

POTTERY and PLACE

Exhibit researched by Jamaica Grace-Bishop
Curated by Dr. Margie Burton, Research Director

INTRODUCTION

A variety of physiographic zones exist in San Diego County: dramatic coastlines, inland valleys, mountains, and desert. Inhabitants of the region have occupied all these areas for thousands of years, and each has offered a unique set of resources and challenges to the people who lived there. Archaeologists use artifacts to tell us how people have responded to and manipulated their environments in order to thrive in such diverse settings. Even the most humble artifact, like broken pottery, can give us insight into how people adapted to different physical environments in San Diego County.

In 2006, University of California, San Diego intern **Jamaica Grace-Bishop** under the direction of **Dr. Margie Burton, Center Research Director** began a research project to investigate shapes and sizes of



Pottery-making was first introduced to the San Diego County region at least 1,000 years ago. Bowls and jars were the most common *vessel form types* or shapes made. Very few complete vessels are found, however. Archaeologists often find hundreds of *sherds* or broken pieces at archaeological sites.



Past and present inhabitants of San Diego County have occupied diverse physiographic zones: coastlines, inland valleys, mountains and the desert. Pottery from the mountains of Cleveland National Forest and the desert of Anza-Borrego were analyzed to determine if there were differences in shape and size that might relate to differences in pottery *function* or use in these different environments.

pre-contact pottery from two different physiographic zones: the mountains of Cleveland National Forest and the desert of Anza-Borrego. Two collections of pottery sherds curated at the Center were used for her study. She analyzed and recorded 1506 sherds from 14 sites in the Cleveland National Forest collection. These data were compared to results from analysis of the Anza-Borrego collection, consisting of 187 sherds surface collected over a period of years.

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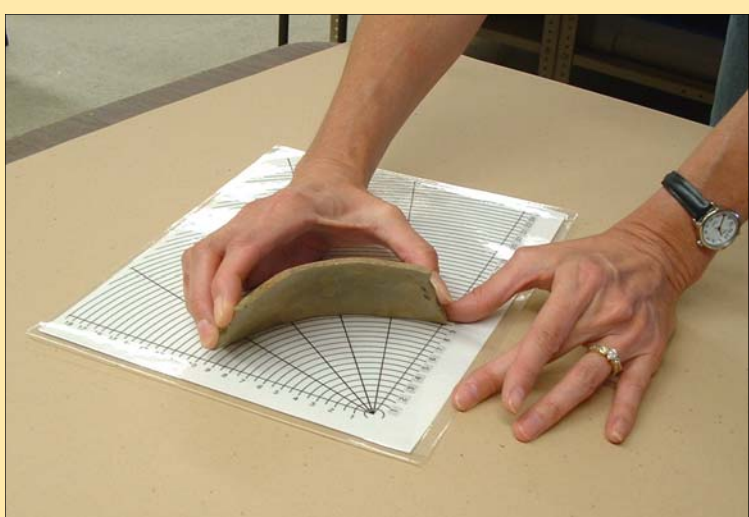
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METHODOLOGY

Even broken pottery can yield important information. Most of the sherds found are from the body of the vessel. Rim sherds give more information about the type of vessel it came from than body sherds. 133 rim sherds from the Anza-Borrego collection and 106 from the Cleveland National Forest collection were examined and carefully measured for this study.

The attributes recorded for rim sherds included:

- Vessel form type
- Rim form
- Decoration
- Post-firing modification
- Wall thickness (measured 1 cm and 3 cm below the lip)
- Rim Radius
- Circumference percentage



Rim radius is measured by placing the rim sherd upside down on a measurement template and fitting the curve of the rim sherd to the measured curve on the template. This bowl rim sherd had a radius of 9 cm, representing an *aperture* or mouth diameter of 18 cm. Circumference percentage is also measured using the template, in 5% increments. This rim sherd represents almost 25% of the circumference of the original vessel. By summing circumference percentages, archaeologists can estimate the number of complete vessels that were present in an assemblage.



Each pottery sherd is carefully examined for post firing modification and decoration.

Top: Drilled hole (post firing modification)



Middle: Red painted stripes (decoration)



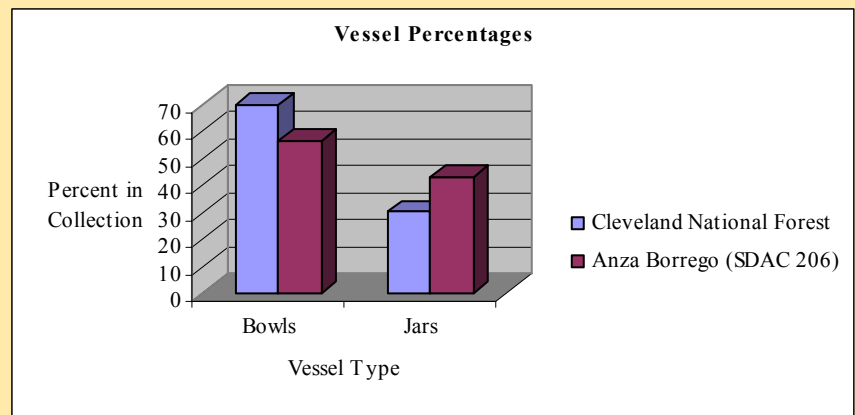
Bottom: Fingernail impressions made on the rim (decoration)

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BOWLS

Bowls were the most common vessel type in both the Anza-Borrego and Cleveland National Forest collections. However, bowls occurred with somewhat greater frequency in the mountain collection (69.9%) than in the desert collection (56.7%).



