

Alternative Approaches to the Shasta Complex and Adjacent Expressions: Assemblages, Cultural Ecology, and Taxonomies

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COMMENTING on the rapidly changing archaeological perspectives of the Shasta Complex and neighboring late prehistoric assemblages in northern California, Jerald Johnson observed aptly that "considerable turmoil currently exists in the north-central part of the state in terms – not only of what terminology ought to be used – but also of what the different archaeological expressions represent" (J. Johnson and Theodoratus 1984: 190). It was also recently noted (Raven et al. 1984: 20) that the Shasta Complex concept, as first introduced by Meighan (1955), endured for nearly three decades before being seriously challenged. Not unexpectedly, as it now stands, the original concept may be so broadly defined as to obscure growing evidence of late prehistoric spatial and temporal cultural variability in the general region (J. Johnson and Theodoratus 1984: 187; Raven et al. 1984: 20). Current impressions of the Shasta Complex are, to a large extent, the result of an emphasis on reconstructing prehistoric adaptive strategies and cultural ecology in the region. The goal of this paper is to clarify notions about the Shasta Complex and adjacent prehistoric cultural expressions so that substitutions of one set of taxonomic and conceptual shortcomings for another might be avoided.

LATE PERIOD ASSEMBLAGES IN NORTH-CENTRAL CALIFORNIA

Considerable progress has been made recently toward defining site and assemblage characteristics that consistently define the Shasta Complex and distinguish it from contemporaneous patterns in surrounding regions. Significant works in this regard are those of S. Edward Clewett and Elaine Sundahl (Clewett and Sundahl 1981, 1982a, 1982b, 1983; Sundahl 1982). Additional contributions have been made by Baker (1984), Farber and Neuenschwander (1983, 1984), and Raven et al. (1984). Although there is, at present, greater consensus than in previous years among researchers as to what comprise the geographic limits and assemblage characteristics of the Shasta Complex, inclusion of two assemblage elements remains the subject of much controversy. These are the mano and metate, and certain crudely fashioned, shouldered projectile points sometimes referred to as Whiskeytown Side-notched points (K. Johnson 1976). Summarized below are site and assemblage attributes that current researchers generally agree characterize the Shasta Complex and adjacent expressions. Unresolved issues of continuing debate are identified, and arguments advanced in support of opposing positions are briefly reviewed.

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Until the latter part of the 1970s, it was widely believed that millingstones (i.e., metates) were rare or nonexistent elements of Late Period (post-A.D. 500) assemblages throughout much of the Sacramento Valley and the North Coast Ranges (Chartkoff, Miller, and Johnson 1970; Chartkoff 1974; Fredrickson 1974). More recent research has all but laid this notion to rest (Jackson 1976; Farber 1982a; Dreyer and Deal 1982). Nevertheless, despite the demonstrated presence of manos and metates in Late Period assemblages in north-central California, the assumption of non-occurrence, until recently, had not been questioned by archaeologists working within Wintu ethnographic territory – the region most closely associated with the Shasta Complex. During nearly two decades of archaeological research in the region, the presence of these artifacts in Late Period assemblages was not reported (Treganza 1958, 1959; Treganza and Heicksen 1960; Dotta 1964; Dotta and Hullinger 1964). Moreover, according to ethnographic accounts (DuBois 1935: 126; Voegelin 1942: 74), Wintu consultants specifically denied using manos and metates. It should be noted, however, that all ethnographic citations to this effect derive from DuBois' single passing statement. This author considers it unlikely (as did DuBois herself) that her description of Wintu material culture encompassed the entire range of adaptive variability characterizing the several Wintu subgroups, in their diverse habitats, over the 1,200 or more years during which they may have occupied the region.

In the late 1970s, there began to appear "various troublesome occurrences of millingstones in late contexts . . . often in association with such agreed hallmarks of the Shasta Complex as Gunther Barbed projectile points" (Raven et al. 1984: 21-22). These discoveries were made primarily along the eastern side of the Sacramento River, roughly between Redding and Shasta Lake (Clewett

and Sundahl 1982a, 1982b; Sundahl 1982). Clewett and Sundahl (1982a, 1982b, 1983; Sundahl 1982) argued that these artifacts were not of known Wintu origin, and were therefore not attributable to the Shasta Complex. They further argued that Late Period sites containing millingstones differ in content, character, and context from "classic" Shasta Complex sites, and may represent a coeval, non-Wintu archaeological manifestation – tentatively named the Tehama Pattern – possibly associated with prehistoric Yana and/or other Hokan-speaking groups. The Tehama Pattern seems to both temporally and geographically overlap the Shasta Complex.

