

## APPENDIX 1: EVALUATING A MIDDEN SAMPLING TECHNIQUE

## AT THE BIG TUJUNGA SITE (LAn-167)

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## ABSTRACT

One phase of the salvage operation at LAn-167 involved the use of intensive midden analysis in exploring the site for European trade beads. The use of the sampling technique, a similar operation to Curtis' "Microanalysis" technique (Curtis 1961), was set up to test the usefulness of intensive midden analysis for the excavation of a non-coastal Southern California site. The study showed that a significant bias in the percentages of some of the items recovered occurred when normal salvage techniques were used (such as the use of troweling and screening with 1/4-inch mesh screens). This bias can skew conclusions about the culture of the people under study. Findings from the study indicate that such a bias can be eliminated by the use of fine-mesh screening and exacting laboratory analysis of column samples taken from each pit excavated.

## INTRODUCTION

Southern California archaeologists have appreciated the usefulness of the intensive analysis of small midden samples as a check on the regular samplings of the site, and as an additional tool in solving the site problem (McKusick 1961:341-44). One example of intensive sampling which has been well-defined and successfully employed is Curtis' "Microanalysis" technique (Curtis 1961:397). While this technique, involving the use of fine-mesh screening and intensive laboratory examination of all screenings, has been shown to be useful in the recovery of classes of small objects; few, if any, writers have tried to judge its usefulness in terms of statistical bias correction. A partial attempt may be seen in Curtis 1964 (471-76). In this paper the writer will use the data gathered in this midden sampling to present some statistical statements as to how effective intensive midden sampling may be for sites such as Big Tujunga.

The salvage operations at LAn-167, of which this project was a part, were conducted in the latter part of 1963 and early 1964. The recovery of a glass trade bead from the nursery area, at the end of regular salvage operations, created interest in the further study of this portion of the site in hopes of recovering more beads. It was decided that a test pit should be excavated near the pit from which the first bead was recovered, and that the contents of the second pit should be carefully screened through a fine-mesh to help increase the chances of finding more beads. Because fine-mesh screening was to be used, it was decided to expand the project in order to evaluate the usefulness of such intensive analysis on a non-homogeneous, non-coastal site. This study is the result of that project.

## DESCRIPTION OF RECOVERED MATERIALS \*

### Ground Stone Artifacts

A single fragment of a ground stone was recovered. It is a wedge-shaped fragment of granitic material, measuring 6.1 cm by 3.9 cm by 3.3 cm. The outer surface is ground and pecked to a concave finish and is partially coated with red ocher. It may be a pestle fragment (Fig. 2a).

### Chipped Stone Artifacts

Projectile Points. Two projectile points as describe below, were recovered:

Type I. This is a corner-notched point of crypto-crystalline silicate, similar to Ruby's Corner Notch (Fig. 1b above). It measures 1.8 cm by 1.1 cm by 0.4 cm (Fig. 2b). This point type is infrequent, but normal for Late Horizon sites (Miller 1965). Similar points have been found by Susia (Susia 1962:Plate II, Fig. s) and Kowta (Kowta 1961:Plate 4, Fig. 1).

Type II. This is a unifacial point fragment, most probably unfinished, on a brown basaltic flake. One edge indicates bifacial flaking. The point measures 2.3 cm by 1.5 cm by 0.5 cm (Fig. 2c). Because the base of the point is missing, it could not be compared to other types.

Scraper Fragment. One scraper made from a flake fragment was recovered. The basaltic flake measures 3.7 cm by 3.7 cm by 1.2 cm and shows secondary flaking and use-wear along one edge (Fig. 2d).

Knife Fragment. One chipped stone tool, which appears to be a knife fragment, was recovered (Fig. 2e). It is made on a flake of crypto-crystalline silicate and is flaked bifacially. Evidence of battering shows on three edges. It measures 2.7 cm by 2.4 cm by 1.0 cm.

