

## A THEMATIC EVALUATION OF SMALL PREHISTORIC FORAGING AND LOGISTICAL LOCATIONS ON A PORTION OF THE MODOC PLATEAU OF NORTHEASTERN CALIFORNIA

GERALD R. GATES

This “research-for-management” project is an attempt to examine a small yet very numerous type of prehistoric archaeological site, originally termed “small sparse lithic scatters” and now referred to as “small prehistoric foraging and logistical locations.” This class of site contains information necessary to undertake a study of prehistoric settlement and subsistence through time and may offer data that will enable the reconstruction of “tool kits” through time, and as such, this site class may be eligible for the National Register of Historic Places. If such a thematic, or class, determination of eligibility can be made, then this would facilitate management of these sites on federal lands.

This project was initiated in 1999 and over the course of five field seasons, with the help of more than 100 *Passport In Time* and *Heritage Expedition* participants and volunteers. Ten small, sparse lithic scatters were excavated. These sites now are referred to as “small foraging and logistical locations.” In this research project we have defined these as equal to or less than 1,000 square meters in surface area (roughly 0.25 acre), generally lacking in visible surface formed artifacts (although one or a few projectile points and/or “utilized” flakes may be present). The primary surface evidence consists of a very light scatter of waste flakes, generally exhibiting an overall density of fewer than five flakes per square meter (however, slightly denser “loci” may be present). The study area (Figure 1) is located on the Devil’s Garden area of the Modoc Plateau in a location that is a border zone between the Modoc tribe and the Pit River tribe. Further, this study area contains portions of territories of two bands of the Modoc (*Gumbatwas* on the west and *Kokiwas* on the east) and two bands of the Pit River (*Atwamsini* on the west and *Astariwawi* on the east).

The goals of the project were to collect sufficient data to address three major research questions:

- What is the nature of the archaeological values, or research potential, contained in small,

relatively sparse/light lithic scatters or small prehistoric foraging and logistical locations?

- Are present standard archaeological testing methods adequate to properly identify the

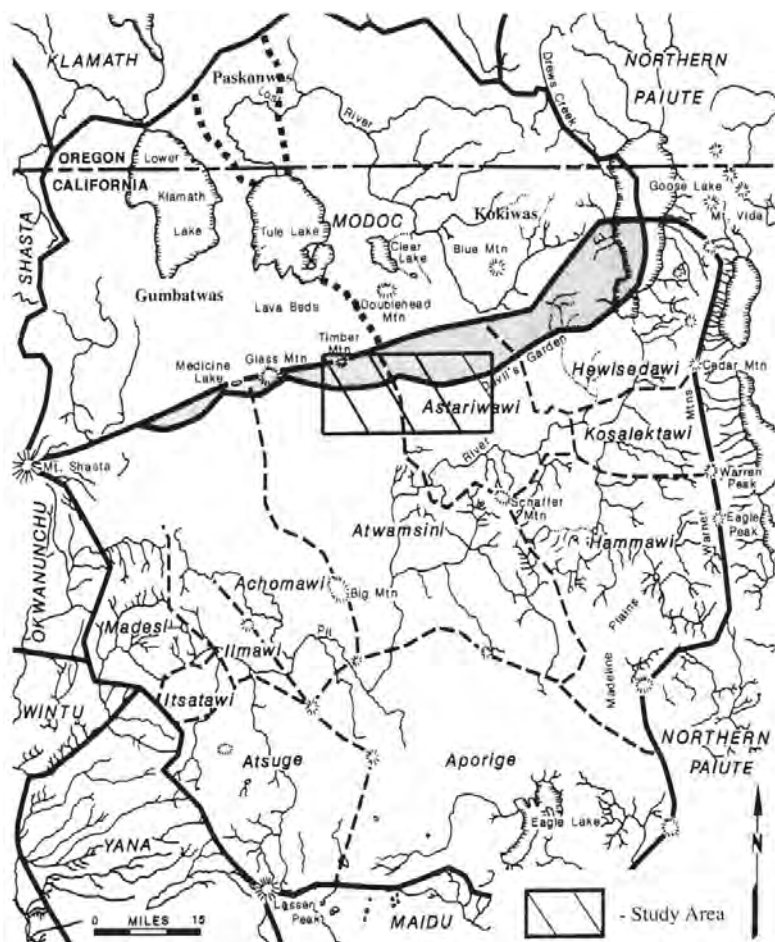


Figure 1: Ethnographic Boundaries and the Study Area. The gray tinted area is an “overlap” zone between the Pit River and Modoc tribes, possibly reflecting a southward expansion of Modoc bands.

actual archaeological information potential of this class of site?