Although the Shasta Complex and the Tehama Pattern share many traits, Clewett and Sundahl (1982a: 78-82, 1982b: 48-55) distinguished them on the basis of ostensibly distinctive marker artifacts and differential site characteristics indicative of divergent subsistence-settlement strategies. The Shasta Complex (specifically attributed to late prehistoric Wintu [Clewett and Sundahl 1981: 88]) was described as representing a sedentary or semi-sedentary way of life built around the specialized exploitation of relatively few, but abundant, resources concentrated primarily in and along major rivers. While these resources were relatively easy to obtain, in order that seasonal surpluses could serve as reliable year-round staples certain resources required a considerable investment in processing time to render them usable (e.g., acorns) or storable (e.g., salmon). Shasta Complex marker artifacts identified by Clewett and Sundahl include Gunther series projectile points, hopper mortars and flat-bottomed pestles, bone awls and harpoon tips, paint pallettes, bone fish gorges, bone gaming pieces, Olivella beads, clamshell disc beads, obsidian, chert, and basalt drills, sandstone arrowshaft smoothers, and drilled, engraved, or incised stones. Farber and Neuenschwander (1983, 1984) further noted that Shasta Com-

plex assemblages are often numerically dominated by small, usually obsidian, use-modified flakes.

Clewett and Sundahl (1981, 1982a, 1982b) asserted that major Shasta Complex villages tend to be located on terraces above major rivers and tributaries, with larger villages situated along the Sacramento River. These settlements appear to have been occupied during most or all of the year, and they often exhibit relatively high frequencies of projectile points and waste flakes. Obsidian generally predominates over other flaked stone materials. Manos and metates are conspicuous by their rarity or absence.

In contrast, of the Tehama Pattern sites excavated to date, Clewett and Sundahl (1982a: 78-82, 1982b: 48-55) observed that these appear to represent only seasonal occupation and may reflect a more mobile adaptive strategy. Villages were occupied mainly during winter and tended to be located in foothill areas near eastern tributaries of the Sacramento River. As compared to Shasta Complex sites, Tehama Pattern sites generally lack dark, ashy middens, contain relatively little bone or shell, and exhibit relatively low frequencies of projectile points and waste flakes. Manos and metates are common, along with notched pebbles that are thought to be net-weights. Tehama Pattern sites also contain Gunther series projectile points, but points of this series are not necessarily the dominant forms as they apparently are at Shasta Complex sites. Corner- and side-notched forms, in particular Whiskeytown Side-notched, comprise a greater proportion of the projectile point assemblage at Tehama Pattern sites than at Shasta Complex sites. Mortuary practices may also differ between the Tehama Pattern and the Shasta Complex, although at present there are few comparative data from sites ascribed to the former.

Sundahl has recognized (personal communication 1984) the possibility that the

apparent discriminating power of certain Tehama Pattern assemblage attributes may be a function of sampling error; i.e., few Tehama Pattern sites have been studied and additional site investigations may reveal characteristics more similar to those of Shasta Complex sites. She has also stressed that the fundamental distinction drawn between the two archaeological manifestations relates primarily to differences in inferred subsistence-settlement patterns (E. Sundahl, personal communication 1984). In contrast to the economically specialized, sedentary or semi-sedentary populations associated with the Shasta Complex, Clewett and Sundahl (1982a, 1982b) considered the Tehama Pattern to represent relatively smaller, more mobile and dispersed populations adapted to a broad, diversified economic base.

