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Author

Connolly, Thomas J

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A Culture-Historical Model for the Klamath Mountain Region of Southwest Oregon and Northern California

THOMAS J. CONNOLLY, Oregon State Museum of Anthropology, Univ. of Oregon, Eugene, OR 97403.

SOUTHWEST Oregon and extreme northern California is a rugged region, dominated by the geologically ancient and contorted Klamath Mountains. To the north is the northward-flowing Willamette River in Oregon, and to the south is the southward-flowing Sacramento River in California. Both are low-gradient and meandering rivers occupying broad valleys. The Klamath Mountain region itself is dissected by high-gradient rivers and streams trending generally westward to the Pacific Ocean. The region is dotted by relatively small and isolated valleys, separated by steep mountains, narrow canyons, and dense conifer forests (Fig. 1).

In most areas of North America, fundamental culture-historical outlines have been known for decades, and have served as essential guides for studies of broader anthropological concern. The archaeology of southwest Oregon and adjacent areas of northern California has suffered from the absence of a basic culture-historic framework, making it difficult to place specific archaeological components within a temporal context except by generalizing chronological patterns from outside the region. The purpose of this study (cf. Connolly 1986) is to organize the archaeological data from the region into an explicit, and broadly applicable, culture-historical model.

Work reported here included the identification of four assemblage types. These are assumed to have culture-historical significance, and a series of interpretations re-

garding local prehistory are presented to explain the patterns derived from the analysis in light of assumptions drawn from local linguistic relationships and archaeological patterns documented for adjacent areas.

METHODS OF ANALYSIS AND DERIVED PATTERNS

The analysis involved a comparison of 47 components from 38 archaeological sites in southwest Oregon and northern California (Table 1). Two different similarity measures were used to compare components, although not all components were suitable for both analyses due to incomplete data or insufficient sample sizes.

It should be noted that 32 assemblages were used in the initial presentation of this analysis (Connolly 1986). The present report represents an effort to expand the database as a test of the patterns initially observed. Assemblages were added where projectile points were reported in sufficient detail to permit conversion of point frequencies to those initially established for the analysis (see Connolly 1986:237-241 for definitions), and where the assemblages were believed to be reasonably chronologically discrete (e.g., Hildebrandt and Hayes 1983:17.2-17.13). Unfortunately, a number of important assemblages were necessarily excluded because reported point types could not be reassigned with a reasonable degree of confidence. More thorough illustration of diagnostic artifacts in primary source documents (rather than selected specimens of a broadly defined

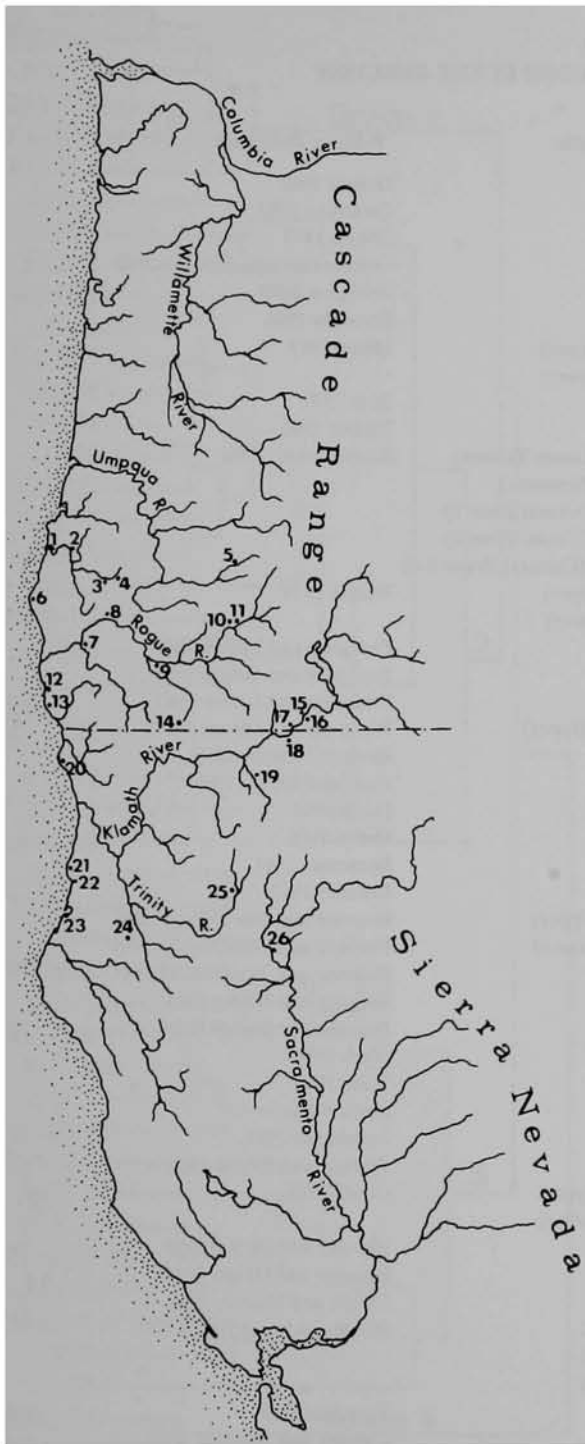


Fig. 1. Location of sites (see Table 1) employed in the assemblage analysis.

type) or, at a minimum, tabulation of critical metric attributes of all diagnostic specimens would enhance comparability and increase the value of reported results to other researchers.