- Does this class of site contain sufficient archaeological values or information potential to qualify for the National Register of Historic Places?

To this end I believe that the project has been successful in collecting sufficient data to address each of these three questions. However, like many research projects, this was a work in progress – subject to modification and development over the years — and not all procedures were used on each and every site; however, the overall direction and implementation of the project were adequate to the task.

As Ebert (1992: 141-142) states:

Lithic technology, according to Pokotylo (1978), involves three basic classes of physical elements: fabricators used in tool manufacture and maintenance, debitage or discarded waste, and finished tools; only debitage is consistently left in place where it is created, making it perhaps the most important class of lithic material for understanding the relationships between places and what was done at them. (*emphasis added*)

In regard to the first of the three questions, as presented throughout this report, this class of site does have quite a range of variability, albeit within a narrow set of parameters. First, generally, there is no correlation between the visible surface manifestations present on the site and what is present below the surface. Indeed, the very first site excavated, MOD-3745 (FS-05-09-56-2413), had two points and only about 40 visible waste flakes present at the time of its recording – yet fewer than 11 flakes were visible the week prior to the excavation. Similarly, the second site had on the surface one projectile point and 50 to 75 waste flakes when it was recorded, and only a single waste flake was visible the week prior to its excavation. Basically, none of the 10 sites at the time of excavation had many flakes visible on the surface — the range was from one to about 80 – and the ones at the higher end tended to be due to the site size being expanded considerably.

The fact that nine out of 10 sites were expanded emphasizes the nature of the natural soil movement in this area – abundant cryoturbation caused by the severe temperature variations and variable moisture content of the soils on an annual cycle. The reddish soils go from dry powder in the late summer to slimy, saturated muck in the late fall, to rock-hard frozen soil in the winter and then back to muck in the spring. As it dries out, impressive cracks occur, some of which may be 20

centimeters or more in depth, and finally it goes back to dry powder. This natural cycle results in a great deal of vertical movement in the top 20-30 centimeters of soil – basically the entire depth in which most of the cultural materials are found within this shallow soil type. Horizontal movement appears to be far less severe, as documented by site MOD-2479 and MOD-2861. At both of these sites artifacts (projectile point fragments) that were plotted and left on the sites in 1988 and 1989 were relocated in 2002 and 2001, respectively, within one meter of their original plot. Two halves of a projectile point were recovered from the same unit at MOD-1588, so horizontal movements appear to occur more slowly than vertical. Thus, it is very unlikely that any intact cultural stratigraphy is present in any sites located within these shallow soils. This makes those sites that have single occupations, or use episodes, much more valuable than those with multiple, mixed cultural deposits.

As Figure 2 shows, five of the 10 sites examined appear to have single primary-use episodes. It should be possible, given a large enough sample of these sites, to reconstruct “tool kits” from each temporal period. Four of these “single-use” sites date approximately between 535 and 670 years BP, representing a Late Archaic/Terminal Prehistoric transition period, and one dates to about 2240 years BP, from the Middle Archaic. Each of these sites has yielded either diagnostic artifacts or various formed and/or expedient tool types. The debitage from these sites gives an indication of the type of core - bifacial, angular, or bipolar — used to make the expedient tools. Again, data collected from a sufficient sample of temporally distinct sites may shed light on the preference of these types of cores through time, and, perhaps, by ethnographic group. At present, this sample of 10 sites represents about 5,000 years of human use and occupancy of the study area. Older sites are undoubtedly present within the area and across the Modoc Plateau, documenting another 5,000 years at the least.