When Clewett and Sundahl first distinguished between the Shasta Complex and the Tehama Pattern, they were aware of several sites in the upper Clear Creek drainage (several kilometers north and west of Redding) that had been reported to contain manos and metates in apparent stratigraphic association with Gunther series projectile points and hopper mortars. The original investigators of these sites had assigned them to the Shasta Complex (K. Johnson and Skjelstad 1974; K. Johnson 1976; Jensen 1977). Sundahl (1982: 188) acknowledged that the Clear Creek sites could represent a specialized, local variation of the Shasta Complex, but emphasized that their assemblages included Whiskeytown Side-notched points, which she considered to be expressly pre-Wintu or non-Wintu in origin. Therefore, Sundahl (1982) felt it to be more likely that these sites were occupied before Wintu arrival in the region, or that they represented later occupation by Hoka-speaking groups (e.g., ancestral Yana).

Recently, however, still more "troublesome occurrences" of milling equipment, often in association with Whiskeytown Side-

notched points, have been reported for several sites or components thereof dating to the Late Period that otherwise appear to be typical of the Shasta Complex (Baker 1984; Farber and Neuenschwander 1983, 1984; Farber, Ritter, and Jensen 1984; Henn, Hitchcock, and Sundahl 1979; Jensen 1980; Raven et al. 1984¹). For the most part, these sites are located in foothill and mountain areas. Manos discovered at the sites are often described as being unshaped (or of functionally fortuitous natural shapes), with relatively little use-wear evident (Baker 1984; Farber and Neuenschwander 1983, 1984). Occasional manos are reported (K. Johnson 1976: 23; Farber and Neuenschwander 1984: 67) that display a surface residue of hematite (red ochre). At some sites, manos outnumber pestles and hopper mortars (Jensen 1980), but are in general not so numerous as to suggest that they comprised a crucial element of prehistoric Wintu food-processing technology.

Critics refute the hypothesized presence of "Wintu" manos in assemblages assigned to the Shasta Complex on the basis of the lack of supportive ethnographic data (but see comments above). Other arguments used to dismiss the occurrence of milling tools in Shasta Complex assemblages focus on: (1) the presence of pestles and mortars – and absence of manos and metates – in Shasta Complex/Wintu grave good lots; (2) the functional and/or artifactual validity of many of the objects designated manos (although there are irrefutable specimens [e.g., from the Kett site]); (3) the more prevalent distribution of points similar to Whiskeytown Side-notched in non-Wintu sites (e.g., in Yana territory); (4) where obsidian Whiskeytown Side-notched and Gunther series points co-occur, the former tend to possess thicker hydration bands (here, hydration values greater than three microns are usually considered pre-Late

Period); and (5) stratigraphic mixing of pre-Shasta Complex (specifically manos and Whiskeytown Side-notched points) and Shasta Complex assemblages at multi-component sites.

Investigators less convinced of the improbability of Shasta Complex milling tools note that manos and Whiskeytown Side-notched points are so pervasively associated with Gunther series points and pestles and hopper mortars at some sites that stratigraphic mixing is all but ruled out. Certain of these sites (see Farber and Neuenschwander 1983, 1984) exhibit no artifactual, stratigraphic, or radiometric evidence of an earlier (i.e., pre-Shasta Complex) component, although hydration bands on associated obsidian artifacts (consisting mostly of obsidian from the Grasshopper Flat source) occasionally measure greater than three microns. But it must also be noted that there are not an inconsequential number of obsidian Gunther series points – generally regarded as Late Period time-markers – that display hydration values larger than three microns.² Further, Whiskeytown Side-notched points or morphologically similar forms were found at several large, "classic" Shasta Complex village sites known to have been occupied by historic Wintu (Treganza and Heicksen 1960: 18, Figs. 1 u-v, x; Woolfenden 1970: 150). Therefore, given typological, stratigraphic, radiometric, and obsidian hydration dating evidence from recently investigated Late Period site assemblages in foothill and mountain areas, it can no longer be assumed *a priori* that manos (and, by extension, metates) and Whiskeytown Side-notched points are definitively pre-Wintu or non-Wintu in origin in north-central California. At the very least, there are clearly significant artifact-specific chronological questions that must be resolved before any final assessment of the Shasta Complex/milling tool issue can be attempted.

