# THE COLLORD SITE (CA-Sis-S15):

# A PROTO-KAROK VILLAGE AT HAPPY CAMP

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## ABSTRACT

Northwestern California's cultural and linguistic diversity provokes questions about how, when and why its several ethnic groups emerged as distinct cultures. Newly analyzed data from the Collord Site (CA-Sis-S15), a prehistoric settlement on the Klamath River near Happy Camp, shed light on the emergence of the Karok system. It suggests that a non-sedentary, non-village-organized, non-fishing-oriented, Late Archaic way of life existed in the Klamath drainage prior to the arrival of Algic and Athapaskan speaking peoples. It also suggests that obsidian exchange developed earlier than riverine adaptation.

## INTRODUCTION

One of the continuing problems in the archaeology of northwestern California concerns the emergence of its distinctive patterns of sedentary village life with large population aggregates, complex social institutions and intensive riverine-oriented adaptation. In evolutionary terms, how did cultures become transformed from their small-scale, egalitarian, band-level, terrestrially-focused Archaic predecessors? And what relationship did this transformation have to the presumed migration of Algic and Athapaskan speakers into the area some 1000 years ago?

I have been interested in these questions since the early 1970s when my wife and I did some fieldwork for the U.S. Forest Service along the Klamath River in the traditional territory of the Karok people. The Karok ethnographic area still has seen very little archaeological excavation, so even the modest amount of testing we did in 1972 has value (Chartkoff and Chartkoff 1975).

This paper examines one site we tested at that time. It is the Collord Site (CA-Sis-S15) near Happy Camp. At the time we assumed that the Collord Site was a protohistoric village. Recent reexamination of the collection, along with some newer data, indicate the site is earlier, however, and that it may shed

some light on the transformation from Archaic to protohistoric cultures along the Middle Klamath River.

## BACKGROUND

The Collord Site is named for Mr. and Mrs. Everett Collord of Happy Camp, the landowners of the site when it was tested. The site is situated on a high terrace overlooking the Klamath River about 1.5 lineal miles (2.3 km) east of Happy Camp. It lies west of, and down slope from, State Highway 96, off the Morgan Point turnoff (Figure 1).

The test excavations were undertaken as part of a cultural resource management program provided for Region V of the U.S. Forest Service in 1972. The main aim of the program was the provision of training for 40 Forest Service employees in elements of cultural resource management. The opportunity was also used to provide similar training for 15 students from Michigan State University. In addition, the training exercises conducted by these students were used to gather some basic archaeological data in the traditional ethnographic territory of the Karok people. At that time, no published archaeology had been done in the Karok territory. This work was intended to begin compiling a site record inventory and to test-excavate some representative sites as time permitted. The results were also intended to help Klamath National Forest establish a data base for those parts of the forest within Karok territory.

The field season was conducted between June 22 and July 30, 1972. It was directed by Kerry K. Chartkoff and the author, with the assistance of three graduate students from Michigan State: Janet Brashler, Jeffrey Tordoff and Judy Tordoff. During the season about 100 named Karok ethnographic places along the Klamath River were visited and recorded, along with some 40 additional prehistoric and historic sites that were located during survey. The results were summarized in a study of Karok area settlement patterns (Chartkoff and Chartkoff 1975). In addition, test excavations were conducted at three prehistoric settlements and three historic sites (see Chartkoff 1986, 1989). The Collord Site was one of the tested prehistoric sites.

Work at the Collord Site was conducted between July 2 and July 21, 1972. A total of ten field days of actual testing was available. Altogether some 20 Forest Service employees and 12 M.S.U. students worked at the site. Because of the rest of the curriculum of the program, however, only an average of 6-7 worked at the site at any one time. Since most of them were having their first excavation training, progress was very modest. The fieldwork was directed by Judy Tordoff.

The Collord Site is located on the Happy Camp U.S.G.S. 7.5 minute topographic map. It is situated on the second major