Both Q-mode and R-mode analyses were performed on the data, the former to group assemblages based on shared attributes, and the latter to isolate co-occurring artifact sets as a means of identifying elements that are consistently associated with each assemblage group (Johnson 1968:2; Dumond 1974: 254).

Assemblages in the first series of comparisons were grouped on the basis of the relative frequency of projectile point types. The initial analysis (Connolly 1986) relied on 13 defined types. Based on a review of the literature for the present analysis, the initial Type 11 (stemmed points with neck widths ≥ 7.5 mm.) was divided into two types for the present analysis. Stemmed points with neck widths exceeding 17 mm. (often identified in some northern California assemblages as Borax Lake Wide-Stem) were assigned to a separate class (Type 14). Frequency data were converted to similarity scores using Robinson's (1951) Index of Agreement, which provides a similarity score for each possible assemblage pair on a scale from 0 to 200. The resulting matrix scores were reduced to an average linkage cluster dendrogram as a means of illustrating the assemblage relationships. Four major assemblage groups were distinguished by the analysis (Fig. 2).

The second set of assemblage comparisons was based on a series of artifacts other than projectile points (Table 2), including pottery and pecked, ground, and chipped stone tools (Connolly 1986:242-244). Artifacts of bone, shell, and other organic materials were excluded from consideration, so that differential preservation would not be introduced into the analysis as a potential bias factor. In addition, artifact classes that were either

Table 1
SITES AND COMPONENTS INCLUDED IN THE ANALYSIS

| Map Location No. (Fig. 1) | Site Name (Number) | Components | Primary Reference |
|------------------------------|--|--|--|
| 1 | Philpott (35CS1) | | Draper 1982 |
| 1 | Bandon (35CS5) | | Cressman 1952 |
| 1 | 35CS2 | | Collins 1953 |
| 2 | Schwenn (35CS16) | | Leatherman and Krieger 1940 |
| 3 | Looney (35DO13) | | Pettigrew 1980 |
| 4 | Standley (35DO182) | | Connolly 1986 |
| 5 | South Umpqua Falls Rockshelters (35DO205) | SUF-1 (Upper) SUF-2 (Lower) | Minor 1987 |
| 6 | Nellie's Cove (35CU9) | | Ross 1977 |
| 7 | Tlegettintin (35CU59) | | Tisdale 1986 |
| 8 | Marial (35CU84) | MAR-L (Lower Terrace) MAR-P (Plowzone) MAR-1 (Cultural Zone 1) MAR-2 (Cultural Zone 2) MAR-3+ (Cultural Zones 1-6) | Schreindorfer 1985 |
| 9 | Ritsch (35JO4) | RIT-1 (Upper) RIT-2 (Lower) | Wilson 1979 |
| 10 | Elk Creek sites | 35JA27A 35JA27B 35JA59 35JA100 (Upper) 35JA102 35JA107 | Pettigrew and Lebow 1987 Pettigrew and Lebow 1987 Pettigrew and Lebow 1987 Pettigrew and Lebow 1987 Budy and Elston 1986 Budy and Elston 1986 |
| 11 | Lost Creek sites | | Davis 1968 |
| 12 | Pistol River (35CU61) | | Heflin 1966 |
| 13 | Lone Ranch Creek (35CU37) | | Berberman 1944 |
| 14 | Applegate Lake sites | 35JA42 35JA47 (Upper) 35JA47 (Lower) 35JA49 35JA52 35JA53 | Brauner 1983 Brauner and MacDonald 1983 Brauner and MacDonald 1983 Brauner and MacDonald 1983 Brauner and Nisbet 1983 Brauner and Nisbet 1983 |
| 15 | Klamath Shoal Midden (35KL21) | | Mack 1983 |
| 16 | Big Boulder Village (35KL18) | | Mack 1983 |
| 17 | Border Village (35KL16) | | Mack 1983 |
| 18 | Iron Gate (4SIS326) | | Leonhardy 1967 |
| 19 | Cash Creek Rockshelter (4SIS13) | | Wallace and Taylor 1952 |
| 20 | Point St. George (4DNO11) | PSG-1 (Upper) PSG-2 (Lower) | Gould 1966 |
| 21 | Patrick's Pt. (4HUM118) | | Elsasser and Heizer 1966 |
| 22 | Tsurai Village (4HUM169) | | Elsasser and Heizer 1966 |
| 23 | Gunther Island (4HUM67) | | Heizer and Elsasser 1964 |
| 24 | Pilot Ridge sites | 4HUM367 4HUM573 4HUM588 | Hildebrandt and Hayes 1983 |
| 25 | Trail Gulch (4TRI70) | | Treganza 1959 |
| 26 | Eagle Court (4SHA266) | | Clewett and Sundahl 1981 |