The two theses by Van de Hoek (1990) and Luhn (1998) have demonstrated that the distribution of Blue Mountain obsidian may be a key indicator of the territory of the Kokiwas band of the Modoc Tribe. Therefore, it appears possible to use the obsidian sourcing data from these sites to indicate possible tribal, and even band-level, cultural affiliation. Thus, we have a mechanism to verify ethnographic descriptions of territory, and, perhaps this data may be used to identify such territories going back in time? This may be a method to help verify the Baumhoff and Olmsted (1963 and 1964) “Hokan Hypothesis” regarding the movement of ancestral Achomawi/Pit River peoples from the northern Sacramento Valley in to the Pit River

SITE	TERMINAL PREHISTORIC	LATE ARCHAIC	MIDDLE ARCHAIC	EARLY ARCHAIC
MOD-3745 (Single Episode)		670		
MOD-4936 (Four Episodes)	470	1,175	1,800	3,110
MOD-4980 (Three Episodes)	535		2,160	3,570
MOD-2861 (Four Episodes)		670 1,430	2,680	3,725
MOD-2825 (Two Episodes)	600	1,475		(4,200?)
MOD-2479 (Four Episodes)		1,250	2,290	3,420 4,920
MOD-5841 (Single Episode)	535			
MOD-1588 (Two Episodes?)	670		(1,860?)	
MOD-4237 (Single Episode)	600		(2,100?)	
MOD-3305 (Single Episode)		(750?) (1,220?)	2,420	

NOTE: The years given above are "yrs. Before Present", with "Present" being 1950. Dates in parentheses (?) are possible use dates, but have too few hydration readings to be certain. EML – East Medicine Lake; GG = Grasshopper Group.

Figure 2: Time periods represented (years before present based on EML/GG obsidian hydration).

area and the Modoc uplands. Similarly, this type of data may be used to address the more recent "Numic Expansion" (Madsen and Rhode 1993).

Referring back to Kowta's (1975) Northeastern California research design, these small prehistoric foraging and logistical locations are important sites, for in order to fully understand the prehistory of this area we need to identify, record, analyze and interpret all types of archaeological sites so that we may "*identify recurring activities performed by a designated segment of the population at a particular locality at specified times*" (p. 3) These data will help us reconstruct a group's annual cycle and use across a landscape, and, due to the ability to place these sites in temporal perspective, we can accomplish this task through time. In trying to understand a group's lifeway, it is the more numerous, small sites that are going to yield the *majority* of the information needed to truly reconstruct their annual cycle across the landscape and through time.

Two sites, MOD-1103 and MOD-1588, may have data that are "gender-specific"; that is, they may be interpreted to represent activities that are female-oriented. The numerous drills/piercing tools and split-cobble basalt scrapers may indicate that MOD-1103 was the scene of processing hides and, perhaps, clothing manufacture. MOD-1588, with its scrapers, expedient tools, and metates, may represent a plant-food processing location. If these interpretations are correct, then it may be possible to identify the pattern of female-oriented activities across the landscape, and across time, too.

Part of the surprising results of this project was in the apparently large "gaps of time" present between use episodes at some sites. MOD-4936, for example, appears to have had four use episodes take place: the first dating to roughly 3110 years BP, followed by a second episode about 1,300 years later, another episode about 625 years after that, and a final episode about 705 years later. MOD-2479 has a similar use record with gaps of about 1,500 years, 1,130 years, and 1,040 years between use episodes. These very long gaps indicate that these locations, most likely, were not part of a systematic annual cycle or a group's settlement/subsistence pattern. Rather, they appear to be nothing more than the fortuitous re-use of a spot that had been previously used by someone who left behind evidence of that use.