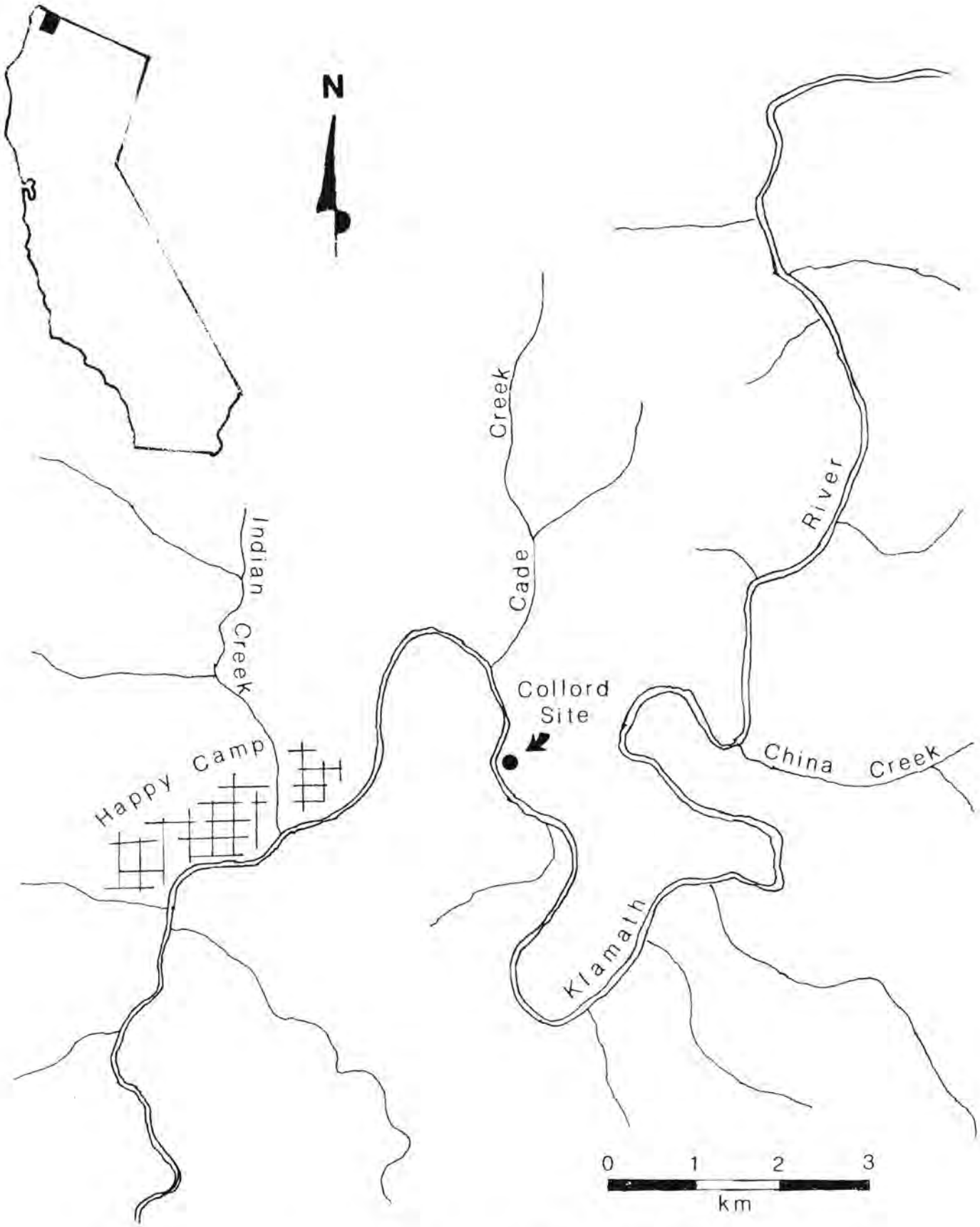


Figure 1: Location of the Collord Site (CA-Sis-S15)

terrace of the Klamath River, about 35 feet (11 m) above the summer river level. The site's existence was indicated by the occurrence of obsidian flakes in the soil of a garden on the south side of the Collord's house. The Collords kindly allowed us to conduct test excavations outside their garden in the lawn area. We were permitted to open six units. It was not possible to conduct random sampling. Test shovel probes across the lawn also were not permitted. Consequently, it is not known how large the site may be. Our test pits show it to cover an area of at least 20,000 sq. ft. (ca. 2000 sq. m), although it may be much larger.

Placement of test pits was based on the Collords' concern that their lawn not be heavily damaged. As a result, pits were placed in two clusters plus one additional pit. A site datum, established at the southeast corner of the Collord's house, was a corner post for a porch. From that point, a meridian was established due south, and a base line was extended westward. These lines were divided into 5' intervals (ca. 1.5 m). Each interval was numbered in consecutive units south or west of datum: S1, S2, S3, W1, W2, W3 and so forth. Grid units were based on the resulting 5' squares. Each unit was designated according to the lines intersecting to form its southwest corner. These intersections defined the pit datum. Each pit datum was measured by transit from site datum. All locations within a pit were measured three dimensionally from pit datum (Figure 2).

The test units chosen for excavation were units S8/W20, S8/W22, S12/W2, S12/W5, S12/W9, and S31/W24. Each unit was excavated by hand trowel. All excavated soil was sifted through screens with 1/4" mesh (ca. 8 mm). Units were excavated in 6" arbitrary levels (ca. 15 cm). All debris from each level was collected separately for processing at the field laboratory. A cube six inches on a side was collected whole from the center of the north wall of each level for later analysis.

Because of the modest amount of time and labor available, none of the units was excavated to sterile soil. The deepest unit (S31/W24) was excavated eight levels deep (4 ft or ca. 120 cm). Among the six pits, a total of 28 levels was recorded for a total volume of 350 cubic feet. The site as a whole has a volume no less than 80,000 cubic feet. The resulting sample amounted to less than 0.005% of the midden, and probably a good deal less than that amount.

The site is located at or near a named Karok settlement, called Okurimshurak. This settlement was noted by Kroeber (1936) in his brief paper on Karok towns. It also is listed by William Bright (1957) in his monograph on the Karok language, where it is shown on Map 1 as Site 7. Bright's Site 6, called Kiritskan, is located just to the north of Okurimshurak but appears to be on a lower terrace. Based on this identification, it was suspected that the Collord Site was the ethnographic settlement of

*This page has been redacted to protect the location of this site. Should you require specific location information, please contact the SCA Business Office at office@scahome.org*

Okurimshurak and, therefore, might reflect the protohistoric Karok riverine village way of life in our archaeological sample. The Collord Site was, therefore, chosen for testing.

## RESEARCH ORIENTATION

In a recent paper the author argued from other data that the Klamath River area, in contrast to the North Coast Ranges, was very modestly used by Archaic foragers in earlier prehistory (Chartkoff 1989). Two particular factors were seen at work. One was the lack of chippable stone. The Middle Klamath River area is notably poor in colloidal silicates and has no obsidian or basalt. This lack is a serious limitation for any stone-based technology. It is particularly limiting for Archaic-style technologies which rely heavily on locally available resources.