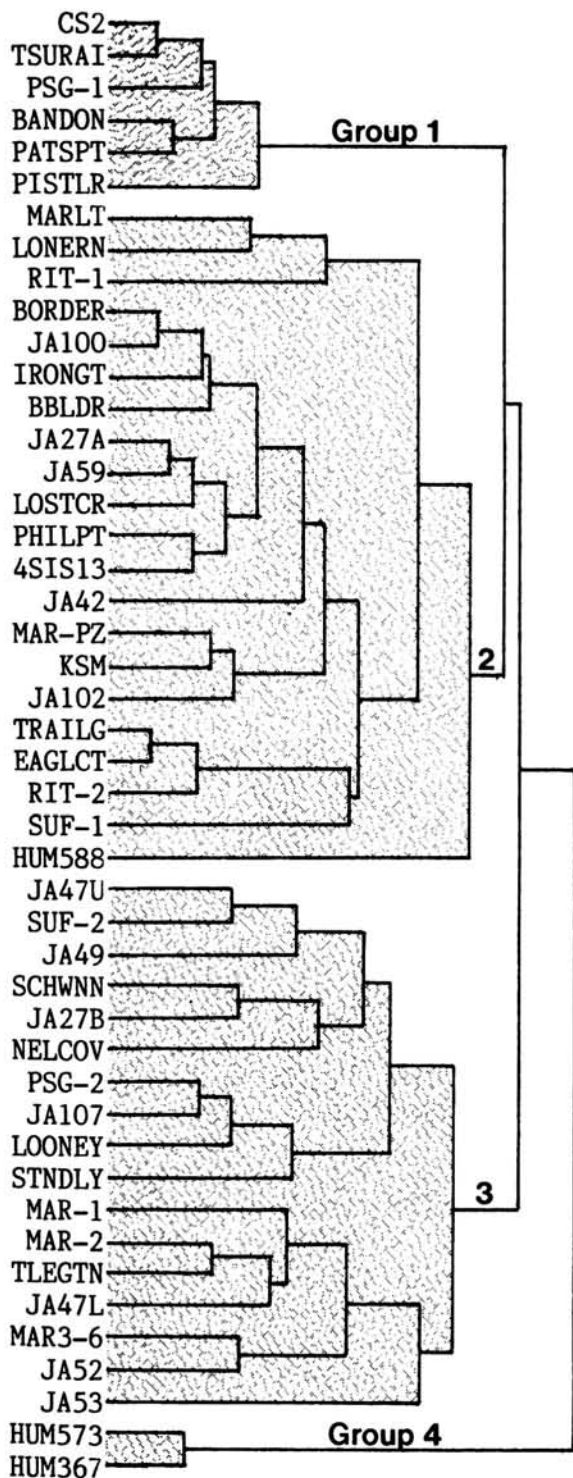


Fig. 2. Dendrogram of similarity scores derived from projectile point data.

ubiquitous or unique were excluded from the analysis. Again, it should be noted that many potentially diagnostic artifact types were excluded due to inconsistencies in reporting or ambiguities in type definitions, precluding an accurate tabulation of occurrence.

For this comparison the Z coefficient of correlation, described by Kroeber (1940:34), was used. This statistic is a presence/absence measure, rather than a proportional measure such as the Robinson Index, and is better suited to small sample sizes. For the analysis, a decision was made to exclude all sites with artifacts present in less than 20% of the represented classes in order to avoid spurious linkages of sites based simply on a high proportion of mutually absent traits. As a result, only 21 assemblages of the initial 47 were considered. An average linkage cluster dendrogram was constructed from the resulting similarity scores (Fig. 3).

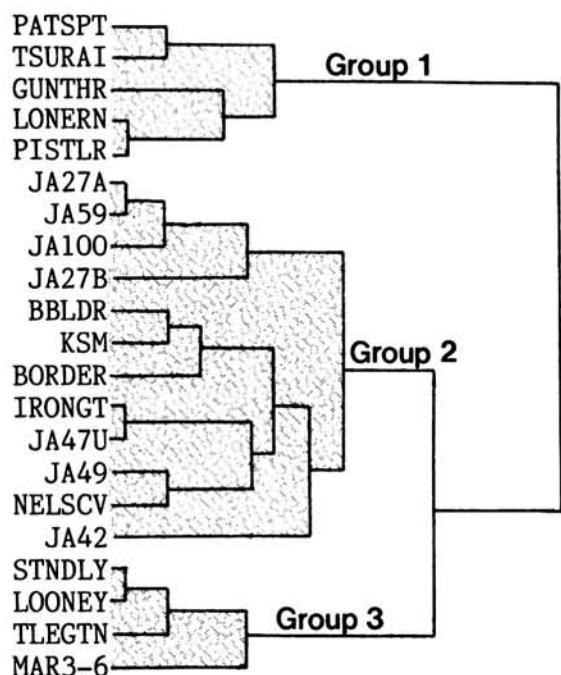


Fig. 3. Dendrogram of similarity scores derived from stone tools other than projectile points.