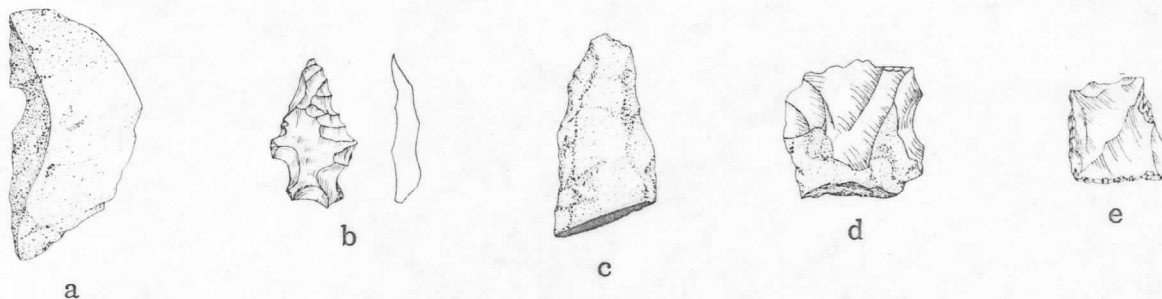
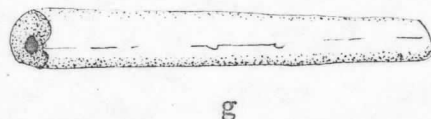
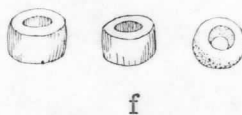


Figure 2



\*Scale for illustrated artifacts on page 132.

## Historical Material

One hundred and twenty-four items of historic European or Anglo-American manufacture were recovered from pit M. With one exception, all pieces were restricted to the top 15 inches of the deposit. A brief description of the historic material follows:

✓ Glass Bead. A small, green glass bead was recovered from the 0-inch to 3-inch level in the 1/8-inch mesh screen (Fig. 2f). It appears to be related to the other Spanish trade bead recovered in the area (Ruby 1964). It measures 0.20 cm in diameter by 0.15 cm in thickness, with a hole diameter of 0.09 cm.

Clay Pipe Stem. Part of the stem of a clay tobacco pipe was recovered in the 1/4-inch screen at the 15-inch level of the midden (Fig. 2g). According to James Deetz, the pipe probably is a Scottish piece of the post-1800 period. The stem fragment is composed of extremely fine-tempered, hard-fired white clay (temper is visible only under a 60-power microscope). It measures 3.8 cm in length by 0.6 cm in thickness. The inside bore varies in thickness from 0.015 cm to 0.020 cm (Deetz 1965).

Glass. Thirty-nine fragments of glass were recovered from the top 18 inches of the deposit. These fragments weigh a total of 87.5 grams. The bulk of the glass consists of small fragments of bottles and windows. Two pieces are bottoms from bottles but lack any trademarks.

Metal. Fifty-two pieces of metal were recovered from the top 15 inches of the deposit. Except for one aluminum safety-pin head all fragments are made of iron or steel and consist of common nails and bits of tin can. Thirteen nails are recognizable and six lumps of oxidized matter appear to have been nail heads.

Brick. Twenty-five fragments of commercial red building brick, some with cement encrustations, were recovered from the top 18 inches of the deposit. Nineteen fragments were found above a depth of six inches and the rest came from the 12- to 18-inch levels. If the sample were larger and the deposit undisturbed a differential sequence of European occupation could be postulated, but under the above circumstances it cannot.

Porcelain. Two fragments of white, glazed porcelain were recovered from the upper half of the deposit. One measures 1.4 cm by 1.3 cm by 1.0 cm, while the other is 1.1 cm by 0.9 cm by 0.7 cm. Both are roughly triangular in shape and lack any sort of trademark. Deetz believes them to be European, possibly English, but is not absolutely certain (1965). He has not, it must be said, had a chance to examine them well.

Asbestos Shingle. Two fragments of roofing shingle were taken from the top nine inches of deposit by the 1/4-inch screen.

Leather. A piece of leather harness strap was found in the top level of the pit, measuring approximately 2.5 cm by 2.4 cm by 0.7 cm.

Rubber. A piece of the back of a hard rubber men's pocket comb was found at a depth of 12 inches. The back is 3.3 cm long by 0.4 cm thick with eight broken teeth of varying length still attached to the back. The letters, "... UILER HARD RUBBER" were visible on one side of the back.