A second limitation involves the relative poverty of the habitat for foods edible by humans. The middle Klamath River traverses the western Klamath Mountains. This area is very high in biomass, but the great bulk consists of coniferous trees, especially Douglas fir (Pseudotsuga menziesii). The region also is notable for its great diversity of species. According to Jepson (1963), the Klamath Mountains have the highest number of endemic species of any comparable area in North America. On the one hand, the prevalence of conifers means that the bulk of the area's biomass is not usable for food by humans or the species humans can eat. On the other, the high diversity of other species means that the population size of each other species is small. Thus, the quantity of edible terrestrial plant and animal foods is not very great compared to nearby regions such as the North Coast Ranges where chaparral and oak stands are much heavier, as consequently were the populations of deer, elk and rabbits.

The most important food source for the middle Klamath was the salmonid fishery of the river itself. But the successful use of the fishery required organized collective labor, preservation methods, storage facilities, and high levels of sedentism, none of which were features of Archaic adaptations. It was, therefore, hypothesized that the effective settlement of the middle Klamath was not possible until means were developed to import quantities of chippable stone and to harvest surpluses of salmonids from the river.

It is clear that by late prehistory these limits had been overcome. Fairly complex exchange systems were developed to import obsidian, primarily from eastern Siskiyou County, to allow lithic technology to function (see Hughes 1978, 1982). In addition, the institutions necessary to allow the surplus collection and storage of salmonids were evolved. How did things proceed in this evolutionary direction? When the Collord Site project was begun, it was expected that the testing would reveal

details about the later stages of development of the pattern of Karok riverine adaptation. Subsequent analysis has suggested that, instead, the Collord Site informs about earlier phases, during the transition from Archaic to Pacific Period adaptations 2000 or more years ago (Chartkoff and Chartkoff 1984; Fredrickson 1984). The following comments summarize what has been learned about the site from analysis of the 1972 sample.

## NATURE OF THE MIDDEN DEPOSIT

The deposit of the Collord Site consists of a medium to dark brown midden with a moderate amount of ash and grease. Charcoal, although present in minute flecks, was not abundant in lumps. Only 45 grams of charcoal were recovered from the 28 levels excavated. Most recoveries amounted to 0.3 gr. or less. The soil was quite dense and compacted, and was fairly heavy in fire affected rock. Bone was poorly represented. Soil pH values of 6.0-7.0 suggest that high acidity was not responsible for the paucity of bone.

The top two levels (12 in. or 30 cm) of the deposit were disturbed fairly substantially by post-depositional processes. Chief among them were the mechanical turning of the soil by plowing and tilling, and the churning of the soil by small mammals, especially the California ground squirrel (Citellus beecheii). A number of pieces of lightly charred and unburned wood scraps were found in the top two levels of the deposit, as was the majority of the bone fragments recovered. Below a depth of 12 inches, evidence for disturbance was much less.

## NATURE OF THE COLLECTION

The test excavations yielded a collection of moderate size but one which still has some interesting aspects. The collection is dominated by 1077 pieces of chipped stone, including 95 retouched pieces, 143 utilized flakes, and 839 waste flakes or pieces of debitage. By contrast, only 20 cores and core fragments were recovered, mostly micro-cores of obsidian, and only five pieces of ground stone. The faunal remains were comparably modest: only 17 bone fragments were found, all of medium-sized or larger mammals but none identifiable to species. There were 80 lumps of red mineral pigment or ochre found. Historical artifacts consisted primarily of nails, and numbered 22 pieces in all. None of the historical materials showed any signs of having been modified or employed in a traditional Karok technology (Figure 3).

The chipped stone is dominated by obsidian. Of the 1077 flakes and flake tools, 85.7% are of obsidian (Table 1). This percentage indicates the significant lack of chippable stone within the traditional territory of the Karok. Thomas M. Origer