PERSPECTIVES IN CULTURAL ECOLOGY

Baker (1984) and Raven et al. (1984) are among those who have reported the discovery of manos in association with apparent Shasta Complex assemblages at foothill sites in north-central California. While they attributed these assemblages to prehistoric Wintu, they nonetheless reconstructed an adaptive pattern that most closely resembles the mobile, generalized land-use strategy which Clewett and Sundahl (1982a, 1982b) associated with the Tehama Pattern. As stated by Baker (1984: 121), "out of necessity, the Klabalpom Wintu of the French Gulch area presumably adopted the more generalized procurement practices of the earlier (i.e., Hokan) peoples, so that seed-grinding implements continued to be used into the late period." Baker (1984: 73, 118) speculated that the presence of manos and metates in an apparent prehistoric Wintu component related more to the distribution of resources within specific ecological zones than to temporal or ethnolinguistic distinctions (cf. Raven et al. 1984: 264). If, in fact, some Wintu used manos and metates and/or pursued a somewhat mobile and generalized adaptive strategy, it would seem that the Shasta Complex / Tehama Pattern differentiation hypothesized by Clewett and Sundahl (1982a, 1982b) is not sufficiently flexible to incorporate the variability in subsistence technology that actually existed among the various ancestral Wintu subgroups. Conversely, it should also be mentioned that, to a greater or lesser degree, Hokan-speaking populations occupying regions east and north of the Wintu (e.g., Achumawi, Shasta, and Yana) adopted some aspects of economic specialization during historic times (e.g., as indicated by use of the hopper mortar for acorn processing). Achumawi inhabiting the lower Pit River area had become at least semi-sedentary by the time of Euroamerican contact.

Clewett and Sundahl (1982a) argued convincingly that a strong valley-vs.-upland dichotomy in late prehistoric lifeways existed in the region, a perspective taken by others (e.g., J. Johnson and Theodoratus 1984). This author, however, questions whether this dichotomy reflects known ethnolinguistic distributions. Specifically, based on the foregoing discussion, it could be surmised that upland-dwelling prehistoric Wintu more closely resembled their upland Hokan-speaking neighbors than their valley-dwelling Wintu kin in subsistence-settlement patterns. The divergent perspectives may reflect a difference in approach and emphasis among researchers. Differing ethnolinguistic boundary reconstructions and cultural ecological interpretations may well reflect contrasting theoretical and methodological orientations. Certain researchers (e.g., J. Johnson and Theodoratus 1984: 191) would favor use of what Binford (1962) termed "technomic" traits to delineate ethnolinguistic boundaries. This author has argued elsewhere (Farber 1982b: 81-82; cf. Raven et al. 1984: 315-317) that adjacent, linguistically unrelated groups sharing a similar environment often employ comparable, if not archaeologically indistinguishable, tool-kits and subsistence strategies. Consequently, in such instances, culturally discriminating, but less visible archaeological traits may be more "socio-technic" and "ideo-technic" (Binford 1962) than "technomic" in nature.

Archaeologists have long recognized compositional variation in Shasta Complex assemblages from one locale to another (Woolfenden 1970: 190). Treganza and Heicksen (1960: 2), for example, observed that "the archaeological remains of the mountain and hill Wintun [Wintu] extending as far south in the Sacramento Valley as Red Bluff are going to be distinguishable from those Wintun [Wintu] groups of the valley proper" (cf. Heizer and Elsasser 1980: 14). Comparable

ethnographic accounts of intra-regional adaptive variability among historic Wintu subgroups can also be found (Kroeber 1925; Theodoratus Cultural Research 1981). Thus, assuming that ancestral Wintu subgroups faced similarly unique natural and social environments, it stands to reason that the Shasta Complex, as defined, may represent relatable, but nonetheless distinctive lifeways. In particular, Wintu who inhabited primarily foothill and mountain areas would probably have exploited these environments in ways quite similar to those of their upland neighbors (including Hokan-speakers). Relative to valley-dwelling Wintu, upland Wintu may have been both less sedentary and less economically specialized. Given these possibilities (or probabilities), along with the fact that all Hokan-speaking groups developed at least some of the characteristics of specialized processors, a necessarily more flexible modeling of the Shasta Complex/Tehama Pattern distinction seems appropriate.