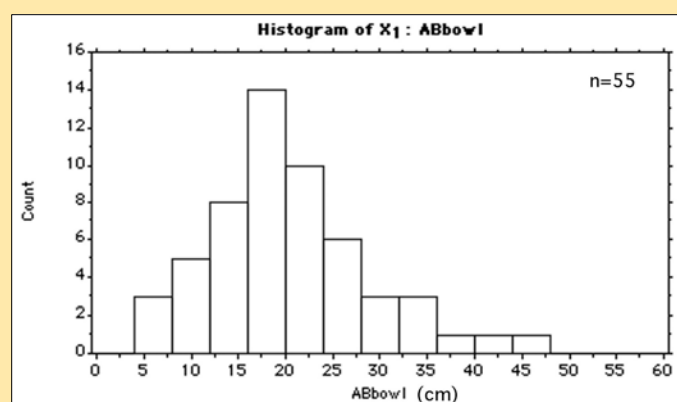
Bowls were the most common vessel type in both the Anza-Borrego and Cleveland National Forest collections. Sample sizes were 133 and 106 rim sherds, respectively.

Bowls from the Anza-Borrego and Cleveland National Forest collections show similar size distributions. The modal bowl rim diameter in both collections is between 15 and 20 cm. Bowls were used for food preparation, cooking, and serving.

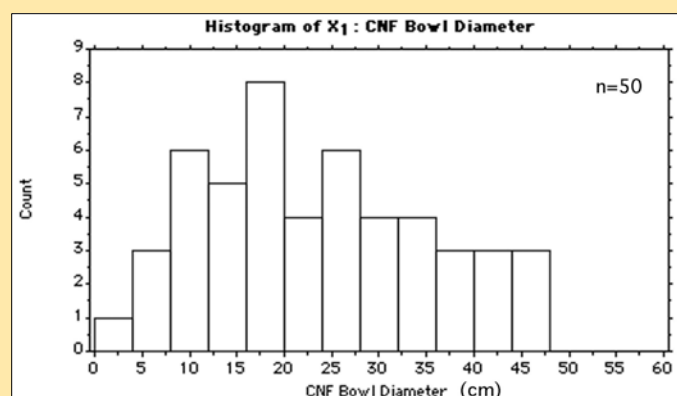


A rim sherd gives more information about the type of vessel it came from than a body sherd. From a rim sherd we can discern the type of vessel, its diameter and general shape. Anza-Borrego bowl rim sherds are placed next to a reproduction bowl made in the traditional style for comparison.

Comparison of Bowl Rim Diameters



Bowl rims from Anza-Borrego (*above*) and Cleveland National Forest (*below*) collections show similar size distributions. The modal bowl rim diameter in both collections is between 15 and 20 cm.



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JARS

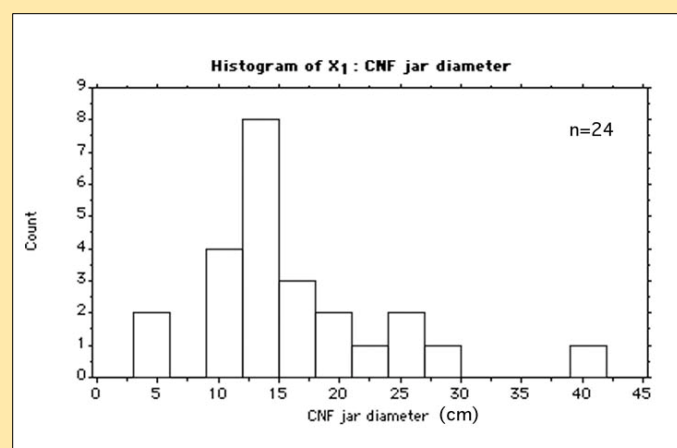
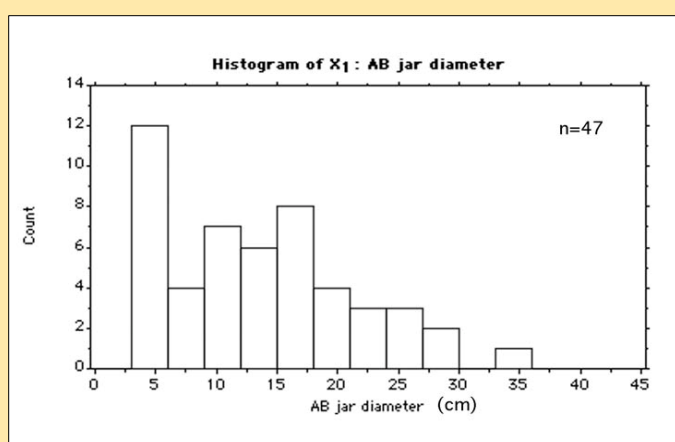
Measurement of the jar rim sherds revealed differences between the Anza-Borrego and the Cleveland National Forest collections. The Anza-Borrego collection showed evidence of two jar size classes: a common small size class with a modal rim diameter of about 5 cm and a large size class with a secondary mode between 10 cm and 20 cm. The Cleveland National Forest collection showed one dominant size class of large jar with a modal rim diameter of about 15 cm.