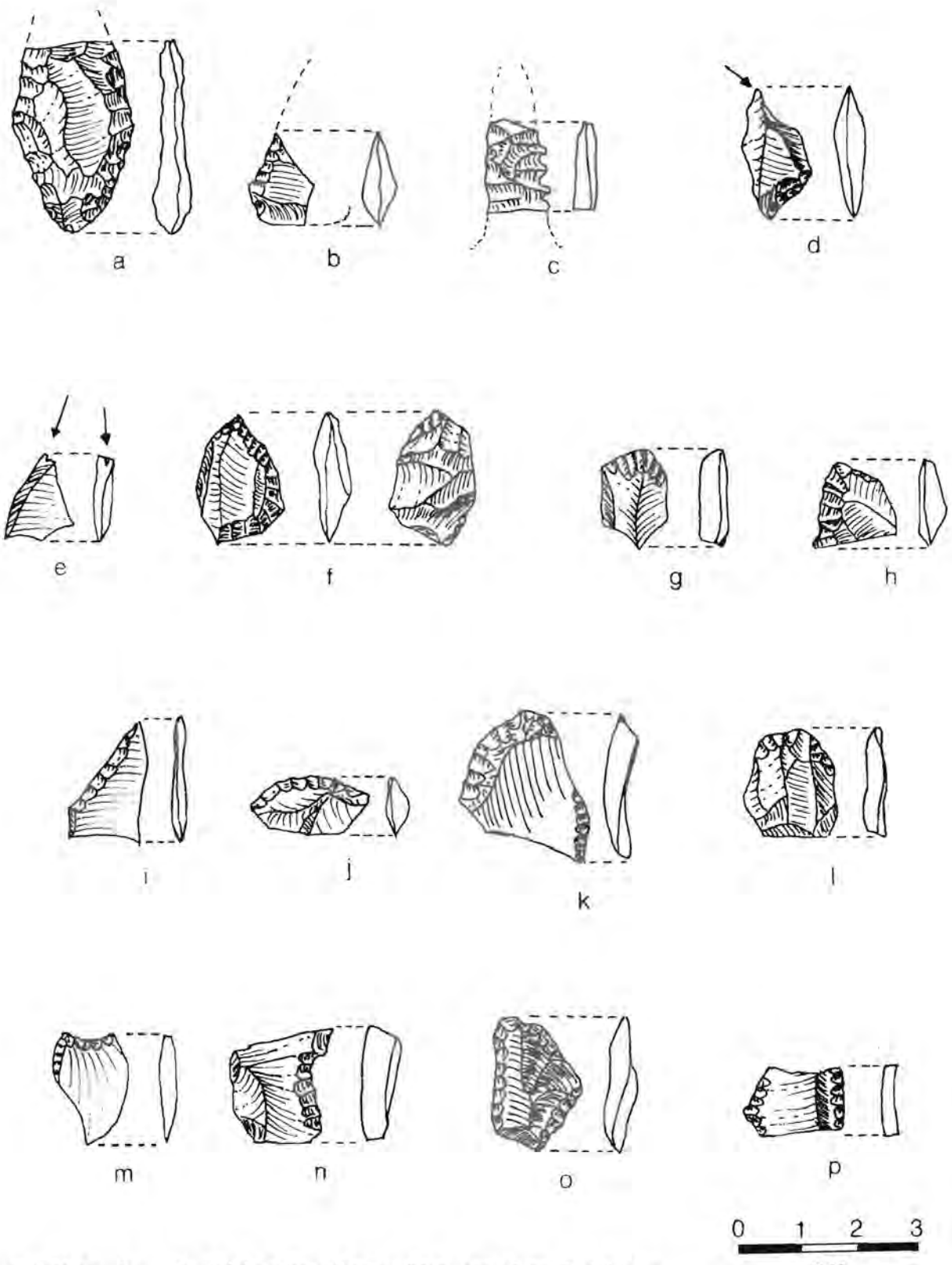


**Figure 3. Artifacts from the Collord Site.**

[a. KR-501: projectile point; b. KR-759: projectile point fragment; c. KR-475: drill fragment; d. KR-521: graver; e. KR-797: burin; f. KR-843: bifacially retouched misc. piece; g. KR-505: end scraper; h. KR-550: side scraper; i. KR-381: scraper on a diagonal; j. KR-869: transverse scraper; k-l. KR-840, 1583: thumbnail scrapers; m-n. KR-826, 539: notched scrapers; o-p. 601, 472: compound scrapers; a,d,h are jasper; c,e are chert; all others are obsidian.]

of Sonoma State University performed sourcing by XRF on 25 of these pieces. Of them, 24 came from the Medicine Lake Highlands locality and the other was associated with the Grasshopper Flat locality, both of eastern Siskiyou County. The absence of materials from the Clear Lake sources in the North Coast Ranges is significant because it indicates a lack of regional interaction between the North Coast Ranges and the Klamath River drainage at the time when the Collord Site was occupied. Instead, the Collord Site's orientation lay with the Upper Klamath River drainage, which significantly lay, along with the Karok territory, in the hands of speakers of Hokan languages. It was this orientation which was related to access to essential raw materials for the lithic industry of the Collord Site community.

Table 1: Percentage of obsidian in Collord Site chipped-stone artifacts.

| Category | Number Obsidian | Number Non-obsidian | Total umber | Percent Obsidian |
|---|---|---|---|---|
| Retouched | 79 | 16 | 95 | 83.2% |
| Utilized | 124 | 19 | 143 | 86.7% |
| Non-utilized | 720 | 119 | 839 | 85.8% |
| TOTAL CHIPPED STONE | 923 | 154 | 1077 | 85.7% |

The retouched chipped stone artifacts can be divided into a dozen categories, none of which has many examples. The area of the site tested clearly was not a center of tool manufacturing or for any intensive activity, but the variety of tools present indicates that a fairly wide range of domestic activities was performed. The categories of tools can be divided initially into two larger sets: tools with bifacial retouch and tools with unifacial retouch.

Four categories of bifacially retouched pieces can be recognized. The most numerous category includes projectile points and point fragments, of which ten examples were recovered. Seven of them are of obsidian, one is of jasper, one of yellow-gray chert, and one of chalcedony. Most pieces are too fragmentary to reflect style. The most diagnostic piece is a bi-pointed or diamond-shaped point of jasper, while two obsidian point fragments appear to reflect convex base forms. The bi-pointed specimen is most similar to the McKee Series points as defined by Basgall and Hildebrandt for the Sacramento River Canyon in Shasta County (1989:165-170; see especially Figure 18a). They find McKee points most commonly associated with occupations dating between 3000 and 4000 BP.

The bifacially retouched pieces also include four drills and

borers, five gravers and burins, and three miscellaneous bifacially retouched pieces. Among the drills, a gray chert piece has elongated, parallel, serrated sides with a thick cross-section and appears to be a mid-section of a T-shaped drill. The other three specimens have projecting spurs with rotary wear around the projections. One is of obsidian, another of jasper and the third is of gray chert. The jasper piece is a double drill, while the obsidian one combines a drill with an end scraper and a notch. The gravers and burins are almost all of obsidian. They represent pieces that have been snapped after bifacial retouch was begun, and on which a graver or burin edge was created by producing a second snap or a removal by burin blow at right angles to the original snap. The three other pieces include a bifacially worked knife fragment on a tabular metamorphic rock, a small obsidian biface fragment, and another biface fragment on gray-green chert.

All told, the bifacial pieces have a much higher percentage of non-obsidian than the unifacial pieces: roughly 38% versus 10%. Why this should be so is an interesting question. Sampling error may be responsible, but differential curation behavior may also be the answer. Individuals may have kept and carried bifacial pieces with them while the simpler unifacial tools may have been made and discarded as needed.

Unifacially retouched pieces outnumber bifacial pieces almost three to one. They also include more than twice as many varieties (see Table 2) of tools.

