. It is also concentrated between San Matias Pass and Mount Matomi, which are south of San Pedro Martir. It is common along the shores of the Gulf of California.

**Comparisons:** This type contrasts with Palomar Brown and Hakum Brown in that the muscovite is more silvery and crushed much finer. Palomar Brown has more quartz, less mica, and darker surface color. Hakum Brown has a lighter core and rarely is carbon streaked. San Felipe Brown is more red and orange on the surface. Coachella Brown lacks the mica.

**Remarks:** This type has been found associated with Hakum Brown around the Jacumba Pass region, but is in small quantity. It probably was made by the Cocopa Indians. Trade and other contacts between the Gulf Coast peoples and the Pacific Coast people is indicated. Similarity in forms suggest very close relationships.

## THE GULF SERIES

### **TYPE 3: Salton Brown**

**Synonym:** Desert Ware (Townsend 1960).

**Described by:** Malcolm J. Rogers, Ronald V. May, 1971.

**Type Specimens:** San Diego Museum of Man; Drawer 416:SL 51-AC.

**Date:** Unknown.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 10 YR 6-3/1; gray to very dark gray.
  - c. Fired — uncontrolled, oxidizing atmosphere.
  - d. Carbon Streak — occasional.

**Temper:** Fine to medium rounded and angular white quartz mixed with the presence of dark black and brown sands. The latter materials are crushed specks of hornblende, biotite, and tourmaline crystals. A hand lens reveals fine specks of hematite, red feldspars, and traces of shell and muscovite mica. The latter usually consist of one showing per sherd.

**Texture:** Medium.

**Walls:** Averages 5 mm. thick.

- Surface:**
- a. Color — Munsell Color Chart: 10 YR 3-2/1, 6/1, 5/3; very darkish gray to black and brown.
  - b. Finish — smooth, but somewhat gritty.
  - c. Fire Clouds — occasional.

**Forms:** Straight sided bowls, scoops, trays, small jars and bowls, and small disks with holes in them. Rogers (San Diego Museum of Man notes) asserts that the disks served as buttons on rabbit fur robes.

**Range:** It is found mostly on the western and upper terraces of the Salton Sea shoreline. It is common in both the low and high desert country.

**Comparisons:** This type lacks the mica quantities found in San Felipe Brown and Hakum Brown. It contains traces of shell, which can be found on the old shoreline of the Salton Sea. The forms are more similar to the types in the Peninsular or Laguna Series than the other types of this series.

**Remarks:** This type was probably made in historic times by Kamia clans, but may also have been a minor Kumeyaay tradition. The temper materials are unusual when compared to other associated types. The tourmaline is also of interest. Tourmaline in the crystal form was a "taboo" mineral for general handling (Dubois 1908) among the Luiseno. There is some evidence, however, that it was quarried from pegmatite dikes by the Kumeyaay (Long and May 1970). It is possible that traditional sanctions may have been the mechanism which allowed for the addition of crushed tourmaline to the clay.

## THE GULF SERIES

### **TYPE 4: Seri Brown**

#### **Sub-type A: Tiburon Plain**

**Synonym:** None.

**Described by:** Thomas Bowen, 1969.

**Type Specimens:** Moser Collection, University of Sonora Museum.

**Date:** 1000 A.D. to 1700 A.D.

#### **Description:**

**Core:** a. Construction — paddle and anvil.

b. Color — Munsell Color Chart: 10 YR 6-5/1; gray.

c. Fired — oxidizing.

d. Carbon Streak — common.

**Temper:** Very fine white angular and subangular quartz and fine silvery mica flecks.

**Texture:** Fine to medium.

**Walls:** 2 mm. to 6 mm. thick, average 3 mm.

**Surface:** a. Color — Munsell Color Chart: 5 YR 2/1, black; 5-4/1, gray-dark gray; 5-4/3, reddish brown; 5/4-6, reddish to yellowish brown.

b. Finish — Narrow and wide striations overlap at right angles and obliquely. Grass bundles and several varieties of shell formed the striations. Most outer surfaces, and some insides as well, have been stone burnished. There are an even rarer number which have not been burnished.

c. Fire Clouds — common.

**Forms:** Disc-like bowls to deep hemispherical bowls, narrow necked jars, storage jars. The necks are not as tall as is found on other types. The bases are generally rounded and pointed.

**Range:** The Tiburon Plain can be found along the Sonora coast from Desemboque south to Guaymas. It is also found on the islands of Tiburon and San Esteban.

**Comparisons:** It is very similar to Lower Colorado River Buff Ware, but was made from a residual clay. It is thinner than any other type of the Tizon Brown Ware. It may represent an early transition between the two wares.

**Remarks:** This is the famous "egg shell pottery" which is attributed to the prehistoric Seri Indians. It is the southernmost existence of Hakataya pottery. Its actual relationship with other Gulf Series types is unknown at this time and may represent another series entirely.

## THE GULF SERIES

### TYPE 4: Seri Brown

#### Sub-type B: Historic Seri

**Synonym:** None.

**Described by:** Thomas Bowen, 1969.

**Type Specimens:** Moser Collection, University of Sonora Museum.

**Date:** 1700 to 1920 A.D.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 10 YR 6-5/1, gray; 7.5 YR 7-6/3, light reddish brown; and 5/2, grayish brown.
  - c. Fired — oxidizing.
  - d. Carbon Streak — common.

**Temper:** The core of each sherd exhibits numerous cavities which once housed pieces of organic temper prior to firing. This material may have been animal dung (McGee 1989:183), as well as prepared plant material. Coarse sand particles permeate the paste. Traces of muscovite mica and shell are occasionally found.

**Texture:** Medium to coarse.

**Walls:** 5 mm. to 13 mm. thick, averages 7 mm.

- Surface:**
- a. Color — usually gray, but also tan to red (unavailable for Munsell study).
  - b. Finish — Burnished by smooth stone, the finish is pitted and cracked from the combustion of the organic temper. The burnishing is usually difficult or impossible to see due to the cracking.
  - c. Fire Clouds — common.

**Forms:** Wide mouthed bowls are the most common form. Pointed bases are more common than rounded varieties. Storage jars, miniature vessels, shallow plates, and trays are also found.

**Range:** This type is restricted to Tiburon Island and the mainland between Desemboque and Bahia Kino. It has also been found on the western shores of the Gulf of California, but in limited quantities.

**Comparisons:** This type is similar to Santo Tomas Brown and forms of Papago pottery from the Tucson Presidio. All three forms of ceramics were tempered with organic material. No other ceramics share this trait. It is impossible that dung temper was an historic innovation and may have been encouraged by Spanish and Mexican colonials.

**Remarks:** This is the famous "egg shell pottery" which is attributed to the prehistoric Seri Indians. It is the southernmost existence of Hakataya pottery. Its actual relationship with other Gulf Series types is unknown at this time and may represent another series entirely.

## THE GULF SERIES

### **TYPE 4: Seri Brown**

#### **Sub-type C: Modern Seri**

**Synonym:** None.

**Described by:** Thomas Bowen, 1969.

**Type Specimens:** Moser Collection, University of Sonora.

**Date:** 1920 to present.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — black (unavailable for Munsell Study).
  - c. Fired — oxidizing.
  - d. Carbon Streak — always.

**Temper:** "Fine sandy clay mixed with about 3:1 rabbit dung" (Bowen 1969:222).

**Texture:** Medium to coarse.

**Walls:** Range is unknown, but averages 5 mm. and is much thicker than Sub-type B (Historic Seri).

- Surface:**
- a. Color — dark gray, reddish, or brown (unavailable for Munsell Study).
  - b. Finish — stone polished, but is less cracked and pitted than Sub-type B.
  - c. Fire Clouds — common.

**Forms:** Tall storage jars, cooking pots, pot lids, shallow dishes, and tar pots are most common. These vessels are made more for tourist trade than utilitarian use.

**Range:** Same as Sub-type B: Desemboque to Bahia Kino and Tiburon Island. It probably is not carried across the Gulf of California.

**Comparison:** This type is very similar to Historic Seri, but is thicker and has less cracking and pitting. It is made solely as a trade item.