Clewlow et al. (1984: 246) recently pointed out that the term "generalized" has become confused with "highly mobile," while "specialized" (e.g., acorn-dependent) has become synonymous with "more sedentary." Based on investigations at a semi-permanent or base-camp site in the northern Sierra Nevada, which was apparently occupied more-or-less continuously for several thousand years, Clewlow et al. (1984) observed that an increasing tendency over time toward a subsistence specialization on acorns had only a negligible effect on the degree of sedentism. In fact, a site containing evidence of a highly generalized economy (i.e., in terms of the diversity of exploited resources) can easily be interpreted as indicating long-term stability and considerable sedentism if it is assumed that task groups brought resources to the site, as opposed to consumers moving to the resources (cf. Hildebrandt and Hayes 1983; Clewlow et al. 1984).

Recently, several researchers have presented hypothetical models (derived largely from the work of Binford [1980]) that theorize two general hunter-gatherer adaptive modes (Hildebrandt 1981; Bettinger and Baumhoff 1982; Hildebrandt and Hayes 1983). These models, while not identical, are remarkably similar and may be summarized loosely as follows. An adaptive mode variously termed the "searcher," "forager," or "traveler" strategy is generally associated with small, mobile populations that spend relatively more time and energy seeking and traveling to dispersed resources requiring relatively little energy to extract or process. Temporal and spatial incongruities in the distribution of resources tend to be resolved by means of frequent residential moves that bring consumers to the resources. Conversely, "pursuers," "collectors," or "processors," as they are variously called, generally comprise larger, denser populations. Settlements are established in areas where there exist greater concentrations of a few abundant resources that often require substantial expenditures of time and energy for processing. Only when these relatively "high-cost" resources are depleted do processors resort to expending the additional search time to exploit more dispersed, "low-cost" resources (cf. Bettinger and Baumhoff 1982: 487).

Simons (1983: 3.49) injected what might be a crucial twist to these models in his catchment analysis of the Pilot Ridge area 80 km. west of Redding. He hypothesized that indigenous hunter-gatherers in the area engaged in a *pursuer* strategy during the wet season when they occupied villages in low-elevation river valleys adjacent to Pilot Ridge. During dry, summer months, however, they followed a *searcher* strategy on high-elevation ridgetops. The implication here for Shasta Complex/Tehama Pattern cultural ecology is that both adaptive strategies can be employed by a single group of people, and the relative

emphasis or dependence on one or the other strategy is conditioned by seasonal and annual variability in climate and resource availability. Indeed, the ability of hunter-gatherers in northern California to successfully pursue either adaptive mode – as dictated by environmental circumstances – may be somewhat universal (J. Johnson, personal communication 1985).

Extreme variability in climate and resource availability seems to be the norm for northern California, as was made evident by the drought of 1976-1977 and the record wet "El Niño" year of 1982-1983. In order to have survived such drastic climatic fluctuations, native hunter-gatherers must have had an extremely flexible adaptive system. While many Wintu groups may have preferred to maintain a predominantly sedentary lifestyle supported by specialized exploitation of riverine resources and acorns, during those years or seasons locally marked by scarce or depleted staple resources, they may have resorted to a searcher/forager/traveler subsistence-settlement strategy. Given the foregoing, and in light of available ethnographic and archaeological data, it is therefore proposed that a few minor adjustments be made to extant notions about the range of adaptive variability encompassed by both the Shasta Complex and the Tehama Pattern. It should be noted that neither the differentiation proposed by Clewett and Sundahl (1981, 1982a, 1982b, 1983; Sundahl 1982), nor the revisions to it suggested below are to be construed as reconstructions of prehistory *per se*. Rather, these should be viewed as a hypothetical modeling of adaptive behavior which, at some future time, can be used to generate a series of testable hypotheses that may eventually lead to useful reconstructions of regional culture history and culture process.