Table 2
OCCURRENCE OF ARTIFACTS OTHER THAN PROJECTILE POINTS USED FOR COMPARISON

| Site | Type ^a | | | | | | | | | | | |
|-------------------|-------------------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Standley site | | | | X | | X | | X | | | X | |
| Looney site | | | | X | | X | | X | | | X | |
| Marial/3-6 | | | | X | | | | X | X | | X | |
| Tlegetlinten | | | | X | | X | X | X | | | X | |
| Iron Gate | | | | | X | | X | | X | | | X |
| Kl. Shoal Midden | | | | | X | X | X | X | | | | X |
| Big Bldr. Village | | | | | X | X | X | | | | | X |
| Border Village | | | | | | X | X | | | | | X |
| Lone Ranch Creek | X | X | X | | X | | | | X | | | X |
| Pistol River | X | X | X | | X | | | | X | | | X |
| Patrick's Point | X | X | X | | X | | | X | X | X | | |
| Tsurai | X | X | X | | X | | | X | X | | | |
| Gunther Island | X | X | X | | | | | | X | X | | X |
| Nellie's Cove | | | | | X | X | | | X | | | |
| 35JA42 | | | | | X | | X | | | | X | ? |
| 35JA47/Upper | | | | | X | | X | | X | | | X |
| 35JA49 | | | | | X | X | X | | X | | | |
| 35JA100 | | | | X | X | X | X | X | | | | X |
| 35JA27A | | | | X | X | | X | X | | | | X |
| 35JA27B | | | | X | | | X | X | | | | |
| 35JA59 | | | | X | X | | X | X | | | | X |

^a Key to artifact types: 1, oil lamps; 2, flanged/offset pestles; 3, bell-shaped mauls; 4, edge-faceted cobbles; 5, hopper mortar bases; 6, stone bowl mortars; 7, metates/grinding slabs; 8, hammer/anvil stones; 9, netsinkers; 10, zooform clubs; 11, thick-bit (>7.5 mm.) endscrapers; 12, pottery vessels, pipes, figurines.

Three assemblage groupings were distinguished that correspond closely with Groups 1-3 distinguished by the point analysis. With the exception of Gunther Island (excluded from the projectile point analysis because of a lack of quantifiable data) and Lone Ranch Creek (marginally linked with Group 2 in the point analysis, and possibly representing a culturally mixed assemblage), Group 1 sites are those that made up Group 1 in the projectile point analysis. Similarly, Group 3 sites also were assigned to Group 3 in the point analysis. Group 2 includes three assemblages assigned to Group 3 in the point analysis. Like other Group 2 sites, 35JA27B, 35JA49, and Nellie's Cove (35CU9) contain hopper mortars and metates; like Group 3 assemblages, however, they lack pottery and most also contain bowl mortars.

The overall redundancy of the groupings derived from essentially independent tests lends credence to the assumption that the groupings reflect some cultural reality.

RESULTS OF THE ANALYSIS AND TERMINOLOGY

Group 1 sites are distinguished by a predominance of triangular (usually concave-based) projectile points, oil lamps, flanged and offset pestles, bell-shaped mauls, zooform clubs, and ceramic artifacts (primarily clay pipes). These are among the artifacts considered by Fredrickson (1973, 1984; cf. Heizer and Elsasser 1964) as diagnostic of the Gunther Pattern on the northern California coast. Radiocarbon dates from these assemblages fall within the last 1,100 years. The present study shows that elements of

the Gunther Pattern are also present on the adjacent southern Oregon coast.

Netsinkers and hopper mortar bases are attributes shared by both Group 1 (Gunther Pattern) and Group 2 assemblages. Group 2 assemblages are characterized by small side-notched, corner-notched and basally-notched projectile points (Gunther series), metates, and occasional ceramics (primarily figurines and crude vessels). Northern California sites assigned to the Shasta Complex (Treganza 1959; Clewett and Sundahl 1981) or Augustine Pattern (Fredrickson 1973, 1984) were sorted by the present analysis into Group 2. While it is acknowledged that the Shasta Complex concept is the subject of current debate and redefinition on a local level (Sundahl 1982; Fredrickson 1984; Farber 1985), the present analysis suggests that some of its diagnostic elements are present in assemblages far beyond the territory with which it is usually associated (at least in recent usage, but see Meighan [1955]). *Olivella* shell and pine nut beads also are frequently associated with these assemblages. In addition to commonalities in artifact assemblages, both northern California Shasta Complex assemblages and other late prehistoric assemblages from southwest Oregon and northern California exhibit similarities in house form (circular, shallow basin floors covered with a conical bark-and-timber roofs).