**Remarks:** Although Bowen mentions this ceramic as a tourist item, very few museums have examples of this craft. It is clearly the last of a dying tradition and specimens should be preserved in several American museums. It is recommended that future researchers collect specimens for curatorial preservation and later study. The relationship between this type and other historical dung tempered ceramics of the American Southwest should be further studied.



## THE MOHAVE SERIES

### **TYPE 1: Cronese Brown**

**Synonym:** None

**Described by:** Malcolm J. Rogers.

**Type Specimens:** San Diego Museum of Man; Drawer SL:45-M.

**Date:** Yuman II.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 10 YR 5-6/4; yellowish brown.
  - c. Fired — oxidizing.
  - d. Carbon Streak — occasional.

**Temper:** Crushed feldspar, mostly white translucent but some pink, and a trace of bluish black and green spars. A great deal of biotite and some hornblende, with traces of specular magnetite.

**Texture:** Coarse to medium; occasional particles up to 6 mm. are to be found.

**Walls:** Averages 5 mm.

- Surface:**
- a. Color — Munsell Color Chart: 10 YR 6/1-4; light gray to light brownish gray and light reddish brown.
  - b. Finish — smoother, but some grit and float.
  - c. Fire Clouds — uncommon, some are light gray.

**Forms:** Deep bowls, 3/4 jars, jars with re-curved rims, seed jars, small trays, and miniature jars. Handleless scoops with tab ends are also found.

**Range:** The focal point for this type is bounded by the north end of the San Bernardino Mountains and south of the Mohave River. It is common in the Mohave Sink.

**Comparisons:** This type is distinct from the other series' types in the colored spars and relative coarseness of temper. It is coarser than Crucero Brown, but finer than Panamint Brown.

**Remarks:** Rogers felt this type was earlier than Crucero Brown. It may have been in use when there was more water in the Mohave Sink, for it is far more widespread. More studies are needed.

## THE MOHAVE SERIES

### TYPE 2: Crucero Brown

**Synonym:** None.

**Described by:** Malcolm J. Rogers.

**Type Specimens:** San Diego Museum of Man; Drawer SL:46-M.

**Date:** Malcolm J. Rogers claims 1100 A.D. to 1450 A.D. and that it post-dates the use of Cronese Brown.

### Description:

- Core:**
- Construction — paddle and anvil.
  - Color — Munsell Color Chart: 7.5 YR 5/2-4; brown.
  - Fired — oxidizing.
  - Carbon Streak — unusual.

**Temper:** Almost entirely greenish and rusty and colored spars and far less mica than is found in Cronese Brown.

**Texture:** Fine.

**Walls:** Averages 5.5 mm.

- Surface:**
- Color — Munsell Color Chart: 10 YR 5-3/3; pale brown to dark brown.
  - Finish — smooth.
  - Fire Clouds — uncommon.

**Forms:** Deep bowls.  $\frac{3}{4}$  jars, saucers, and scoops are very common. Very small narrow necked jars are found upon occasion, but large storage jars are exceedingly rare. Scoops have elongated handles which are more pronounced than is found on Cronese Brown. Some jars have crude "Gila Shoulders."

**Range:** This type is centered around the southern end of the Mohave Sink. It is far more restricted than Cronese Brown and much rarer.

**Comparisons:** This type has finer temper and paste than any other type in the Mohave Desert. It has better made vessels. Panamint Brown is thicker and coarser.

**Remarks:** This description is almost entirely the work of M. J. Rogers. This author has seen only a few specimens from the field. Almost all whole pieces have been removed by archaeologists and pothunters. However, the similarities in form to types of Lower Colorado River Buff Ware and Hohokam ceramics on the eastern side of the Colorado River suggest trade contacts between southern Arizona and the Mohave Desert. Russell Croasdale of the Antelope Valley Archaeological Society has shown this author numerous sherds of Hopi and Anasazi and possibly some Hohokam ceramics from the Mohave Desert which support this contention. Efforts are needed to radiocarbon date the presence of such associations.

## THE MOHAVE SERIES

### TYPE 3: Panamint Brown

**Synonym:** None.

**Described by:** Named and briefly described by Malcolm J. Rogers; it has been further described by Ronald V. May in 1972.

**Date:** M. J. Rogers claims 1200 A.D. to 1700 A.D.

**Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 3/1; very dark gray.
  - c. Fired — oxidizing.
  - d. Carbon Streak — uncommon.

**Temper:** Angular white, pink, dark pink feldspars and some granite chunks. A few large ones are subangular.

**Texture:** Coarse; more coarse than San Diego Brown II.

**Walls:** 5 mm. to 19 mm. thick, averages 8 mm.

- Surface:**
- a. Color — Munsell Color Chart: 5 YR 5/1-3; gray to reddish gray.
  - b. Finish — very gritty. Some pieces have been wiped with a dark brown slip. Occasional false corrugations and finger indentations appear. Most surface sherds are heavily sandblasted.
  - c. Fire Clouds — unusual.

**Forms:** Straight sided trays, straight sided bowls, some outcurved rims on bowls, no rounded jars.

**Range:** The northern portion of the Mohave Desert, including the Panamint area, Death Valley, and along the southern toe of the Sierra Nevada.

**Comparisons:** This type differs both in form and makeup from Cronese and Crucero Brown. It is far coarser in temper and texture and lacks the narrow necked jars, round bottomed vessels, and scoops. It is similar to "Owens Valley Brown Ware" (Riddell 1951) and should be compared to see if they are not the same.

**Remarks:** Rogers had no remarks. However, the type is strikingly foreign to the general trend of Tizon Brown Ware. The texture is grossly coarse and the vessel forms do not suggest any known traditions. It is possible that the makers copied historic implements, but this is pure speculation.

## THE MISSION SERIES

**TYPE 1: Santo Tomas Brown** (May 1973: 59-60)

**TYPE 2: Gritty Brown** (May 1976a: )

**TYPE 3: Sandy Brown** (May 1976a: )

**TYPE 4: Straw Temper Brown** (May 1976a: )

**TYPE 5: Slipped Brown** (May 1976a: )

## THE MISSION SERIES

### **TYPE 6: San Luis Rey Brown**

**Synonym:** Mission Brown

**Described by:** Ronald V. May, February 4, 1978

**Type Specimens:** Los Angeles County Museum of Natural History, Archaeology Section, SDi-5422.

**Date:** Circa 1790 to 1810 based upon an association with San Elizario Polychrome Green, a form of Mexican Majolica (May, Ronald V., 1972, A Preliminary Report of Mexican Majolica From The San Diego Presidio. (In) M. R. Barnes and R. V. May, *Mexican Majolica of Northern New Spain*. Pacific Coast Archaeological Society Occasional Paper Number 2. Costa Mesa, California.) and Puebla Blue-on-White.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 2.5 YR; 6/0 gray to 2/0 black to 3/2 dusky red to 5 - 4/8 red.
  - c. Fired — uncontrolled atmosphere.
  - d. Carbon Streak — 90 percent of the sherds gray to black.

**Temper:** Natural subangular quartz and feldspar inclusions.

**Texture:** Fine to medium.

**Walls:** 5 to 10 mm., average 8 mm.

- Surface:**
- a. Color — Munsell Color Chart: 5 YR 5 / 3-4 reddish-brown with some 2/1 black, which is cooked in with grease and sort of polished.
  - b. Finish — gritty smooth, fire black is polished.
  - c. Fire Clouds — occasional.

**Forms:** Large heavy bowls with flared and straight rims.

**Range:** Only known from SDi-5422, across the Mission San Luis Rey.

**Comparison:** Similar to other Mission Series types, but is slightly thinner, lacks dung/straw temper and dark carbon streak, and more commonly has brown to red core.

**Remarks:** I suspect this type was made by Luiseno Indians in response to directions from the Spanish at Mission San Luis Rey. Thicker and cruder types lacking older traditions are always found around Spanish and Mexican missions. It probably developed from Luiseno peoples who knew pottery making under the rules which produced San Diego Brown I. There is no evidence that San Luis Rey Brown is linked to the traditions of Palomar Brown.