This author agrees with Clewett and Sundahl that Shasta Complex/Wintu populations

tended to be somewhat more specialized and sedentary than neighboring groups (who may be archaeologically represented by the Tehama Pattern). In the most general sense, valley Wintu were probably relatively more specialized and sedentary than upland Wintu. However, all Wintu and adjacent non-Wintu groups possessed a roughly equivalent capability insofar as following either a searcher/forager/traveler or a pursuer/collector/processor adaptive strategy as preference and/or ecological conditions dictated. Valley Wintu, owing to their rich resource base, subsistence technology and, probably, preference, tended to emphasize a processor adaptive mode whenever possible. Upland Wintu may have also favored this strategy, and may therefore have emphasized reliance upon it as well. However, upland resources were probably inadequate in most years to support this subsistence-settlement pattern year-round. The relative dependence on one adaptive strategy or the other would therefore be a consequence of yearly variations in resource availability. During annual dry seasons, foothill and mountain Wintu (and possibly even valley Wintu) most often probably had to resort to a traveler strategy. Thus, it would not be surprising, as Baker (1984) and Raven et al. (1984) pointed out, that certain apparent Shasta Complex/Wintu sites, particularly those located in foothill and mountain areas, can exhibit characteristics of the Tehama Pattern – namely, residential mobility and a generalized subsistence technology (including occasional use of milling tools). Such sites should not be automatically attributed to the Tehama Pattern, especially when they are situated well within Wintu ethnographic territory and their assemblages contain distinctive Wintu artifacts such as sandstone arrowshaft smoothers and paint palettes. Mortuary practices and other ideo- and socio-technic traits need to be used, in conjunction with technomic evidence, as diagnostic deter-

minants of ethnic affiliation. In terms of mobility and economic specialization, upland Wintu may have been intermediate between valley Wintu and their Hokan-speaking neighbors.

The Tehama Pattern, on the other hand, probably represents the relatively more mobile and generalized adaptive strategy of one or more Hokan populations, including, possibly, the Yana, Shasta, and Achumawi. Due to differences in habitat and subsistence technology, these groups tended to emphasize a traveler adaptive strategy, although increased sedentism and specialization on riverine resources and acorns developed in certain localities (e.g., lower Pit River basin). Of the three groups mentioned, the Yana were probably the most mobile and economically diversified, while the Achumawi may have been the most sedentary and economically specialized. It is important to note, however, that to be effective a processor adaptive mode may have required both a relatively rich resource base and an efficient food-processing and food-storing technology. Hence, while Tehama Pattern populations probably adopted some aspects of a processor subsistence technology (e.g., the hopper mortar), they may not have had access to the type of resource base necessary to support this adaptive strategy. As with Shasta Complex sites and assemblages, the Tehama Pattern should be identified on the basis of location, technomic characteristics, and ideo- and socio-technic traits. Specifically, the presence of manos alone should not be considered the sole diagnostic attribute of Tehama Pattern assemblages. In fact, as discussed earlier, it is the form that manos take that may be more informative than their mere presence or absence. In comparison to manos apparently fashioned and used by Hokan populations (i.e., Tehama Pattern), Shasta Complex/Wintu manos (if they can be demonstrated to exist) may be unshaped or less elaborately shaped, less

extensively use-modified and, therefore, less likely to exhibit much shouldering. In addition to their use in processing seeds, certain Shasta Complex/Wintu manos may have been employed in the grinding of pigments.

It should also be remembered that upland and valley Wintu groups often exchanged commodities not directly available to both (e.g., obsidian [upland] for salmon meal [valley]), so that each group benefited from a wider variety of available resources and from a greater range of exploitative techniques. Thus, valley Wintu may have had indirect access to upland resources without the necessity of adopting a traveler subsistence pattern to directly procure these resources. Conversely, upland Wintu may have had indirect access to salmon-bearing streams otherwise controlled by relatively sedentary valley populations.

Bettinger and Baumhoff (1982) theorized that where two hunter-gatherer groups come into close contact, the group following primarily a processor strategy will eventually outcompete the other when the latter group pursues a traveler strategy. Prehistoric valley Wintu (i.e., Shasta Complex) possessed the advantages of a naturally rich resource base, and were oriented principally, but not exclusively, to a processor strategy. Outlying Wintu populations pursued a more mixed adaptive strategy, and given apparently cohesive intergroup relations, an optimal balance of resource quantity and diversity could be attained with a minimum of residential moves. Although the Wintu may have arrived in the region in relatively small numbers, their economic strategies and use of technologies to efficiently process and store seasonally available foods may have enabled them to outcompete and eventually absorb or displace indigenous and neighboring populations. At the time of Euroamerican contact, Wintu populations were apparently expanding northward and westward at the expense of Shasta and

Chimariko groups. Considering the broader implications of the facts, hypotheses, and theories discussed above, it can easily be argued that questions of culture history – e.g., those that ask where prehistoric populations originated, when and by what means did they arrive, whether they replaced (and by what processes) earlier populations, and what adaptive strategies and technologies they may have introduced – are best approached from a comprehensive cultural ecological perspective.