One possible explanation of this behavioral pattern may be contained in the semi-tongue-in-cheek hypothesis called the "*This must be a good spot*" hypothesis. The basic premise is that someone initially does some activity at some spot – butchers game, manufactures or repairs chipped-stone tools, camps overnight, or whatever – and leaves behind visible evidence of this use, such as waste flakes, expedient tools, broken tools, etc. At some future time, perhaps a few hundred or thousand years later, another person or small group is traversing the same landscape, they are sort of tired and looking for an excuse to stop and rest, when they come across the archaeological evidence left behind by the first group. Someone, noticing the things on the ground, says "*Oh, this must be a good spot! Let's rest here.*" And so, a second cultural deposit is then

left behind at that “good” spot. This action is repeated over again at some other future time, and so on. It could be just that simple – human nature at work.

At any rate, due to the nature of the predominant toolstone in this area – obsidian – and its ability to be placed in a rough temporal perspective via obsidian hydration, this class of site has the potential to address research questions dealing with chronology. Where temporally diagnostic artifacts, such as projectile points, may provide a very rough temporal placement, usually a period of time from 500 to 4,000 years, obsidian hydration may narrow that time period down considerably to a window of a few decades. This chronological control then allows for the identification and interpretation of settlement patterns and subsistence patterns through time and across the landscape.

The cultural materials present within this class of site, although limited at times, may be used to identify the site function (Figure 3). Ebert (1992: 35-36) has pointed out that “expedient tools are by definition manufactured where they are needed, and they are also discarded there. They occur in direct association with the activities in which they were used and discarded almost immediately...”

Therefore, coupled with our ability to place these sites in a temporal perspective, we have the potential to identify types of activities and where those activities occur across the landscape through time. Thus, we can potentially reconstruct past land use and how it may have changed through time, and discuss research questions and hypotheses as to why any observed

changes may have occurred (again, referring to settlement patterns and subsistence patterns).

The cultural materials present within this class of site also highlight lithic technology, and, once again, with our temporal control, we can explore any changes in this technology across the landscape through time.

Associated with lithic technology is the procurement of the raw toolstone. This procurement may also be studied temporally. In addition, this area may have implications for another research topic – trade patterns, and any changes through time (Figure 4). The dispute with the geochemical identification of East Medicine Lake (EML) versus Grasshopper Group or Grasshopper Flat/Lost Iron Well/Red Switchback (GF/LIW/RS) obsidian sources has been going on for years. The data present in these sites may help resolve that dispute, and may help to clarify that, at least in this author’s opinion, there are two distinct trade/interaction spheres operating in this area – the GF/LIW/RS obsidians located on the western side of the Medicine Lake Highland are primarily accessed by and traded to west-side (downriver) Pit River bands and other folks to the west, while the EML sources are primarily utilized by east-side (upriver) Pit River bands and the Gumbatwas band of the Modoc.

Tied in with the lithic technology/procurement of toolstone may be the ability to address questions dealing with population movement across the landscape and through time. This area might be addressed down to the “band” territory, as suggested by the two theses dealing with the distribution of Blue Mountain obsidian.

Figure 3: Site function.

SITE	ACTIVITIES REPRESENTED					SITE AREA		
	Stone Tool Manufacture or Repair	Animal Processing or Butchering	Cooking of Game or Processing	Plant Food Collection or Preparation	Hide Working or Clothes Manufacture	Site Size (Original)	Site Size (Expanded)	Percentage Increase
MOD-3745	Yes	Yes	Yes	-	-	210	450	114%
MOD-4936	Yes	Possible	-	-	-	264	630	138%
MOD-4980	Yes	Possible	-	-	-	600	724	20%
MOD-2861	Yes	Possible	-	-	-	646	1,050	62%
MOD-2825	Yes	Possible	-	-	Yes?	561	2,700	380%
MOD-2479	Yes	Possible	Possible	-	-	760	1,628	114%
MOD-5841	Yes	Yes	Yes	-	-	120	180	50%
MOD-1588	Yes	Possible	-	Yes	Possible	900	3,520	291%
MOD-4237	Yes	Possible	-	-	-	324	396	22%
MOD-3305	Yes	Possible	-	-	-	676	676	0%