## THE SIERRA SERIES

### TYPE 1: Sierra Brown

**Synonym:** Possibly "Owens Valley Brown" as described by Harry S. Riddell in 1951.

**Described by:** Ronald V. May, 1978

**Type Specimens:** Bakersfield College, Department of Anthropology, Site #RJ-1.

**Date:** Unknown.

#### Description:

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 4/2 dark reddish gray, 5/2 reddish gray, 4 - 2/1 dark gray to black.
  - c. Fired — oxidizing atmosphere.
  - d. Fire Clouds — rare to absent.

**Temper:** Crushed clear to opaque angular quartz, opaque to yellow sub-angular feldspar. Some sherds exhibit no temper at all.

**Texture:** Fine to medium with an occasional coarse sand.

**Walls:** 3 mm. to 6 mm., averages 3.5 mm.

- Surface:**
- a. Color — Munsell Color Chart: same as core.
  - b. Finish — treatment is *unique* to this type. Paddle or impressions of small bundles of grasses in the exterior and sometimes interior surface. This is most evident up nearer the rim of the vessel. Stone burnishing polishes the surface but does not attempt to obliterate the impressions. Grass and sand impressions in the base as though it were made on the ground, apparently *not* on a basket or old pot; most unusual for any Tizon Brown Ware type.

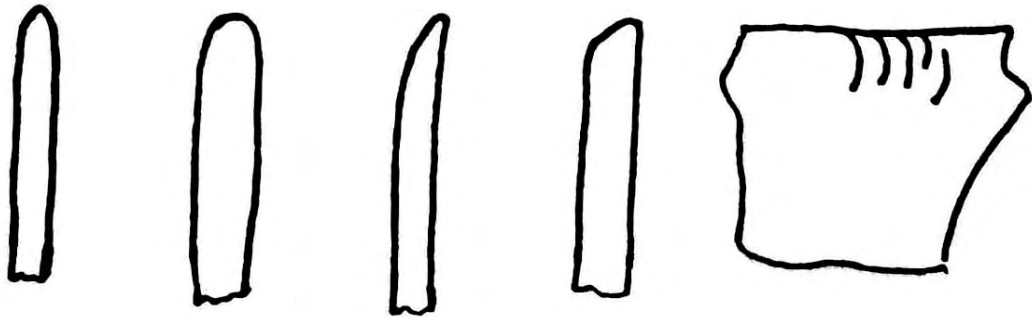
**Forms:** Shallow and steep-sided bowls. Rims are always straight sided with rounded tips. *Base is flat.*

**Range:** Southern Sierras. This needs a great deal more research, as this author has only examined a small collection.

**Comparisons:** This type is similar to both Cronese Brown and Crucero Brown, but nonetheless quite distinct. It seems possible that the makers of the Paiute types might have transmitted the craft north to the Sierras, as the surface impression treatment is strikingly similar to that found on some Cronese Brown specimens seen by this author. The rims/lip structure is also similar in this respect. The burnishing, however, is unknown for anywhere in the northern part of the ceramic range. Burnishing *is* found on Seri pottery (Gulf Series) but this author does not believe there is any connection. Therefore, it would appear that burnishing of this pottery type is an independent invention. The temper material is similar to the Crucero Brown.

**Remarks:** This type of pottery is so far out of the usual range of Tizon Brown Ware types that this author almost hesitates to label it under the same ware.

Nonetheless, it shares all the same characteristics of Tizon Brown Ware, and must therefore be assigned to this family. It is recalled that Riddell noted the form similarities of Owens Valley Brown to historic trade pots. Perhaps both of these types (if this one is indeed distinct from Owens Valley Brown) were historical developments in which the craft diffused up Indian Wells Valley to both Owens Valley and through major drainages in the Sierra Nevada Range. It would be a major contribution if any site could answer these problems pertaining to the process of diffusion, source of influence, and time of introduction.



## THE SALTON SERIES

### **TYPE 1: Salton Buff**

**Synonym:** None.

**Described by:** Ronald V. May, 1977, and assorted notes of Malcolm J. Rogers, housed in the San Diego Museum of Man.

**Type Specimens:** Museum of Man, Laboratory 5.

**Date:** M. J. Rogers suggested 1150 to 1350 A.D.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 7/6, reddish yellow; 7.5 YR 6-7/2, pinkish gray.
  - c. Fired — oxidizing atmosphere, excellent control.
  - d. Carbon Streak — none.

**Temper:** Coarse subangular to freshly crushed angular white quartz sand. Some appears to have been deliberately crushed and sorted to the same size as the subangular sand pieces.

**Texture:** Rough angular chunks of paste break very unevenly.

**Walls:** 4 to 5.5 mm., averages 5 mm.

- Surface:**
- a. Color — Munsell Color Chart: 7.5 YR 7-6/2, pinkish gray; 10 YR 6/2, light brownish gray.
  - b. Finish — slipped and wiped smooth, but not as burnished as pipes or Colorado Beige (Schroeder 1958); some crazing present.
  - c. Fire Clouds — present but covered by the slip. The clouding can be seen in the outer portion of the core exposed by breakage.

**Forms:** Unknown.

**Range:** A map in Malcolm J. Rogers' notes sketches the range all around the Lake Cahuilla basin with an extension across the Chocolate Mountains to the east towards Blythe along the Colorado River. It does not extend south in the Tumco region. It does touch the Cocopa Mountains down in Baja California, but does not extend down to the Gulf of California.

**Remarks:** This type is most similar to Schroeder's Colorado Beige, but when seen together the burnish-like smoothing on this type is far less shiny or complete than on Colorado Beige. Furthermore, the paste is more chunky and the temper is more sparse and coarse on the Salton Buff. The interior surface of Colorado Beige has a more sandy feeling, while the Salton Buff tends to almost hold a shine.