Following the terminology suggested by Fredrickson (1973:117), and in line with the classification of Group 1 assemblages (Gunther Pattern), Group 2 in the present analysis is designated the Siskiyou Pattern (cf. Connolly 1986:112-114). This designator acknowledges the overall similarity among late prehistoric assemblages in interior southwest Oregon and northern California, but should not impinge on attempts to clarify local variants or chronologies. It is also free from inherent association with

either central California or Columbia Plateau terminology, although such external connections may be demonstrable. Radiocarbon dates associated with Siskiyou Pattern assemblages fall within the last 1,700 years. It should be noted that site 4HUM588 is only marginally linked with Group 2.

Group 3 sites include broad-necked side-notched and stemmed projectile points, foliate (serrated and unserrated) and shouldered contracting stem points, stone bowl mortars, hammer/anvil stones, edge-faceted cobbles, and thick-bit end scrapers. As noted above, three assemblages assigned to Group 3 in the point analysis were linked with Group 2 by the analysis based on artifacts other than projectile points. Sites 35JA27B, 35JA49, and Nellie's Cove (35CU9) contain hopper mortars and metates, primarily a Siskiyou Pattern attribute, but two of the three also contain bowl mortars. There appears to be a strong patterning by subregion in the groups derived from data other than projectile points, with upper Rogue River sites falling together, lower Rogue River/Coquille River sites grouping together, and upper Klamath River/ upper Applegate River assemblages linking together. It is only in the latter grouping, the southernmost of the three, that pre-Siskiyou Pattern assemblages (judging from point types) contain milling equipment other than bowl mortars, an attribute not uncommon in early northern California assemblages.

The most striking characteristic of Group 3 assemblages is illustrated in Figure 4, which shows that associated radiocarbon dates range from 9,000 years ago to late prehistoric times. The existence of a cultural tradition of unusual conservatism and duration in southwest Oregon was initially proposed (Connolly and Baxter 1986) based on the apparent similarities between artifacts from the Standley Site in southwest Oregon, radiocarbon dated to after 2,400 years ago,

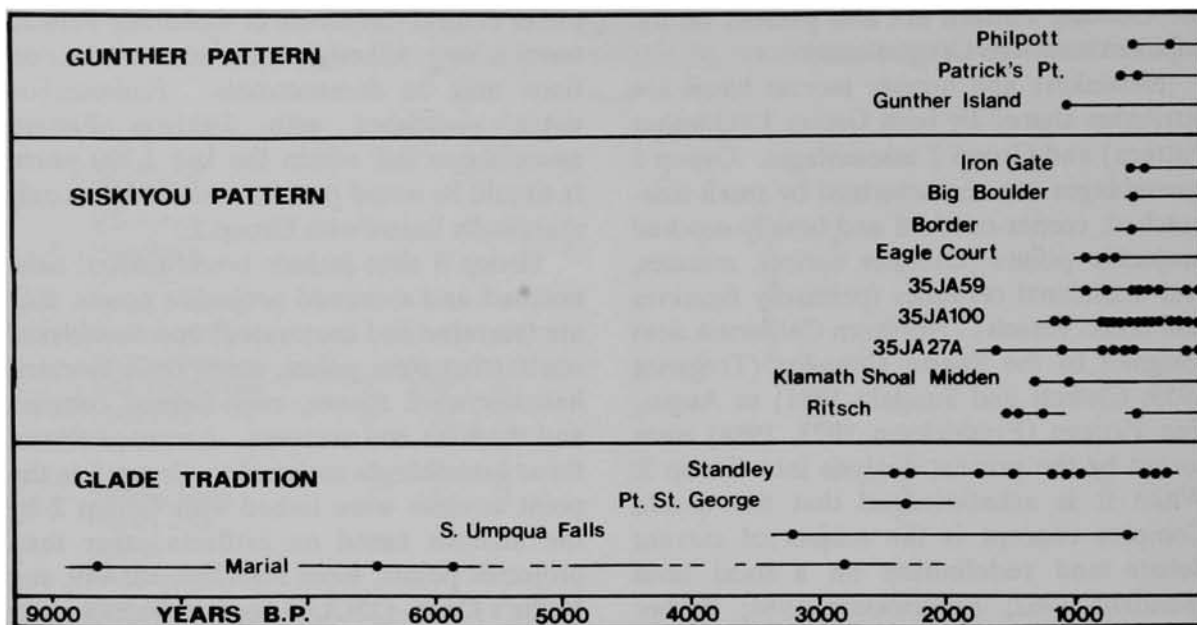


Fig. 4. Radiocarbon dates associated with each archaeological pattern for components used in the analysis; each dot represents one date.

and early Archaic sites from the Willamette Valley and Columbia Basin to the north. Subsequent evidence from the Marial site, located on the lower Rogue River, provides solid support for this contention with a radiocarbon-dated cultural sequence of stratified components that exhibit marked cultural continuity from 9,000 to 2,000 years ago. Schreindorfer (1985:27) noted that the persistence of many artifact forms throughout the occupation of the Marial site indicates the persistence of a distinct "technological tradition" throughout much of the region's prehistoric past.

