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"Invisible" Archaeological Deposits at Small Milling Sites

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ARCHAEOLOGICAL sites always are initially characterized and evaluated (even if only on the site record) by surface indications; architecture, bedrock milling features, soil color differences, visible artifacts, etc. At the survey (inventory) level of investigation, there is no other option. Based on these data, archaeologists speculate on the presence or absence, extent, content, and age of subsurface deposits and make decisions regarding the significance of sites. This often is done without the benefit of excavation data either to confirm or modify the initial evaluation. The presence or absence of a subsurface deposit is postulated based on the presence and nature of surface materials. In the case of some sites (e.g., small lithic scatters or bedrock milling stations), it appears that in the absence of positive information to the contrary, many archaeologists will assume that no subsurface deposit is present.

This presents a problem regarding the understanding of the archaeological record. If we assume that no subsurface deposit is present and so do not test that proposition, we will never know if we were correct, nor will we know the nature and age of what was missed. This ultimately will result in two unsatisfactory effects: 1) an inability to model and predict such occurrences in the future; and 2) a misunderstanding and misinterpretation of the known archaeological record. Data on the merit of the "small site/no deposit" assumption are important in dealing with this problem.

THE STUDY

Recent archaeological work in the Tehachapi Mountains in southern California serves as a test of this problem. An archaeological study of Hart Flat, a small, northward-sloping alluvial valley located in the northern Tehachapi Mountains just south of Tehachapi Pass (Fig. 1), was conducted by CSU Bakersfield (Parr 1991). Twenty-nine sites were located in the project area and each was mapped and recorded in detail. A tentative site classification scheme for Hart Flat includes three site categories: short-term milling; long-term milling; and camp (Table 1).

Short-term milling sites (n=13) are those sites containing only bedrock milling features that were judged to have received minimal use and contain few milling features (usually one to four mortars and/or slicks). In only one instance were surface artifacts observed on a short-term milling site. All but one of the short-term milling sites were tested (the exception due to unfavorable slope and absence of soil accumulation).

Long-term milling sites are defined as having a relatively large number of bedrock milling features (more and better developed than short-term sites) and/or subsurface cultural remains. As a rule, these sites tend to contain larger, deeper mortars than do the short-term milling sites. Presumably these sites are a result of relatively intensive and extended use. Sites in this category (n=14) vary considerably in terms of the number of bedrock milling features and the complexity of subsurface deposit. Of the 14 long-term milling sites recorded in Hart Flat only one was not tested (due to its location).

Two sites in Hart Flat exhibited a sufficient quantity and diversity of cultural remains to classify the sites as habitation loci or camps. In addition to the presence of bedrock mortars, the assemblages from these sites include pestles, manos, bone awls, projectile points, and a large quantity of flaked stone debitage. Substantial subsurface deposits were located at these sites.

Generally, test excavation units were placed close to bedrock milling features or where surface artifacts were observed. Test units were either 1 x 1 or 1 x 2 m. in size, levels were dug in arbitrary 10-cm. increments, and all soil from the test units was passed through 1/8-in. mesh.

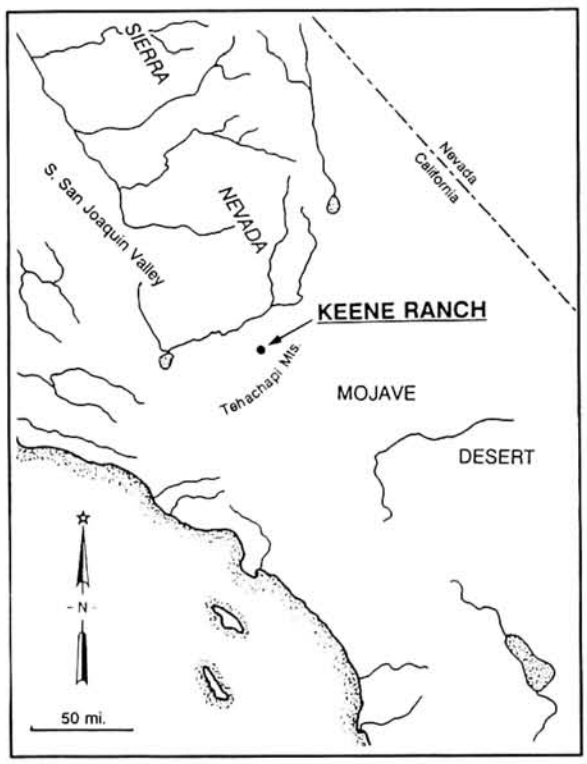

Fig. 1. General location of the Keene Ranch sites.