The variety of scraping tools, along with the number of utilized flakes, suggests a fairly wide array of household tasks was performed at the site, ranging from hide preparation to basketry production. The tools suggest tasks by both genders rather than a special-function camp used by one gender. It would be useful to conduct microscopic edge wear analysis on the tools to test this suggestion. Unfortunately, reliable methods for doing edge wear analysis on obsidian have not yet been developed.

Features

Four features were found during the test program. All four consisted of rock concentrations. Each rock feature was composed of a mixture of fire-affected cobbles and unaffected cobbles, with no tools in direct association. No evidence for house floors, fire pits, storage facilities or other architectural remains was found. Neither were any marked concentrations of tools or debitage encountered. Given the limited sample recovered, there is no way to know now whether the lack of other features is due to their absence or to sampling error.

Faunal Remains

Faunal remains were scarce in the Collord Site sample. Only 17 bone fragments were found. Almost all were found within the top 12 inches of the deposit. None was identifiable to species,

but all were mammal bones, principally from large mammals, most probably deer. No fish scales, bones or otoliths were recovered from either the excavations or subsequent studies of soil samples. The faunal data, therefore, do not reflect riverine exploitation, even though the site overlooks a rich salmon stream.

Site Stratigraphy

These test excavations never reached the base of the deposit. The deepest unit extended down for eight levels or 48 inches. No physical stratigraphic layering was observed in any of the unit profiles. The vertical distribution of artifacts in the deposit suggests, however, that the site has some vertical segregation of materials (see Table 3). Although not all units were excavated to the same depth, the fact that frequencies increase in lower levels indicates that real patterning occurs in artifact distribution.

Table 2: Collord Site retouched flake tools by type.

| Type | Obsidian | Non-Obsidian | Total |
|---|---|---|---|
| Bifacially Retouched | | | |
| 1. Points and frags. | 7 | 3 | 10 |
| 2. Drills and borers | 1 | 3 | 4 |
| 3. Gravers and burins | 4 | 1 | 5 |
| 4. Misc. bifacially retouched pieces | 1 | 2 | 3 |
| Subtotal: | 13 (59.1%) | 9 (40.9%) | 22 |
| Unifacially Retouched | | | |
| 1. End scrapers | 3 | 0 | 3 |
| 2. Side scrapers | 5 | 1 | 6 |
| 3. Transverse scrapers | 1 | 0 | 1 |
| 4. Scrapers on diagonal | 5 | 0 | 5 |
| 5. Thumbnail scrapers | 10 | 0 | 10 |
| 6. Notched scrapers | 6 | 1 | 7 |
| 7. Compound scrapers | 9 | 0 | 9 |
| 8. Trimming flakes | 20 | 1 | 21 |
| 9. Misc. unifacially retouched flakes | 5 | 4 | 9 |
| Subtotal: | 64 (90.1%) | 7 (9.9%) | 71 |
| Total: | 77 (82.8%) | 16 (17.2%) | 93 |

The data in Table 3 indicate that artifact frequencies peak in levels 2 and 3, decline in level 4, and rise in level 5, to decline again sharply in level 6. They rise again in level 7,

Table 3: Vertical Distribution of Artifacts in the Collord Site

| Depth | Points, Point Frags | Drills, Borers | Gravers, Burins | Bifacial FRP's | End Scrapers | Side Scrapers | Transverse Scrapers | Scrapers on Diagonals | Thumbnail Scrapers | Notched Scrapers | Compound Scrapers | Trimming Flakes | Unifacial FRP's | Utilized Flakes | Nonutilized Flakes | Cores, Core Tools | Ground Stone | Bone | Red Ocher | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Surface | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 14 | 26 | 0 | 0 | 11 | 0 | 54 |
| Level 1 (0-6") | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 7 | 3 | 26 | 236 | 1 | 0 | 4 | 38 | 319 |
| Level 2 (6-12") | 2 | 3 | 1 | 2 | 1 | 2 | 0 | 2 | 2 | 2 | 3 | 8 | 1 | 37 | 210 | 9 | 1 | 0 | 27 | 313 |
| Level 3 (12-18") | 2 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 2 | 2 | 0 | 3 | 3 | 17 | 92 | 2 | 0 | 0 | 15 | 144 |
| Level 4 (18-24") | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 14 | 63 | 1 | 0 | 0 | 0 | 89 |
| Level 5 (24-30") | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 1 | 1 | 1 | 9 | 103 | 2 | 1 | 0 | 0 | 122 |
| Level 6 (30-36") | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 25 | 2 | 1 | 0 | 0 | 35 |
| Level 7 (36-42") | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 1 | 1 | 16 | 61 | 2 | 1 | 2 | 0 | 88 |
| Level 8 (42-48") | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 | 23 | 1 | 1 | 0 | 0 | 34 |
| Totals | 10 | 4 | 5 | 5 | 3 | 6 | 1 | 5 | 10 | 7 | 9 | 21 | 9 | 143 | 839 | 20 | 5 | 17 | 80 | 1198 |

and fall off again in level 8. Within this trimodal distribution, there are some differences as to what artifact categories predominate in upper and lower parts of the deposit. For example, drills occur only in the top two levels of the deposit, and end scrapers are found only in levels 2 and 3. Side scrapers, transverse scrapers and notched scrapers occur only above level 6. Red ocher was found only in the top three levels. By contrast, 80% of the ground stone occurs in the four lowest levels. Do these differences indicate functional and temporal changes in the site over time? The possibility is interesting and deserves further research. It is possible that sampling error is responsible, since in each case the number of tools per type is too small for statistical confidence. It also is possible that taphonomic factors have affected larger and smaller artifact types differently. It still remains possible, however, that the site was occupied over a considerable span of time and that functional changes in site use took place. One way to evaluate this idea is to see whether obsidian hydration data support the notion of a considerable period of occupation.