Assemblages assigned to Group 3 in the present analysis are designated as representative of the Glade Tradition (Connolly 1986: 108-112). Tentative evidence suggests that outside of the Rogue River Basin (i.e., within drainages of the Coquille and Umpqua rivers to the immediate north) elements of the Glade Tradition may persist to within the most recent millennium (Connolly 1986:15-47; O'Neill 1988a, 1988b).

Finally, as the result of including in the current analysis northern California assemblages dominated by broad-stemmed points (stem widths exceeding 17 mm.), a fourth assemblage group was delineated. Sites 4HUM573 and 4HUM367 probably are assignable to the northern California Borax Lake Pattern, which, in addition to broad-stemmed points, often contain milling stones and manos (Fredrickson 1973, 1984).

INTERPRETATIONS AND DISCUSSION

The Borax Lake Pattern

The Borax Lake Pattern initially was described by Fredrickson (1973, 1984) for the North Coast Ranges of California as representing an unusually long-lasting tradition extending from the Lower Archaic Period (beginning 6,000 B.C.) "through the Middle Archaic Period (ca. 3,000-1,000 B.C.) and in some localities into the Upper Archaic (1,000 B.C.-A.D. 500) and possibly a few centuries into the Emergent (A.D. 500-1850)" (Fred-

rickson 1984:497-498). For the northern North Coast Ranges of California, Hildebrandt and Hayes (1984) designated the period prior to about 3,000 years ago as Borax Lake. Supported by radiocarbon evidence, Clewett and Sundahl (1983) restricted the Borax Lake Pattern to between 8,000 and 5,000 years ago in the Squaw Creek locality northeast of Redding. The principal attributes of the pattern include wide-stemmed projectile points (often with concave bases), grinding slabs, and manos.

The Glade Tradition

A number of attributes, including foliate points and edge-faceted cobbles, suggest a technological link between southwest Oregon assemblages assigned to the Glade Tradition and the early Pacific Northwest regional Cascade Pattern (Nisbet 1981; Brauner and Nisbet 1983; Connolly 1986:124-143; Connolly and Baxter 1986). Indeed, a number of undated sites on the upper Applegate River (a primary tributary of the Rogue) have been assigned early Archaic ages by Brauner and Nisbet (1983; also Nisbet 1981) because of the morphological similarities between projectile points recovered from them, and Windust and Cascade points from the Columbia Plateau. In support of this chronological assignment, three radiocarbon dates from early components at the Marial site, which contains foliate points and edge-faceted cobbles (Schreindorfer 1985), fall between 5,500 and 9,000 years ago, an expected range for Cascade Pattern and earlier assemblages.

Later dated components, however, from the Marial site and from other assemblages assigned to Group 3 in the present analysis, exhibit little formal change in many assemblage attributes from earlier Marial components. They provide strong evidence for a very stable and conservative cultural tradition that persisted in the Klamath Mountain region for several millennia after it disap-

peared from other sectors of the Pacific Northwest (Connolly and Baxter 1986). Indeed, radiocarbon dates from the Standley site, which range between 2,400 and 300 years ago (Connolly 1986:23), suggest that elements of the Glade Tradition persisted in some areas until protohistoric times.

The long duration of the Glade Tradition in southwest Oregon, especially its persistence into late prehistoric times, provides at least a partial explanation as to why the development of a prehistoric culture chronology has been so elusive in the region. When originally proposed, evidence for the persistence of the Glade Tradition into late prehistoric time was limited to radiocarbon dates from a single site, a fact that has raised questions regarding their validity (Pettigrew and Lebow 1987:10.21). Recently, however, radiocarbon dates of 420 ± 60 (O'Neill 1988a) and $1,020 \pm 60$ (O'Neill 1988b) have been associated with components from the Umpqua River basin assignable to the Glade Tradition. In short, while elements of the Glade Tradition persist in the Umpqua and Coquille river basins until late prehistoric times, the Siskiyou Pattern appears to be pervasive throughout the Rogue River basin by 1,700-1,500 years ago.