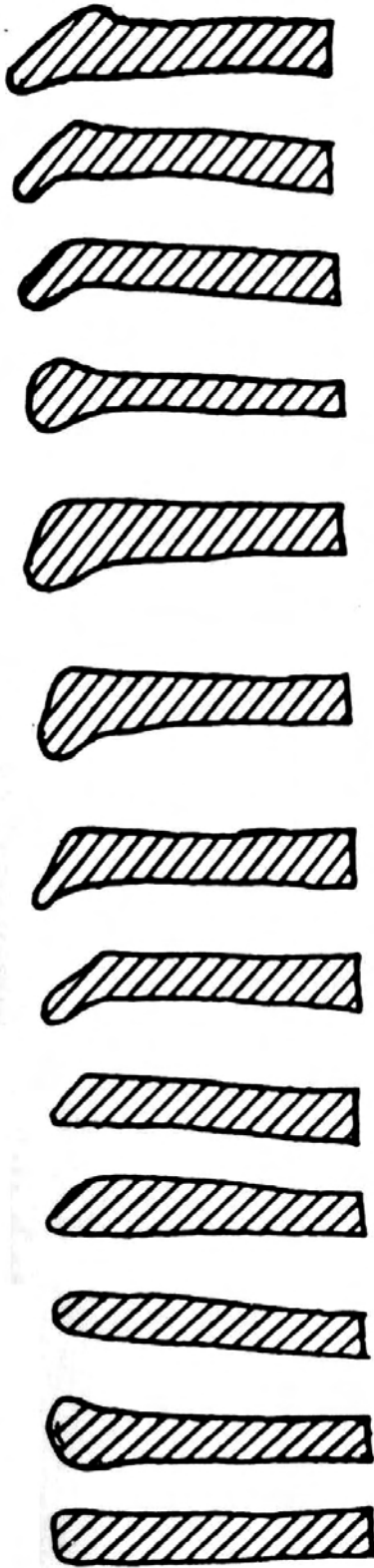


Figure 1  
Salton Buff Rim Sherd Profiles

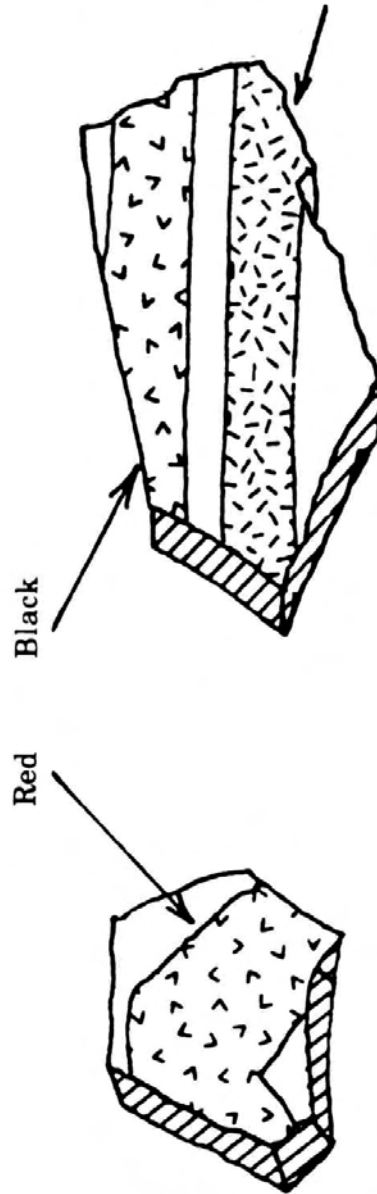


Figure 2  
Salton Red-on-Buff



## THE SALTON SERIES

### **TYPE 2: Salton Red-on-Buff (R/Bf)**

**Synonym:** None.

**Described by:** Ronald V. May, 1977.

**Type Specimens:** San Diego Museum of Man, Laboratory 5.

**Date:** M. J. Rogers suggested 1150 to 1350 A.D.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 7/6, reddish yellow; 7.5 YR 6-7/2, pinkish gray.
  - c. Fired — oxidizing atmosphere, excellent control.
  - d. Carbon Streak — none.

**Temper:** Coarse subangular to freshly crushed angular white quartz sand. Some appears to have been deliberately crushed and sorted to the same size as the subangular sand pieces.

**Texture:** Rough angular chunks of paste break very unevenly.

**Walls:** 4 to 5.5 mm., average 5 mm.

**Surface:** The difference between this type and Type 1 (Salton Buff) lies in the addition of red bands of pigmented painting. The Munsell Color Chart matches the colors at 2.5 YR 5/4 to 4/4, reddish brown. These bands range from 6 mm. to one full centimeter wide. The bands are curvilinear geometric, but no full designs have been seen in the sherd specimens studied. Malcolm J. Rogers did some pictures of reconstructed ceramics with decorations, which are in the museum files, and perhaps someone might some day publish them in an attempt to correlate the pictures with this type.

**Forms:** Unknown.

**Range:** Malcolm J. Rogers sketched the range all around the Lake Cahuilla basin with an extension across the Chocolate Mountains to the east towards Blythe along the Colorado River. It does not extend south in the Tumco region. It does touch the Cocopa Mountains in Baja California, but does not extend down to the Gulf of California. This range, the same as Type 1, could prove to change once there is a better understanding of type frequency locations.

**Remarks:** While the pigmented bands are similar in curvilinear orientation and wideness to Vallecitos Red-on-Buff, the color is much darker and apparently applied thicker. The thin delicate and straight angular designs of Carrizo Red-on-Buff contrast sharply with the wider and curvier bands of Salton Red-on-Buff. While Carrizo Red-on-Buff has a thicker application, much like Salton Buff, it tends to be redder in color.

There are sketches and specimens in the San Diego Museum of Man, Laboratory 5, which illustrate and depict full designs of this type. In a future paper, this information should become available.

## THE SALTON SERIES

### **TYPE 3: Cahuilla Buff**

**Synonym:** None.

**Described by:** Ronald V. May, November, 1977.

**Type Specimens:** Barrel Springs Site, SDI-4443, P177-290P, 28S-34W, State of California, Department of Parks and Recreation, Cultural Resources.

**Date:** Between 1150 A.D. and 1800 A.D.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 10 YR 6/3, pale red (appears pink to the eye).
  - c. Fired — good reduction atmosphere.
  - d. Carbon Streak - rare to none.

**Temper:** Fine, subangular, and rather rare dark brown sandy flecks with a few white feldspar chunks, occasional tan to pink crushed potsherd fragments, and small clam shell or snail pieces.

**Texture:** Gritty and blocky clay chunks with fissures along block joints. Temper stands out along the breaks.

**Walls:** 5 mm. to 7.5 mm. thick.

- Surface:**
- a. Color — Munsell Color Chart: 10 YR 6/3, pale red.
  - b. Finish — very rough and pitted as though floated organic objects burned out in the firing. Dark, subangular to rounded sand grains were present on the surface. When not sandblasted, an exterior cream slip is often present.
  - c. Fire Clouds — unusual, but present.

**Forms:** Unknown at this time.

**Range:** Since this type is being described for the first time, it is only known at Barrel Springs. Since it never appeared in any great quantity, however, it is anticipated that its focus will be elsewhere.

**Comparisons:** It is not one of the types in the San Diego Museum of Man and was not described by Schroeder in 1958. However, the presence of snail and clam shell particles with ground potsherds aligns it with Salton Buff and Ocotillo Buff.

**Remarks:** On October 24, 1977, this author experimented with pieces of Cahuilla Buff and Ocotillo Buff by heating them for 15 minutes to 1900° F. and then allowing them to cool in a reducing atmosphere. They were both then allowed to oxidize. Neither turned the color or consistency of the other types, and it can now be assumed they are separate types.

## THE SALTON SERIES

### TYPE 4: Ocotillo Buff

**Synonym:** None.

**Described by:** Ronald V. May, November, 1977.

**Type Specimens:** Barrel Springs Site, SDi-4443, P177-140P, 68S-34W, State of California, Department of Parks and Recreation, Cultural Resources.

**Date:** Between 1150 A.D. and 1800 A.D.

#### Description:

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 7.5 YR 7/0-2, light gray to pinkish gray.
  - c. Fired — poorly controlled reduction atmosphere.
  - d. Carbon Streak — occasional and light.

**Temper:** Fine to medium grained and subangular quartz sands, flecks of biotite, occasional dark sands, and poorly reduced gray to brown potsherds are common.

**Texture:** Usually a very fine "waxy" consistency which is blocky around the potsherd temper. The temper stands out against the finer paste.

**Walls:** 4 mm. to 7 mm. thick.

- Surface:**
- a. Color — Munsell Color Chart: 7.5 YR 7/0-2, usually gray to buff.
  - b. Finish — smoothed, but not polished. Some wiping marks. Crazeing of the fine textured surface paste is occasional and pitting is present where organic objects burned out.
  - c. Fire Clouds — occasional.

**Forms:** Unknown.

**Range:** Known only for Barrel Springs. It appeared with such remarkable frequency, however, that it probably was made in the area of the site.

**Comparisons:** The paste has a unique color and consistency not unlike commercial Core 10 sculpting clay, which is totally unknown in previously described types. There is an undeniable connection, however, which links Salton Buff, Cahuilla Buff, and Ocotillo Buff by the tradition of adding shell and sherd temper.

**Remarks:** This type occurs in surprising high quantity at this site and yet has not been seen elsewhere by this author. The unfired sherds, P177-106P 70S-36W, were fired and turned out to be Salton Buff, so suspicions that it was made from Barrel Springs clay cannot even be confirmed.

## THE CARRIZO SERIES

### TYPE 1: Carrizo Buff

**Synonym:** None.

**Described by:** Ronald V. May, 1977.

**Named by:** Malcolm J. Rogers, time uncertain.

**Type Specimens:** San Diego Museum of Man, Laboratory 5.

**Date:** The following is abstracted from the late Malcolm J. Rogers' notes:

**Carrizo Buff Series:** Types fall into two age groups; I and II defining the early and late sub-series. Focus on Buff I on the old terraces of the south and west shores of the Salton Sea. Focus of Buff II is on the late terraces of the west shore and the post-Blake sea silt and dune country. Groups I and II produce much material which is impossible to allocate except through stratigraphy. The differences between the two are rim and form treatment and the finer paste of Buff II types. Also the latter always has a strong buff to cream scum coat\*, similar to Hohokam buffs. Group I is composed mostly of surface material and has been subjected to hundreds of years of sand and silt scour which removes the scum coat and permits the pinkish ground to give the illusion that the ware is not so buffish in color as the latter types. If Buff I was decorated often, it would be difficult to determine because of the scoured surfaces.

The author of this typology could not distinguish between the I and II varieties during the studies at the San Diego Museum of Man. Therefore, one comprehensive description of the "type" will be included here and it will be left up to others to search for the stratigraphy to test Rogers' hypothesis of time depth.

### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 7-6/1, light gray; 6/3, light reddish brown; 6/6, reddish yellow.
  - c. Fired — oxidizing atmosphere, excellent control.
  - d. Carbon Streak — common as a light gray.

**Temper:** Extremely fine flecks of mica and sand particles, which may have been natural inclusions in the past. It is not uncommon to find a sherd of this type in a buried site in the Laguna Mountains which has been highly eroded from soil chemistry and, when broken, almost appears to be unfired clay. The fine sand is apparent, however, when examining the texture.

**Texture:** Clean even break with a gritty fine sand feeling and appearance.

**Walls:** 4 mm. to 6 mm., averages 5.5 mm.

- Surface:**
- a. Color — Munsell Color Chart: 5 YR 6/2, pinkish gray; 7.5 YR 7/2, pinkish gray.
  - b. Finish — usually slipped and smooth, but some are gritty to the touch.
  - c. Fire Clouds — very uncommon.

**Range:** Primarily Carrizo Creek and Carrizo Valley, but it was a common trade item and has been found along the eastern Peninsular Mountain region and is common along the southwestern shore of Lake Cahuilla.

**Remarks:** This type was found at shallow depths in the excavations at Kitchen Creek (May 1975) and is thought to have been introduced into the mountain trade rather late. This concept should be tested, as Rogers originally assumed that all buff wares came in after Lake Cahuilla dessicated round 1450 A.D.

\*Rogers was referring to what will be named "Carrizo Stucco" in this typology. It is a term he later adopted himself.

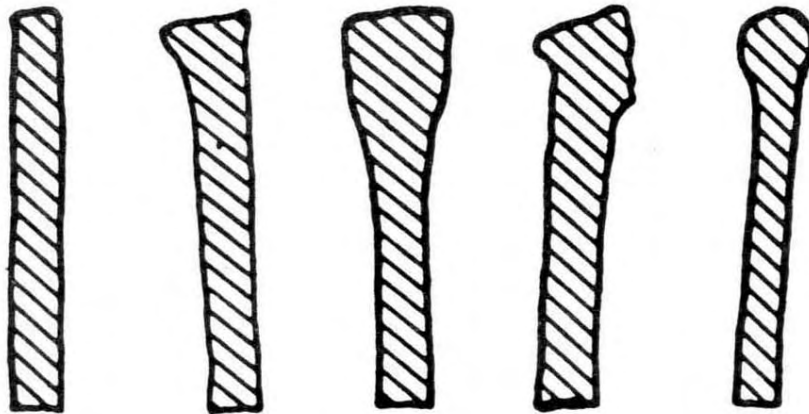


Figure 3  
Carrizo Buff Rim Sherd Profiles

## THE CARRIZO SERIES

### TYPE 2: Carrizo Red-on-Buff

**Synonym:** None.

**Named by:** Malcolm J. Rogers, time uncertain.

**Type Specimens:** San Diego Museum of Man, Laboratory 5.

**Date:** M. J. Rogers stated in his notes that the Carrizo I series types dated from 1100 A.D. to 1400 A.D. and that the Carrizo II series types dated from 1400 A.D. to 1800 A.D. It would appear that any time following full development of the Lake Cahuilla Complex would be acceptable for these types.

### Description:

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 7/6, reddish yellow; 5 YR 6/1, gray. May include colors of Carrizo Buff.
  - c. Fired — oxidizing atmosphere, excellent control.
  - d. Carbon Streak — occasional as a light gray.

**Temper:** Almost nonexistent and may have been natural grit rather than purposefully added temper. There does appear to be a few micro-fine to fine angular quartz sand particles and mica flecks, but this is unusual.

**Texture:** Even break with gritty fine sand.

**Walls:** 4 mm. to 6 mm., averages 5.5 mm.

- Surface:**
- a. Color — both the exterior and the interior are slipped in a 7.5 YR (Munsell Color Chart) 7-8/4 reddish yellow with a 5 YR 5-4/6 yellowish red pigment painted on top. This pigment is done in thin angular geometric bands (4-8 mm. wide) with some spaces between the angles of geometric tips filled in. This is strikingly similar to designs found on Parker Red-on-Buff and other historic Mohave Indian pottery. It is possible that the makers of either the Mohave pottery or the original Carrizo Red-on-Buff influenced the other. This shared design element might be a clue as to whom these people on the southwest shore of Lake Cahuilla may have been.
  - b. Finish — usually slipped and smooth, but some are gritty to the touch.
  - c. Fire Clouds — none apparent due to pigmentation and slipping.

**Forms:** Only a few known. These are shallow wide mouthed bowls with a slight re-curve in and outward at the rim. Shallow scoops with slightly upraised handles are also known, but these are extremely rare.

**Range:** Primarily Carrizo Creek and Carrizo Valley, but it was a common trade item and has been found along the eastern Peninsular Mountain region and is common along the southwestern shore of Lake Cahuilla (same as Type 25 — Carrizo Buff). Some specimens have been found in sand dunes around Ocotillo Wells (near Borrego Springs) and near Ocotillo (east of Jacumba) and

in the Algodones Dunes east of El Centro. It is quite likely that this was a popular trade item all around the southern portion of Lake Cahuilla. Rogers (1945), in his *Outline of Yuman Prehistory*, discussed the occurrence of pigmentation at length and was convinced this element of decoration was historic, as opposed to having been introduced by Hohokam potters. This author would agree that these design elements are not Hohokam, but would not be so bold as to state for certain that this type does not date back to the Lake Cahuilla period. Thus far, it has not been found to any significant extent in the Peninsular Mountains.

**Remarks:** This author has viewed the collection of 1870 period and prehistoric Mohave Indian pottery at the Colorado River Indian Museum in Parker, Arizona, and the specimens at the San Diego Museum of Man and is personally stunned by the similarity in design and execution of decoration between them and this type. It would be a major contribution if anyone could prove or test the connection between the two. Could there have been an exodus of Lake Cahuilla people from the southern shore line northeast to Blythe and Parker along the Colorado following 1450 A.D.? This problem is further irritated by the finding of numerous flat and paddle-shaped figurines with coffee bean eyes (also known for Sedentary Period Hohokam assemblages between 950 A.D. and 1200 A.D.) in this same region (Hedges 1973:8) and the fact that the facial characteristics of these figurines are typically found in 19th Century Mohave pottery collections. It is also most interesting to note that the historic Cocopa (near the International Border) made effigy scoops with very similar geometric designs (Hedges 1973:30).

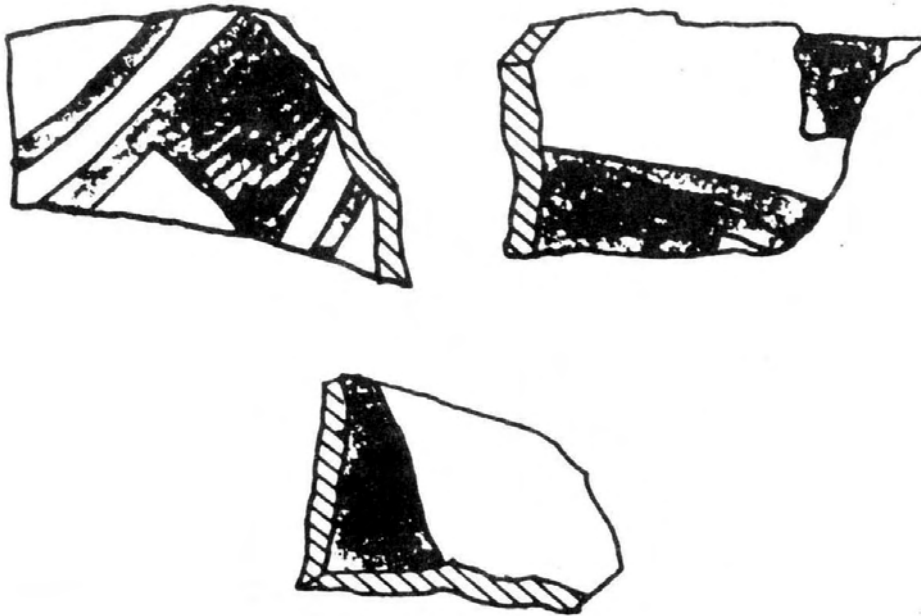


Figure 4  
Carrizo Red-on-Buff  
(Actual size)