SITE	OBSIDIAN SOURCES REPRESENTED												TOTAL
	EML	GG	GF	GM	CB	BL	BK	SP	T	SW	SH	UN	
MOD-3745	X	X	-	-	X	-	-	X	-	-	-	-	4
MOD-4936	X	X	-	-	-	-	-	-	-	-	-	X	3
MOD-4980	X	X	X	-	-	X	-	-	-	-	-	X	5
MOD-2861	X	X	-	-	-	X	X	-	-	-	-	-	4
MOD-2825	X	X	-	X	X	-	X	-	-	-	-	-	5
MOD-2479	X	X	-	-	-	-	-	-	-	-	-	X	3
MOD-5841	X	X	-	-	-	X	X	-	-	-	-	-	4
MOD-1587/1588	X	X	-	X	X	X	X	-	-	X	X	-	8
MOD-4237	X	X	-	-	-	X	X	-	-	-	-	-	4
MOD-3305	X	X	-	-	-	X	-	-	-	-	-	-	3

EML – East Medicine Lake GG – Grasshopper Group (either EML or GF) GF – Grasshopper Flat/Lost Iron Well/Red Switchback GM – Glass Mountain  
 CB – Cougar Butte BL – Blue Mountain BK – Buck Mountain Sp- Spodue Mountain T – Tuscan SW – South Warners SH – Sugar Hill UN – Unknown

Figure 4: Trade/procurement patterns.

As, hopefully, this report has documented, these “small prehistoric foraging and logistical locations” have, *collectively, as a thematic class of site*, the ability to contribute valuable archaeological information and data that are necessary, and important, in order to fully study and interpret man’s prehistoric past in northeastern California.

The second question, dealing with the adequacy of current standard archaeological testing methods, such as the use of the “sparse lithic scatter” CARIDAP (see Jackson, et al. 1988) for these sites, may be answered, with homage to Tom King (1998), with an ambiguous “It depends.” It depends upon your goals – if your goal is to say that the site is NOT eligible for the National Register, contains little or no valuable information important in prehistory, and should be dropped from future management considerations, then the standard method of a couple of 1-x-1-meter units is appropriate and useful. On the other hand, if your goal is to collect sufficient information from the site to contribute to an archaeological understanding of the site and contribute useful archaeological data to understanding and reconstructing past lifeways, then the method does not work most of the time in this area. It simply boils down to a sample size that is just too small to be meaningful. A sample of less than ½ of 1% is not adequate to successfully identify the true nature of most sites—either the activities present within them or the temporal period or periods they represent—with any real validity. The current project averaged more than a 4% sample, and in a couple of cases nearly a 10% sample was recovered.

Our third major question regards the National Register eligibility for these sites. It is our opinion that,

on the one hand, while individual sites may have limited information on a site-by-site basis, and as such, individually may not meet the “threshold of significance” to be eligible for the Register, on the other hand, as a thematic class or type of site, these “small prehistoric foraging and logistical locations” collectively have the potential to yield information important in prehistory.

As presented above, this thematic class of site has the potential to address the following important research topics: chronology, site function, lithic technology, settlement patterns, subsistence patterns, and population movement. Additionally, a seventh area may be addressed, and that is trade patterns dealing with obsidian procurement.

As such, this class of site may well be eligible for the National Register of Historic Places under Criterion d. Eligibility aside, however, this class of site needs to be managed in such a manner that the information potential contained within them is not carelessly discounted and the relevant archaeological data not adequately retrieved.

To that end, then, we suggest that this class of site may be subject to a carefully crafted programmatic agreement designed to “conserve” the archaeological values. Given that we now have some good information on the archaeological content of this class of site, and on the nature of the rather shallow cultural deposits and shallow soils within this study area, then we should be able to make reasonable management recommendations and prescriptions that would allow for the Modoc National Forest to move from its current “flag-and-avoid” management style to a more

proactive “flag-and-treat” management. That is, there may be certain methods of implementing various undertakings, such as juniper treatments, timber thinning, prescribed burns, and other types of fuels-reduction and ecosystem-management activities, that may take place with the identified site limits and not do any significant damage to the archaeological values present.

Such a programmatic agreement should be developed whether or not a formal determination of eligibility for the National Register of Historic Places is agreed upon. This document may serve as the technical support document for that agreement.

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