TAXONOMIC DIFFICULTIES

From the preceding review, a number of taxonomic shortcomings emerge with respect to the Shasta Complex concept. As originally proposed by Meighan (1955), the complex served as a catch-all classification for all Late Period archaeological manifestations from the northern reaches of the North Coast Ranges east to the upper Sacramento River drainage as far north as the Shasta Lake basin and beyond. Recognizing the fact that this region cross-cuts the ethnographically recorded territories of several unrelated cultural groups, Treganza and Heicksen (1960: 42) proposed limiting the Shasta Complex concept to those areas historically occupied by the Nomlaki and Wintu. Many or most archaeologists now implicitly or explicitly associate the Shasta Complex with late prehistoric Wintu populations (e.g., Jensen 1977: 73, 1980: 51-52; Clewett and Wohlgemuth 1980: 6; Clewett and Sundahl 1981: 88, 1982b: 54; Farber and Neuenschwander 1983: 83-84; Baker 1984: 121-122; Raven et al. 1984: 293; J. Johnson, personal communication 1985; W. Hildebrandt, personal communication 1985). As Clewett and Sundahl (1981: 88) observed, “these people (i.e., the Shasta Complex people) are identified with the Wintu as, first, this is the group known historically to have lived in this area, and second, the archaeologically manifested Shasta Complex is nearly identical to that [material culture and adaptive organi-

zation] recorded ethnographically for the Wintu.”

As it appears that, by consensus, archaeologists have chosen, rightly or wrongly, to equate the Shasta Complex with prehistoric Wintu culture, it follows that the concept must be flexible enough to encompass the potential range of adaptive variability expressed by geographically dispersed Wintu subgroups over the 1,200 or more years since they first settled in the region. Prevailing ideas about the Shasta Complex do not appear to incorporate this behavioral variability, which has resulted in taxonomic contradiction and ambiguity (e.g., identified Shasta Complex sites and assemblages that are nevertheless interpreted as reflecting a Tehama Pattern adaptation). The Shasta Complex concept needs to be redefined and, hopefully, the present paper will contribute to this goal.

There has been a recent tendency to subsume the prehistoric cultural sequence in the Redding region under Fredrickson's (1973, 1974) North Coast Ranges taxonomic system. In fact, the prehistory of the North Coast Ranges has been inexorably linked to that of the Redding region since Meighan's (1955) synthesis taxonomically joined the two regions together. This connection seems premature, if not inappropriate.

In a recent report on an excavation at Bucks Lake in the northern Sierra Nevada, Harvey Crew (Peak and Associates 1983) extended Fredrickson's taxonomy to include the Sierra by recognizing “Archaic” and “Emergent” periods at Bucks Lake. While “Emergent Period” was intended by Fredrickson to represent a span of time from roughly A.D. 500 to the historic era, the term “Emergent” implies a stage of sociocultural integration characterized by chiefdoms or protochiefdoms with ascribed status, wealth and occupational differentiation, and centralized, society-wide political authority. Northeastern Maidu, most likely the people to have

exploited the high-elevation resources of the Bucks Lake area, clearly did not develop chiefdom-level socioeconomic or political organization. To a somewhat lesser extent, perhaps, implications of the term "Emergent" are inapplicable to the Wintu region, particularly with respect to upland Wintu. While Fredrickson may have intended that "Emergent Period" connote only a specific span of time, the unfortunate terminological linkage of a reference to *time* (i.e., period) with a reference to a *stage* of sociocultural development (i.e., emergent) presents a picture, confusing to some, in which many "Emergent Period" cultures consist of band- or tribal-level societies characterized by an "Archaic" form of adaptation. The terminology selected by Fredrickson (1973, 1974) for this taxonomic system has, therefore, inherent shortcomings. Moreover, linking the North Coast Ranges and Redding cultural sequences may tend to overstate actual historic relationships and, simultaneously, obscure other, possibly significant, inter-regional cultural relationships (e.g., between populations in the Redding region and those occupying the southern Cascade Ranges).