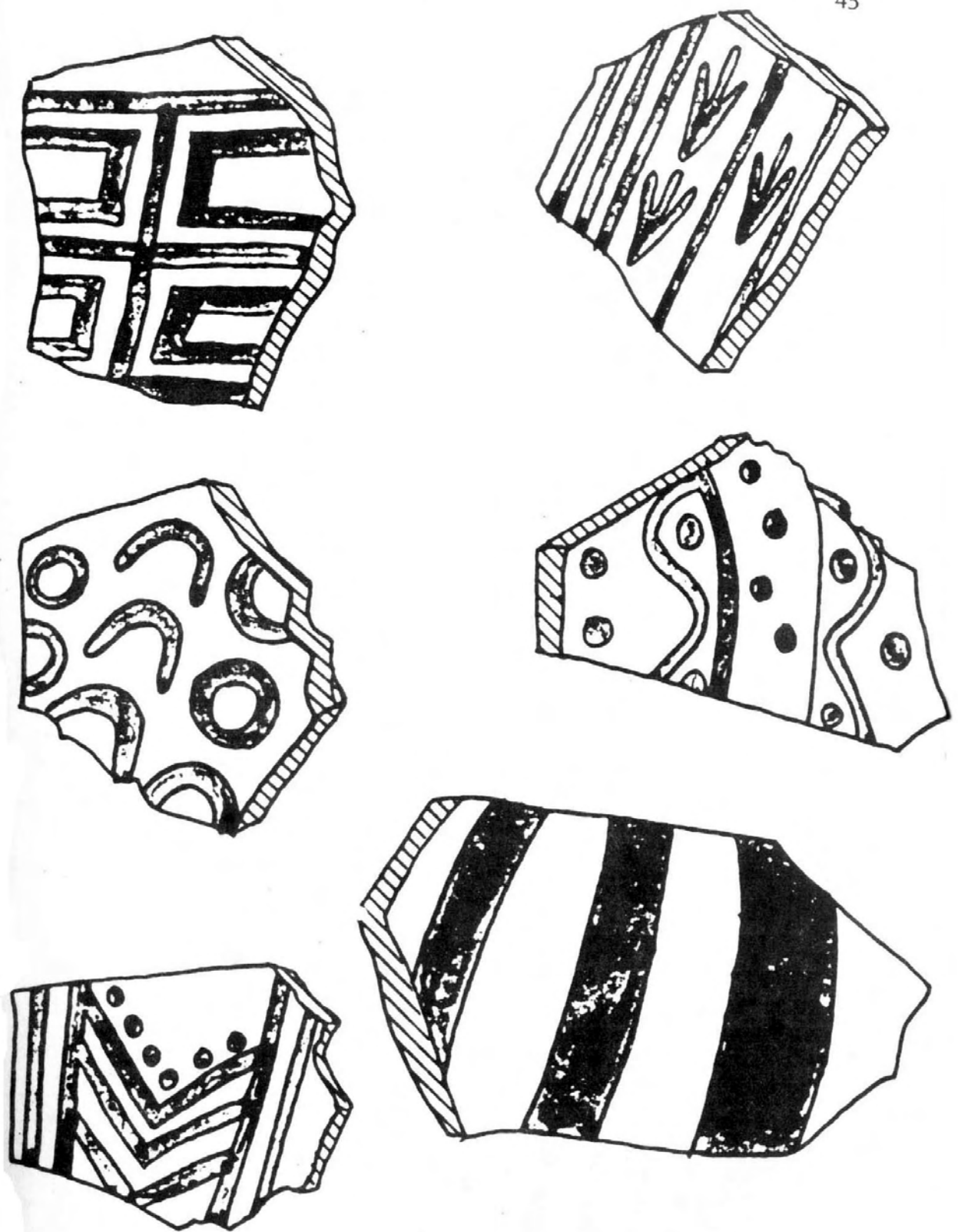


Figure 5  
Carrizo Red-on-buff Conceptual (ca. 12") Designs  
From Malcolm J. Roger's Notes



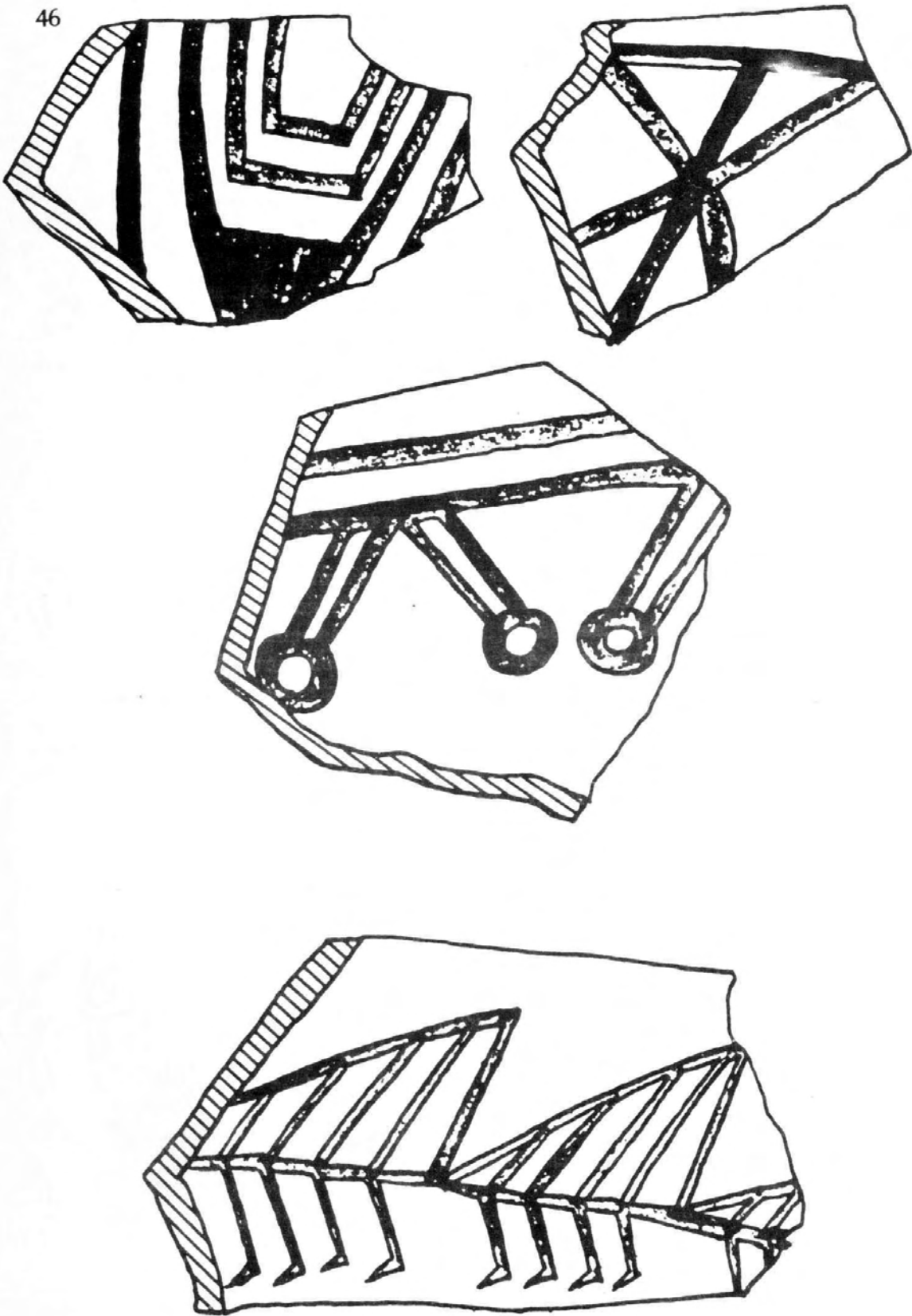


Figure 6  
Carrizo Red-on-buff Conceptual (ca. 12") Designs  
From Malcolm J. Roger's Notes