Jars or *ollas* were used for water and dry food storage. Jars with narrow necks and small openings were designed for water storage and transport. Very large jars with large openings were often fixed in place and served as granaries.



Jars or *ollas* from Cleveland National Forest. The Center thanks Margaret Hangan, United States Forest Service, for allowing us to study and display the Cleveland National Forest pottery.

Comparison of Jar Rim Diameters



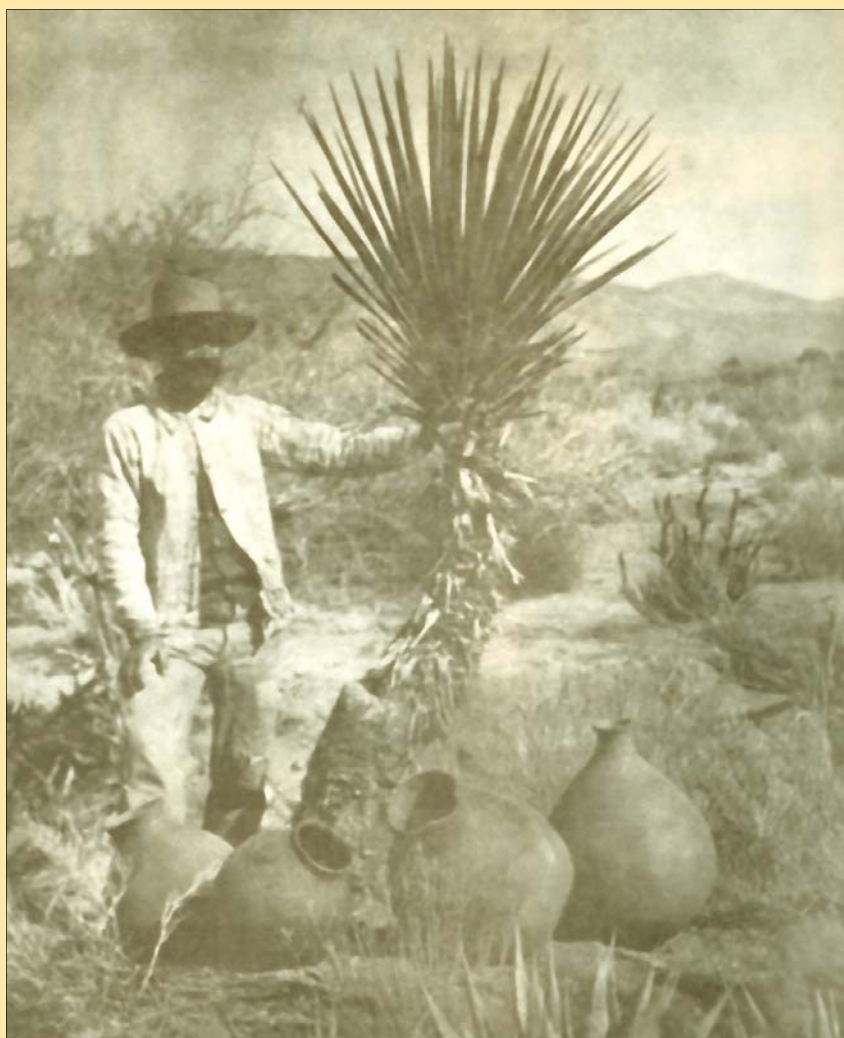
The Anza Borrego collection (*left*) showed two jar size classes; a small size class probably for water storage and a large size class probably for food storage. The Cleveland National Forest collection (*right*) showed one size class of large jars probably for food storage.

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CONCLUSIONS

In summary, the pottery analysis suggests that small-mouthed jars may have been a more important component of the pottery repertoire in the desert than in the mountains. This is indicated by the higher frequency of jars versus bowls and evidence of two distinct jar size classes in the Anza-Borrego collection. A greater need for water storage and/or water transport in the desert environment may account for this. Further investigation is needed to support this hypothesis including quantitative analysis of additional assemblages and study of the relationship between rim diameter and overall vessel shape and size.



Pottery-making was an important technology for the pre-contact inhabitants of San Diego. Pottery vessels were durable, fireproof, and waterproof and helped people cope with environmental challenges. Pottery jars stored water in the desert and protected important food stores from rodents in the mountains.

Photo: Unidentified Kumeyaay man with pottery, 1912. *Kumeyaay Pottery Paddle and Anvil Techniques of Southern California* by Gena R. Van Camp, Ballena Press Anthropological Papers No. 15.