Recognition of the technological relatedness of artifact forms characteristic of the Glade Tradition should not preclude attempts to more precisely define chronological patterns within the tradition. Indeed, the small number of assemblages known to predate 3,500 years ago (Fig. 4) precludes the recognition of chronological complexities that ultimately may be discerned. Within the context of the present analysis, however, three principal subgroups (JA47U-NELCOV, PSG-2-STNDLY, and MAR-1-JA53) were sorted within the Glade group of assemblages (Fig. 2), and an examination of associated radiocarbon dates suggests that the significance of this subgrouping is chronological.

Further, chronologically discrete components at the Marial site exhibit temporal variation in point frequencies (Schreindorfer 1985). For example, while serrated and unserrated foliate points are present in cultural components designated Cultural Zones 1 through 6, serrated foliates represent 6% of the point assemblage in Zone 1, which postdates 3,000 years ago, 26% of the Zone 2 assemblage, and 60% of the cultural zones predating 5,500 years ago. Other temporally sensitive traits may include a decrease in absolute size of points and a gradual increase through time in the frequency of associated notched and stemmed points. It is noted that while a more precise definition of chronological parameters within the Glade Tradition is anticipated, the historical relatedness of Glade components of all ages is unmistakable.

It should also be noted that the Glade Tradition exhibits some parallels with the latter portion (Mendocino Aspect) of the Borax Lake Pattern, as described by Fredrickson (1973, 1984). Hildebrandt and Hayes (1984) assigned this aspect to the Willits Pattern, which includes bowl mortars, large side-notched, corner-notched, and contracting-stem points, and especially in the north and into Oregon, foliate and serrated foliate points.

The Siskiyou Pattern

Radiocarbon dates associated with Siskiyou Pattern components fall within the last 1,700 years. Dramatic trait differences are apparent from those characteristic of the preceding Glade Tradition. These include a change from a predominance of foliate and shouldered projectile points to small barbed points; apparent changes in milling equipment from primarily stone bowl mortars to predominant use of metates and hopper mortars; the first documented appearance of nucleated pithouse villages; and evidence of long-distance trade in marine shells, obsid-

ian, and other exotics.

A number of factors suggest that the appearance of the Siskiyou Pattern in Southwest Oregon and northern California marks the presence of an immigrant group which altered the character of the local material culture. Such a migration is suggested by the apparent discontinuity between Glade Tradition and Siskiyou Pattern assemblages, but also fits well with population movements hypothesized for northern California (Whistler 1977) and portions of the northern Great Basin to the immediate east (Aikens 1985). Similarities in material culture elements (especially basketry traditions; see Cressman [1936:39] and Adovasio [1970:19]) can also be recognized between northern Great Basin components of Neopluvial age and those of late prehistoric age from northern California.

A number of other explanations for changes in material culture might also be explored, however. The abundance of marine shell beads, obsidian, and other exotic materials in Siskiyou Pattern sites suggests that fundamentally different social parameters prevailed during Siskiyou Pattern times than was characteristic of the preceding Glade Tradition. Expanded trade relationships and increased population shifts on a smaller scale than required by movement of entire ethnic groups (such as through intermarriage or slave raiding) may have played a significant role in modifying material culture. Sampson (1985:514) reported a sudden appearance of Gunther series projectile points at the Nightfire Island site in historic Modoc territory at about A.D. 300, along with

[I]nclusion of the site within the range of the [*Olivella*] bead exchange network. These and other marine shell items suggest that trade contacts with the coast became firmly established at this time.

Nightfire Island burial grounds of this period also provide abundant evidence of violent

death, which Sampson (1985:465-467, 515) associated with "raiding and reprisal-seeking counter raids" known from historic Modoc slave-raid accounts. Such raids were part of the mechanism of the interregional contacts otherwise indicated by marine shell beads and other exotic items.

The differences between Glade Tradition and Siskiyou Pattern assemblages argue strongly for fundamental changes in population density and distribution, broader economic contacts (especially evidence for long-distance trade) and a different social climate (marked by nucleated villages and a dramatic increase in ornamental and status objects). Nonetheless, convincing evidence for an actual population replacement has not been forthcoming.

The Gunther Pattern

Assemblages assigned to Group 1 in the present analysis include a number classified by other researchers as representative of the archaeological Gunther Pattern (e.g., Fredrickson 1973, 1984). This pattern was discussed fully by Fredrickson and no significant reformulation is offered here. The present study shows, however, that diagnostic elements of the Gunther Pattern, initially defined for the northern California coast, are also present on the southern coast of Oregon.

While full utilization of estuarine resources is documented for Early and Middle Archaic times on the central Oregon coast (Minor and Toepel 1986), the rocky southern Oregon/northern California coastline may have been "underutilized" (Whistler 1979:24; Fredrickson 1984:481-484; Connolly 1986:208-211). Archaeological evidence is at present inadequate to satisfactorily defend this characterization, so Berreman's (1935:13) subjective evaluation may be recalled. He was "impressed with the relatively small size and superficial nature of a very large num-

ber of the sites" in the region, based on the results of a survey during which 59 sites were recorded. Occupation at the Gunther Island site, which has produced the earliest radiocarbon date associated with a Gunther Pattern assemblage, probably began about 1,000 years ago (Heizer and Elsasser 1964).