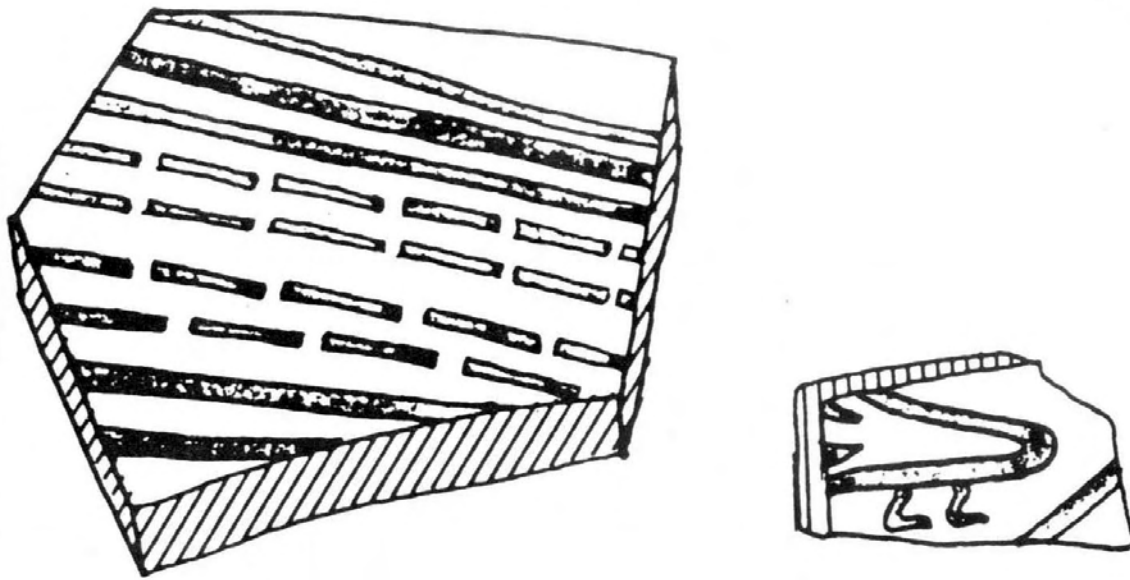


Figure 7  
Carrizo Red-on-Buff Conceptual (ca. 12") Designs  
From Malcolm J. Roger's Notes

## THE CARRIZO SERIES

### TYPE 3: Carrizo Stucco

**Synonym:** None.

**Described by:** Ronald V. May, 1977.

**Named by:** Malcolm J. Rogers, time uncertain.

**Type Specimens:** San Diego Museum of Man, Laboratory 5.

**Date:** Rogers noted this type as coincident with the series, but this author rather suspects that it coincides with occupation of the Lake Cahuilla basin and probably does not date much after 1500 A.D. It is not a common type anywhere and may have had a specific function of only localized distribution.

#### Description:

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 5 YR 6/6; reddish yellow.
  - c. Fired — oxidizing atmosphere, excellent control.
  - d. Carbon Streak — none.

**Temper:** Fine angular flecks of white quartz, evenly distributed over the body of the pottery, but in sparse occurrence. These quartz flecks are all angular and may have been crushed and sorted prior to mixing the clay.

**Texture:** Clean even break.

**Walls:** 4 mm. to 5 mm.

- Surface:**
- a. Color — Munsell Color Chart: 7.5 YR 7/4 to 8/6; pink` to reddish yellow.
  - b. Finish — rough, scummy, wiped surface. Rogers once speculated in his notes that the surface clay might have been mixed with alkaline salts purposefully to produce this surface during the firing. This is the distinguishing characteristic for this type.
  - c. Fire Clouds — none known.

**Range:** Coincident with the series. It seems from the collections at the San Diego Museum of Man that this type is replaced by Picacho Stucco and Tumco Stucco east of the Cocopa Mountains. This author personally has seen one shattered jar at C-397 (also listed as C-128) at the base of Table Mountain, and Rogers recovered specimens of this type for his regional site (C-128), which essentially involves the eastern Jacumba Valley at the headwaters of Carrizo Gorge. It probably is found south into Baja California, but this extent is totally uncharted.

**Remarks:** This type is very unusual and should be studied in greater detail in regional studies to determine when it was made and what function it served. It is possible that it was the work of only one family of potters for only a short period of time, but this must be tested. This author suspects that it was functional, as stucco decoration has been found on other types described by Schroeder in 1958.

## THE CARRIZO SERIES

### **TYPE 4: Vallectios Buff**

**Synonym:** None.

**Described by:** Ronald V. May, 1977.

**Named by:** Malcolm J. Rogers, time uncertain.

**Type Specimens:** San Diego Museum of Man, Laboratory 5.

**Date:** Unknown, but most likely was used until the late 19th Century.

### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 7.5 YR 7-8/4; pink.
  - c. Fired — oxidized, fine control.
  - d. Carbon Streak — none.

**Temper:** Very fine white and gray angular specks of quartz sand intermixed with even finer flecks of muscovite mica. There is far more temper in this type than can be found in any of the Carrizo types.

**Texture:** Fine gritty feeling. This texture contrasts sharply with the smoother texture of the Carrizo types.

**Walls:** 4 mm. to 6 mm., averages 4.5 mm.

- Surface:**
- a. Color — Munsell Color Chart: 7.5 YR 8/2, pinkish white, to 8/4, pink to 7/4, pink slip.
  - b. Texture — gritty sand.
  - c. Fire Clouds — none known.

**Range:** This type is found in greatest abundance throughout Vallecito Creek from the Carrizo Valley northwest to Earthquake Valley. However, it is commonly found all around the Lake Cahuilla basin on the western shore line and throughout the eastern scarp of the Peninsular Mountains, primarily south of Mount Vulcan. Relatively large quantities have been found along the San Diego River and San Luis Rey River in the Peninsular Mountains and down to the Pacific coast. This type is thought to have been a trade item.

**Remarks:** It would be a major contribution to date this type, especially when it began to be traded to the coast. It is possible that this type could be very valuable in the relative dating of surface sites once this sequence is worked out. This author strongly recommends that all future archaeologists whom find this type in any statistical quantity should strive to date the level by whatever means are available.

## THE CARRIZO SERIES

### **TYPE 5: Vallecitos Red-on-Buff**

**Synonym:** None.

**Described by:** Ronald V. May, 1977.

**Named by:** Malcolm J. Rogers, time uncertain.

**Type Specimens:** San Diego Museum of Man, Laboratory 5.

**Date:** Unknown, but most likely was used until that late 19th Century.

#### **Description:**

- Core:**
- a. Construction — paddle and anvil.
  - b. Color — Munsell Color Chart: 7.5 YR 7-8/4; pink.
  - c. Fired — oxidized, fine control.
  - d. Carbon Streak — none.

**Temper:** Very fine white and gray angular specks of quartz sand intermixed with even finer flecks of muscovite mica. There is far more temper in this type than can be found in any of the Carrizo types.

**Texture:** Fine gritty feeling. This texture contrasts sharply with the smoother texture of the Carrizo types.

**Walls:** 4 mm. to 5 mm., averages 4.5 mm. thick.

**Surface:**

- a. Color — thin (7 to 12 mm.) curvilinear bands of red (Munsell Color Chart: 2.5 YR 4/6) pigment atop the standard slip of Type 28 (Vallecitos Buff). This pigment differs from Carrizo Red-on-Buff in that the application was far more diluted and the color a deeper red (2.5 YR as opposed to 7.5 YR). Both were more diluted than Salton Buff. Moreover, the bands are curvilinear in this type and those of Carrizo Red-on-Buff are more angular.

- b. Texture — gritty sand.
- c. Fire Clouds — none.

**Forms:** Only a few are known. These include wide-mouthed bowls and jars.

**Range:** Coincident with Type 28, but this type is far rarer. None of this type have been found outside of the eastern deserts. Pothunters, however, may have removed these few specimens and soil chemistry might have eroded most of the pigmentation away from specimens outside the desert, hence appearing to be Type 28. Future research will be needed to clarify this type of pottery's place in California archaeology.