Obsidian Sourcing

Thomas Origer of Sonoma State University has sourced 25 samples from the Collord Site using XRF. Results are presented in Table 4. They show that 24 of the samples came from the Medicine Lake Highlands source in eastern Siskiyou County, and the other was from the Grasshopper Flats locality in the same region. This pattern shows that the primary lithic acquisition relationships developed by the people at the Collord Site lay within the Klamath River drainage. The sources in eastern Siskiyou County are much closer than any others, as well as being very productive, so this result is not surprising. It also may be relevant, though, that the peoples living around the sources, like the Karok, were speakers of Hokan languages.

Obsidian Hydration

The samples sent to Sonoma State University for hydration analysis were mostly taken from a single pit, S31/W24. This pit, the deepest one excavated, provided samples of obsidian from all but one of its eight levels. In this way it was hoped that results would reflect on the relative ages of the pit's levels as well as on any possible changes in source preference over time. Usable hydration results were obtained from 21 samples from this unit. The results are presented in Table 4. Table 5 provides mean values for the readings of each artifact, and for the artifacts in each level.

The range of values from this unit show that the smallest reading has a substantial amount of hydration and the largest reading is somewhat less than 60% greater than the smallest. The largest reading comes from an artifact that exhibits weathering, so the overall pattern is more reliable than the extreme value.

Table 4: Obsidian Hydration and Source Values for 25 Artifacts From the Collord Site (Provided by Thomas M. Origer, Sonoma State University)

CA-SIS-SIS — Submitted by: Joe Chartkoff - M.S.U. — March 1990

| Lab# | Catalog # | Description | Provenience | Remarks | Readings | Mean | Source |
|---|---|---|---|---|---|---|---|
| 01 | KR-567 | debitage | S31;W24/Level 1 | none | 4.2 4.2 4.3 4.4 4.5 4.5 | 4.4 | ? (v) |
| 02 | KR-595 | debitage | S31;W24/Level 1 | none | 4.3 4.4 4.4 4.5 4.5 4.7 | 4.5 | MLH (v) |
| 03 | KR-596 | debitage | S31;W24/Level 1 | none | 4.4 4.4 4.5 4.5 4.5 4.7 | 4.5 | MLH (v) |
| 04 | KR-742 | debitage | S31;W24/Level 2 | none | 2.4 2.5 2.5 2.6 2.6 2.6 | 2.5 | GF (v) |
| 05 | KR-743 | debitage | S31;W24/Level 2 | none | 4.4 4.5 4.5 4.7 4.7 4.7 | 4.6 | MLH (v) |
| 06 | KR-1629 | debitage | S31;W24/Level 2 | none | 4.2 4.4 4.4 4.4 4.4 4.4 | 4.4 | MLH (v) |
| 07 | KR-1640 | debitage | S31;W24/Level 3 | none | 5.3 5.3 5.4 5.4 5.4 5.4 | 5.4 | ? (v) |
| 08 | KR-1641 | debitage | S31;W24/Level 3 | w | 4.8 4.8 4.9 4.9 5.0 5.0 | 4.9 | MLH (v) |
| 09 | KR-1643 | debitage | S31;W24/Level 3 | none | | DH | MLH (v) |
| 10 | KR-1583 | debitage | S31;W24/Level 4 | none | 4.5 4.7 4.7 4.8 4.9 4.9 | 4.8 | MLH (v) |
| 11 | KR-1590 | debitage | S31;W24/Level 4 | none | 5.1 5.3 5.3 5.4 5.5 5.5 | 5.4 | MLH (v) |
| 12 | KR-1636 | debitage | S31;W24/Level 4 | none | 4.9 4.9 5.0 5.1 5.1 5.1 | 5.0 | MLH (v) |
| 13 | KR-1559 | debitage | S31;W24/Level 5 | none | 4.1 4.2 4.2 4.3 4.4 4.4 | 4.3 | MLH (v) |
| 14 | KR-1589 | debitage | S31;W24/Level 5 | none | 3.9 4.1 4.1 4.1 4.2 4.2 | 4.1 | MLH (v) |
| 15 | KR-1658 | debitage | S31;W24/Level 5 | none | 4.1 4.1 4.2 4.2 4.2 4.2 | 4.2 | MLH (v) |
| 16 | KR-931 | debitage | S31;W24/Level 7 | none | 4.3 4.3 4.3 4.4 4.4 4.5 | 4.4 | MLH (v) |
| 17 | KR-1586 | debitage | S31;W24/Level 7 | none | 4.2 4.3 4.3 4.3 4.4 4.5 | 4.3 | MLH (v) |
| 18 | KR-1644 | debitage | S31;W24/Level 7 | none | 4.5 4.5 4.7 4.7 4.7 4.8 | 4.7 | MLH (v) |
| 19 | KR-1646 | debitage | S31;W24/Level 7 | none | 4.9 4.9 4.9 4.9 5.1 5.3 | 5.0 | MLH (v) |
| 20 | KR-833 | debitage | S31;W24/Level 8 | none | 4.8 4.8 4.9 4.9 5.0 5.1 | 4.9 | MLH (v) |
| 21 | KR-840 | debitage | S31;W24/Level 8 | none | 4.7 4.8 4.8 4.9 4.9 4.9 | 4.8 | MLH (v) |
| 22 | KR-843 | debitage | S31;W24/Level 8 | w | 6.3 6.3 6.3 6.4 6.6 6.6 | 6.4 | MLH (v) |
| 23 | KR-1662 | debitage | S31;W24/Level 8 | none | 5.3 5.4 5.5 5.5 5.5 5.5 | 5.5 | MLH (v) |
| 24 | KR-1579 | debitage | S8;W20/Level 2 | w | | | MLH (v) |
| 25 | KR-1609 | debitage | S8;W20/Level 2 | w | 1.1 1.2 1.2 1.2 1.2 1.2 | 1.2 | MLH (v) |