Paralleling development of the Siskiyou Pattern, the Gunther Pattern differs from earlier coastal occupations in the region by increased intensity of occupation, dramatic artistic elaboration, and establishment of long-distance trade as seen by the presence of exotics such as *Dentalium* shells and obsidian (Hughes 1978). Hughes (1978:61) presented evidence to suggest that the development of long-distance trade networks and the hierarchical social ranking characteristic of historic northwestern California groups were established by at least 600 years ago.

Archaeologists most familiar with the archaeology of northern California have argued that there exists little evidence for the *in situ* development of the coastal habitation and subsistence focus that characterized the Gunther Pattern, attributed by Elsasser (1978:52; cf. Hildebrandt 1981:192) to "people who seemed originally to have come to the coast fully equipped to deal with this environment." Not coincidentally, it has also been noted that Gunther Pattern sites are, without exception, associated with the territory occupied by speakers of the "intrusive" Athapaskan or Algic languages. Fredrickson (1973:148, 1984:488) compiled a partial list of the linguistic affiliations of sites containing both historic and prehistoric components attributable to the Gunther Pattern, including the Gunther Island site, historically the Wiyot (Algic) village of *Tolowot*; site 4Hum169, identified as the historic Yurok (Algic) village of *Tsurai*; site 4Hum129, identified as the historic Yurok village of *Tsahpek*; and the Point St. George

site, known to be the historic Tolowa (Athapaskan) village of *Taiga'n*. To this list we may add the Pistol River site in Oregon, identified as the historic Tututni (Athapaskan) village of *Chetlessentan* (Heflin 1966).

Gunther Pattern assemblages in the present analysis were distinguished from other assemblages by a predominance of triangular, concave-based projectile points, identified ethnographically as harpoon tips used primarily for the hunting of sea mammals (Heizer and Elsasser 1964; Gould 1966). Significantly, Hildebrandt (1981:170) noted a close correspondence between historic Athapaskan-Algic territory and a marine mammal hunting complex, focusing on offshore rocks, unique to the north coast region. He further (cf. Gould 1975:154) suggested that the wealth emphasis characteristic of the northern California coast was fundamental to the sea mammal hunting complex; simply, the wealthy owned canoes, having the resources to support workers during their construction.

SUMMARY

Four archaeological patterns were distinguished by analysis of 47 assemblages from the Klamath Mountain region of southwest Oregon and extreme northern California. The earliest components for which both radiocarbon dates and sufficient artifact samples are available in the northern portion of the study area are designated as representative of the Glade Tradition. Evidence of the Glade Tradition appears in the area as early as 9,000 years ago and persists to within the most recent millennium in the Umpqua and Coquille river basins, centuries after it disappeared from the adjacent Rogue River basin. Of immediate concern for regional prehistory is the development of a more satisfactory understanding of the distribution and temporal variation of components linked with the Glade Tradition. While

a more precise definition of chronological parameters within the Glade Tradition is anticipated, the historical relatedness of Glade components of all ages is unmistakable.

In the southern portion of the study area, the early prehistoric period is included within the Borax Lake Pattern. While the temporal and geographical boundaries of this pattern are still being debated (cf. Clewett and Sundahl 1983; Hildebrandt and Hayes 1984), it is significant that no Borax Lake-like assemblages have yet been reported from southwest Oregon.

Assemblages sorted together in Group 2 of the present analysis include components assigned to the Shasta Complex in northern California and nearly cognate components in southwest Oregon. These sites, which date to within the last 1,700 years, are considered together in the present discussion as representative of the region-wide Siskiyou Pattern. The apparent lack of continuity between Glade Tradition and Siskiyou Pattern assemblages, seen especially in chipped and ground stone tool forms, previously hypothesized population shifts in the region (Connolly 1986:145-149), and in the first documented appearance of nucleated pit-house villages, invite the possibility that the appearance of the Siskiyou Pattern may represent the arrival of an immigrant group into the region. An alternate, and at present the most parsimonious, explanation is that indigenous populations accelerated their participation in regular extra-regional contacts involving long-distance trade in marine shells, obsidian, and other exotics, factors that markedly affected all aspects of material culture and social structure.

The Gunther Pattern first appeared on the northern California coast about 1,000 years ago. Paralleling the development of the Siskiyou Pattern, the Gunther Pattern differed from earlier coastal occupations in

the region by increased intensity of occupation, dramatic artistic elaboration, and establishment of long-distance trade as seen by the presence of exotics such as *Dentalium* shells and obsidian. While the origin of the Gunther Pattern remains in question, the close correspondence of this archaeological pattern with the historic range of "intrusive" Athapaskan and Algic languages is provocative.

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