## THE CARRIZO SERIES

**TYPE 6: Soda Buff**

**Described by:** Ronald V. May, January 7, 1978.

**Named by:** Ronald V. May.

**Type Site:** SBCM 2341.

**Date:** Post-900 A.D. to 1840 A.D.

**Description:**

- Core:**
- a. Construction — coiled; thinned by paddle and anvil.
  - b. Color — Munsell Color Chart: 7.5 YR white 8/0.
  - c. Fired — reducing atmosphere.
  - d. Paste — hard, almost vitrified.
  - e. Carbon Streak — none.

**Temper:** Sparse quantities of fine-grained, subangular white quartz sands and medium-fine angular specks of yellow and reddish sands.

**Walls:** 4 mm.

- Surface:**
- a. Color — Munsell Color Chart: 7.5 YR white 8/0 to pinkish-white 8/2.
  - b. Finish — wiped striations.
  - c. Fire Clouds — none known.

**Forms:** Unknown.

**Rims:** Unknown.

**Decoration:** Unknown.

**Range:** Only known at SBCM 2341. This could be from Arizona or Nevada.

**Remarks:** This type was never reported by Schroeder for western Arizona, and the Nevada scene remains unknown at this time. Future reporting of this type will probably prove to be most interesting.

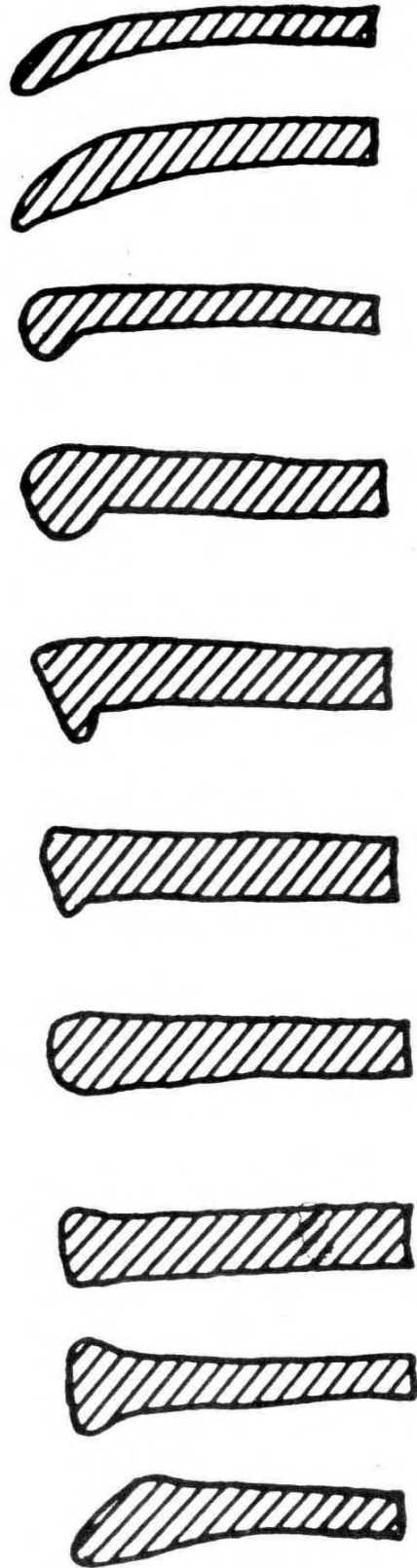
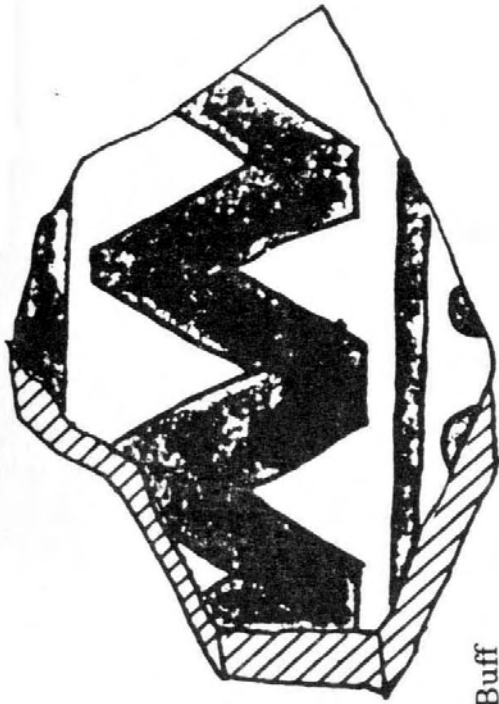
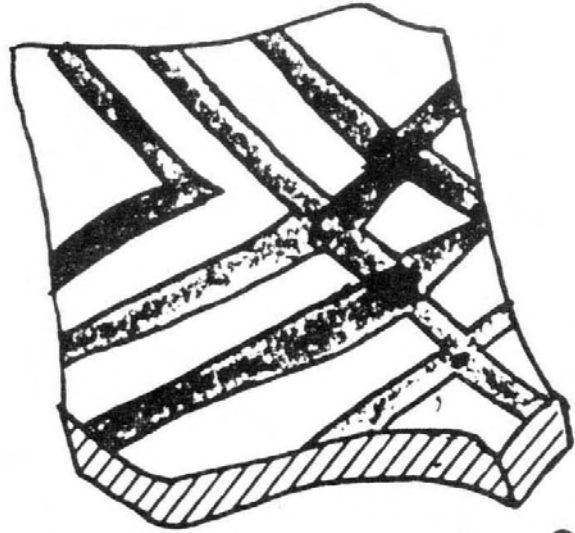


Figure 8  
Vallecitos Buff Rim Sherd Profiles



Tumco Red-on-Buff



Topco  
Red-on-Buff

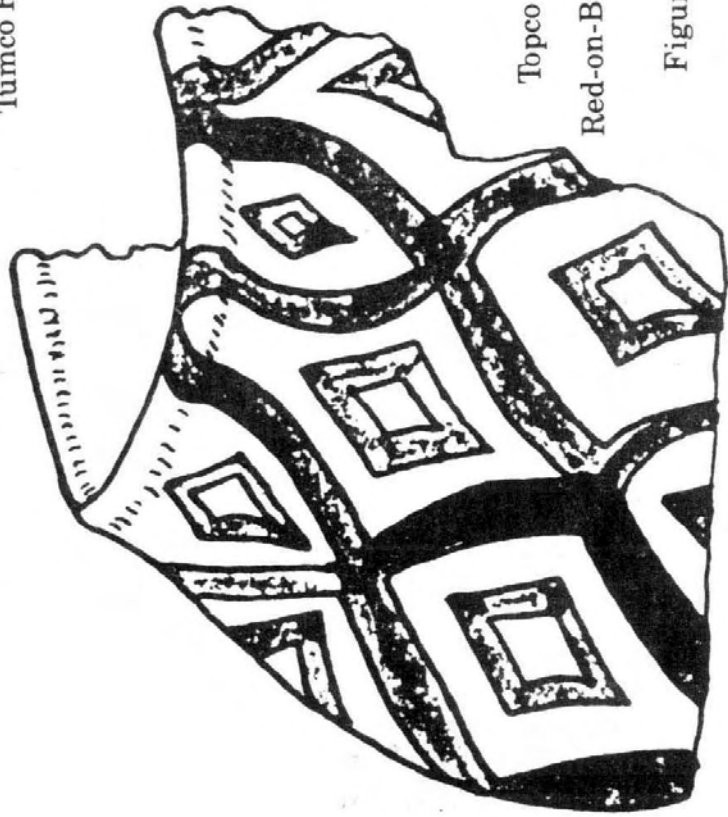
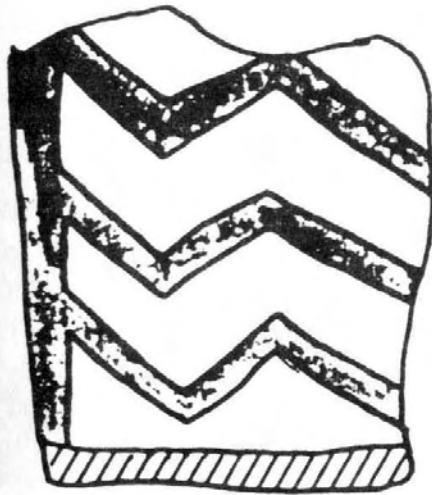


Figure 9



## ACKNOWLEDGEMENTS

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Ronald V. May

September 1, 1978  
San Diego, California