Table 1
ATTRIBUTES OF HART FLAT PREHISTORIC SITES

Site CA-KER-	No. Milling Features	Surface Materials	Subsurface Deposit	No. Test Units
		Short-Term Milling		
996	1	--	--	1
998	1	--	--	1
1008	6	--	Yes	1
1009	4	--	NT[a]	--
1011	3	--	--	1
1012	1	--	--	1
1013	4	--	--	1
2624	1	--	Yes	1
2625	1	--	Yes	1
2632	1	--	--	1
2634	8	Yes	--	2
2642	1	--	Yes	1
2668	1	--	--	1
		Long-Term Milling		
997	5	--	Yes	1
999	6	Yes	Yes	2
1001	11	--	NT[a]	--
1004	10	--	--	2
1006	19	--	Yes	1
1016	4	--	Yes	2
2614	6	--	Yes	1
2615	9	--	Yes	1
2616	7[b]	Yes	Yes	3
2618	13	--	--	1
2619	22	Yes	Yes	2
2622	19	--	Yes	1
2631	16	--	Yes	3
2651	12	--	Yes	1
		Camps		
1002	20	Yes	Yes	7
1015	19	Yes	Yes	11

[a] NT = not tested.
[b] plus 17 cupules.

RESULTS

It was our position from the beginning of the Hart Flat project that we would not assume the absence of a subsurface deposit at any of the sites. Of the 27 milling sites, only four had visible indications (artifacts, soil color, etc.) that a subsurface deposit might be present. Each of these four was tested and three were found to contain subsurface deposits. Of the remaining 23 sites without surface indications of subsurface materials, two were not tested (for reasons specified above), and 12 were found to contain a subsurface cultural deposit. Specifically, of the 12 short-term milling sites without surface materials, four (33%) contained a subsurface deposit and of the 11 long-term milling sites without surface manifestations, eight (73%) contained subsurface deposits. Thus, a total of 56% of all bedrock milling sites contained a subsurface deposit (Table 2).

In the excavations, artifacts were routinely absent, or nearly so, from the upper one or two levels of most test units, became increasingly

Table 2
SUMMARY OF RESULTS[a] AT HART FLAT MILLING SITES

	With Surface Materials		Without Surface Materials[b]		Totals
	With Subsurface	Without Subsurface	With Subsurface	Without Subsurface	
Short-Term	0	1	4	7	12
Long-Term	3	0	8	2	13
Totals	3	1	12	9	25

[a] from Table 1.
[b] two sites were not tested.

numerous, and then dwindled in the lower levels until sterile soil was encountered. This pattern is believed to be the result of fairly recent natural and cultural deposition processes. Such processes had, in effect, "capped" at least some of the sites, making visual detection of artifacts and/or midden difficult at best. It should be noted that all the known sites in Hart Flat were discovered by the presence of highly-visible bedrock milling features. Sites not located in association with such features are unlikely to be discovered.

The most common class of artifact discovered was flaked stone debitage and the most abundant material was chalcedony, with obsidian being the second-most common. Other lithic materials present were chert, basalt, jasper, quartzite, and quartz. Debitage tended to be composed of tertiary flakes and shatter. A small number of ground stone artifacts, cores, hammers, and flaked stone implements also were found (see Parr 1991 for detailed descriptions).

CONCLUSION

If the archaeological record were ever fully-known, the majority of the sites would likely be small, reflecting short-term activities that were part of some complex settlement/subsistence system. To understand such a system, all aspects of it must be considered (e.g., Glassow 1985). Glassow (1985) noted that small sites often contain forms of data not found or obscured in larger, more complex sites. Variations in proportions and quantities of types of data in small sites may provide significant insights into settlement and subsistence patterns. The so-called redundancy of small sites within a settlement/subsistence pattern is in itself important.

Our point is that testing is required to determine the presence or absence of archaeological deposits in small milling sites. By using the criterion of "small" to infer absence of a subsurface deposit, many such deposits have undoubtedly been missed, and archaeologists are missing an important aspect of those sites. Thus, the interpretations based on those faulty data are, themselves, flawed.

The data contained in such sites are significant not only from a settlement/subsistence standpoint but also from a functional interpretive view. For example, the presence of debitage (the result of one activity) at a milling site (another activity) would imply a site function diversity heretofore overlooked. In addition, obsidian materials from such sites could help place the sites in time and perhaps tie them in (using sourcing data) with specific settlement systems. We cannot afford to ignore these sites.

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