Lab Accession No.: 90-H886 — Technician: Thomas M. Origer

w = surface weathering

DH = diffused hydration

MLH = Medicine Lake Highland obsidian source in eastern Siskiyou County

GF = Grasshopper Flat/Lost Iron Wells/Red Switchback series of sources in eastern Siskiyou County

Table 5: Mean values of hydration readings from S31/W24.

| Level | Mean Values per Artifact | Mean Values per Level |
|---|---|---|
| 1 | 4.4; 4.5; 4.5 (microns) | 4.466 (microns) |
| 2 | 4.6; 4.4 | 4.500 |
| 3 | 5.4; 4.9 | 5.150 |
| 4 | 4.8; 5.4; 5.0 | 5.066 |
| 5 | 4.3; 4.1; 4.2 | 4.200 |
| 6 | no samples | |
| 7 | 4.4; 4.3; 4.7; 5.0 | 4.600 |
| 8 | 4.9; 4.8; 6.4; 5.5 | 5.400 |

As Table 5 shows, the average hydration values of obsidian artifacts in unit S31/W24 increases from Level 1 to Level 4. In Level 5 it declines to a smaller value than for Level 1, but then increases again in the lowest levels, reaching the greatest values in the deepest level.

The meaning of this pattern is not clear, and more readings as well as C-14 determinations are being sought to help clarify it. While sampling error may be at work, taphonomic effects cannot be discounted at this point.

## AGE OF SITE

Several lines of evidence bear on the possible age of the Collord Site. Initially it was assumed that the site represented an ethnohistoric settlement because it lay at the apparent location of the named Karok locality of Okurimshurak (Bright 1957: Map 1). If so, its age would fall in the period of roughly AD 1750-1850.

This interpretation could not be sustained, however. The site lacked any historical materials that could be related to a Karok occupation. It also lacked artifacts whose styles clearly belonged to the last several centuries of prehistory in the region, such as Gunther Island Barbed projectile points, saucer-shaped Olivella shell beads or Dentalium shells. It also lacked any architectural features characteristic of Late Period riverine occupation.

Of projectile points, a few base fragments appear to have convex forms, which could place them in the post-AD 1500 period (Gould 1972; Heizer and Mills 1952; Elsasser 1986), but also could be as early as AD 500 (Chartkoff 1988). The most diagnostic point, a bi-pointed specimen similar to McKee Series points from the Sacramento River Canyon area some 140 km to the SSE, would be best dated to the period between 3000 and 4000 BP (Basgall and Hildebrandt 1989:165-170). Studies in the North

Coast Ranges also place these points in an Archaic time frame (Fredrickson 1984; Hildebrandt and Hayes 1983, 1984; Eidsness 1985).

The obsidian hydration evidence also suggests an older age. Of the 21 usable readings from the same pit, none has a value of less than 4.1 microns, and the greatest is about 60% larger. Obsidian hydration readings from the nearby May Site provide radiocarbon dates in association and suggest that a hydration rind of 4.0 microns represents a calendric age in this area of at least 1000-1500 years (Chartkoff 1988:57). If so, the obsidian readings at the Collord Site, when combined with the McKee-like projectile point, suggest the site was first occupied perhaps 2500-3000 or more years ago. The lack of any evidence for riverine exploitation or village sedentism indicates the site ceased being used before the specialized riverine way of life was developed, or no more recently than perhaps 1500 years ago. If so, it may reflect the earliest stages of riverine settlement along the middle Klamath River, if not its Archaic antecedents.

## DISCUSSION

In a recent paper I argued that the Klamath River, in contrast to the North Coast Ranges, was very modestly utilized by Archaic foragers prior to A.D. 500. This low use stemmed from the lack of a diverse food base in sufficient quantity, the lack of chippable stone, and the lack of technology and social patterns to harvest and preserve salmon sufficiently. Once these limits were overcome, the Klamath River was able to support a much larger and more densely, permanently settled population than could comparable-sized areas of the North Coast Ranges (Chartkoff 1989).

This model was developed as a plausible hypothesis to account for the available evidence of late prehistoric settlement along the middle Klamath River and the lack of evidence for earlier periods. To test the model, data from earlier sites are needed. The Collord Site may offer such data.

Given that the Collord Site is located on the Klamath River and is at a named Karok locality, it would seem reasonable to assume that the focus of activity at the site was the exploitation of riverine resources (Bright 1978). Evidence for riverine exploitation is conspicuously absent, however. Fishing gear, such as net weights and fishing toggles, was not found. There has been no recovery of fish scales, bones or otoliths. While sampling error could well account for the absence of low-frequency items such as architectural features, fish remains at least should be in high frequency if present. Fish remains should be present if fishing were a major and persistent activity. So far, though, neither excavation data nor column sample analysis has yielded any fish remains. There is a

comparable lack of evidence for a major village. The lack of architecture has already been noted. The poverty of the site in terms of faunal remains, ground stone tools, charcoal, and black, greasy midden also is indicative that the site does not represent a village occupation.

The limited evidence available so far indicates that the Collord Site was not protohistoric, was not a riverine exploitation site, nor a sedentary village. If not, what was it most likely, and what would its significance be?

At this time, the site appears to date to perhaps the end of the Archaic Period, perhaps 2000-1500 years ago (Chartkoff and Chartkoff 1984: Chapter 3). Its establishment would appear to date within the Late Archaic Period. The variety of stone tool types indicates that a wide range of domestic activities was conducted at the site, involving both males and females. The site, therefore, is most likely a campsite rather than a special function site. Given the lack of architecture and other relevant features, it most likely is a temporary or seasonal campsite rather than a sedentary community. It appears to reflect a modest exploitation of land-based food resources such as hard seeds and mammals, rather than riverine exploitation. The lack of mortars and pestles suggests that acorn processing was not yet a feature of this adaptation, another sign that the site may be earlier than 1500-2000 years ago. Since deer in the region spend their summers at higher elevations and their winters at lower elevations, it is plausible to suggest that the Collord Site might reflect a winter occupation.

Several pollen studies in northwestern California have shown that in the period between 10,000 and 3500 years ago environmental conditions were more xeric than today. Mesic conditions more comparable to today began to emerge by about 3500 years ago (West 1989:48-49).

Archaic cultures of northern California appear to have responded to these climatic episodes. Several writers have noted that, prior to about 5000 years ago, Archaic foragers followed ways of life that emphasized diversified hunting and gathering, patterns which peaked between 5000 and 3000 BP when climatic modernization produced optimal conditions for upland exploitation. As climatic conditions began to evolve toward cooler, more mesic ones after 3500 BP, reduced upland resources and expanding resources at lower elevations led to an increasing emphasis on seasonal lowland exploitation. Both intensive riverine exploitation and systematic use of acorn crops, which together provided the foundations for a settled riverine village way of life in many parts of northern California, emerged between 1500 and 2000 years ago (Basgall and Hildebrandt 1989; Hildebrandt and Hayes 1983, 1984; Johnson and Theodoratus 1984; Kowta 1984). This reconstruction helps suggest an understanding of the place of the Collord Site in regional prehistory. At this

time, the Collord Site appears to be the earliest site yet identified within the Karok ethnographic territory. It appears to date to the early part of the emergence of mesic environmental conditions in the regions, and may reflect an early effort at exploiting lowland resources more intensively, before either salmon fishing or acorn exploitation had come to be developed.

In regional terms, the Collord Site appears to reflect an occupation that is more or less contemporary with Point St. George I on the Del Norte County coast (Gould 1966, 1972), if not a bit earlier. Like Point St. George I, the Collord Site may reflect an early expansion of seasonal foraging in low-elevation terrestrial habitats by populations that previously had concentrated their efforts more in habitats at higher elevations. It is perhaps significant that some of the gray-green chert used for tools at the Collord Site resembles the cherts naturally available in the vicinity of the Point St. George Site.

The great bulk of the chippable stone used at the Collord Site, however, clearly is obsidian from the eastern Siskiyou County sources some 140-150 km ESE of the Collord Site. The Collord Site shows that a solution to the problem of lack of chippable stone was developed through the evolution of social mechanisms for the importation of the needed raw material. The solution was developed historically earlier than was the development of intensive riverine exploitation and, therefore, may be seen as a necessary preadaptation. The solution also relied on transmissions along the Klamath River, primarily with upstream people, rather than depending on sources from across the mountain ranges. This point helps clarify the distinction between the Klamath River drainage and the North Coast Ranges as separate cultural provinces, and helps explain the lack of obsidian from the Clear Lake area in the Klamath region. Also, the chippable stone solution was developed when settlement of a seasonal nature had begun along the Klamath but was not yet sedentary. The evolution of the exchange system involving obsidian thus can be seen as a central element in the subsequent evolution of sedentism, village organization, and socioeconomic complexity as well as riparian specialization.

The development of the obsidian exchange network now also seems to have taken place before the arrival of Algic and Athapaskan speaking peoples in the region and, therefore, is not to be explained in those terms. On linguistic grounds it is presumed that Hokan-speaking peoples occupied the parts of the Klamath drainage now in Yurok, Karok and Shasta territory, and that dialect divergence was then much less far advanced. If so, kinship ties between adjacent Archaic bands up and down the Klamath could have provided a suitable mechanism for the development of early obsidian exchange.

Although the sample from the Collord Site is small, the data it has yielded suggest new understandings concerning the

development of the protohistoric sedentary riverine way of life along the Klamath. The site appears to reflect a key stage in the historical development of proto-Karok culture, one which has not yet been reconstructed archaeologically (Moratto 1984).

## NOTES

Grateful thanks are given to Mr. and Mrs. Everett Collord for allowing the excavations which provided the basis for this paper. The field research was supported by Klamath National Forest and Region V of the Forest Service, U.S. Department of Agriculture. Analysis has been supported through grants from the College of Social Science, Michigan State University. Fieldwork was done by Judith Tordoff, students of the 1972 summer field school in archaeology from Michigan State University, and personnel of the U.S. Forest Service who participated in MSU's cultural resource management program that summer. The support of the Forest Supervisor and the Forest Archaeologist of Klamath National Forest, and the District Ranger of the Happy Camp District, were especially valuable. I am especially grateful, however, to Donald S. Miller, then Regional Archaeologist for Region V USFS, for his outstanding leadership, support and guidance in this project.

Thanks also are due to individuals who have supported the analysis of the Collord collection in many ways. Various aspects of analysis were performed during different academic years by John Davis, Carol Raupp, Daniel Taryane and Jacqueline Upham, and, most recently, Susan Skaggs, to all of whom I am particularly grateful. I also am extremely grateful to David Fredrickson and Thomas Origer of Sonoma State University, and to Clement W. Meighan and Glenn Russell of the University of California at Los Angeles for their invaluable assistance with the analysis of obsidian from the site. Sincere thanks also are due to David Weide of the University of Nevada at Las Vegas for assistance with soil chemistry analysis and lithic analysis.

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