Fredrickson (1974: 41-42) explicitly developed his taxonomic system to take into account the likelihood that cultural sequences in different regions of northern California were not necessarily synchronous, as was implied by earlier, unilineal taxonomic schemes (e.g., Lillard, Heizer, and Fenenga 1939; Meighan 1955). Clewett and Sundahl (1982a, 1982b; Sundahl 1982) suggested, based on radiometric dating of prehistoric assemblages, that the Late Period in the Redding region (which encompasses appearance of the Shasta Complex) began ca. A.D. 700 — some 200 years after the advent of the corresponding "Emergent Period" in the North Coast Ranges. Thus, neither stage nor period in the Redding region correlates exactly with stages and periods identified for

the North Coast Ranges. This suggests, possibly, that prehistoric cultural relationships between the two regions have been over-emphasized as the result of taxonomic imprecision. This author proposes that the two regions should be held taxonomically separate until possible relationships are better established. Along with many other archaeologists, this author has been guilty of at least partially misinterpreting Fredrickson's taxonomic system (which Fredrickson [personal communication 1985] graciously attributed to his failure to more carefully communicate the objectives of his taxonomic scheme). Nonetheless, Fredrickson (personal communication 1985) has agreed that the Redding and North Coast Ranges regions should be taxonomically divorced.

Bennyhoff (1982) and Clewett and Sundahl (1983) proposed replacing "Shasta Complex" with "Redding Aspect of the Augustine Pattern" to bring the terminology into conformity with the Fredrickson taxonomy. For the reasons enumerated above, this proposal should be rejected. As has previously been observed (J. Johnson and Theodoratus 1984: 191; Farber and Neuenschwander 1984: 113), this proposed change in terminology adds little, if anything, to an understanding of Wintu prehistory *per se*. Changing a taxonomic label that pervades nearly three decades of literature may only further confuse the archaeological issues at hand. After all, it is conceptual definition rather than terminology that is in need of clarification.

It is therefore suggested that the Shasta Complex concept (and terminology) be retained with the following modifications. *Spatial* variability within the complex could be recognized taxonomically by use of the term "aspect." For example, distinct valley and upland aspects of the Shasta Complex, already archaeologically evident and separable (cf. Treganza and Heicksen 1960), could be appropriately named. When finer spatial dis-

inctions can be delineated, e.g., archaeologically differentiating Wintu subgroups (as some investigators now believe to be possible – see Farber and Neuenschwander [1983: 71-79]), additional aspects could be accordingly identified. Thus, it may eventually be possible to, for example, refer to the “French Gulch Aspect” of the Shasta Complex when addressing specifically the material remains of ancestral French Gulch Wintu.

Regarding *temporal* variability, a regional chronological sequence – independent of the North Coast Ranges sequence – should be developed on the basis of radiometric and other pertinent data from local, stratified cultural deposits such as those at Squaw Creek (Clewett and Sundahl 1983), in the upper Sacramento River canyon (Raven et al. 1984; and pending reports on additional excavations at four sites in the canyon¹), and Helena (Jensen and Farber 1982). Although the resultant, most likely tripartite sequence may somewhat parallel that of the North Coast Ranges, it will not be necessarily synchronous with the latter.

A chronological sequence for the Redding region may consist of, most simply, Early, Middle, and Late periods (cf. Clewett and Sundahl 1983: 82; Farber and Neuenschwander 1984: 114). The Late Period, which would encompass the Shasta Complex, could be further subdivided into *phases* defined strictly as time-spans within the period. These could be identified when and if phase-specific time-markers can be shown to exist. Sundahl (1982) tentatively proposed three temporal phases within the Late Period based on possibly time-sensitive forms of Gunther series projectile points. The early phase features a predominance of expanding-stem points, the middle phase is marked by the introduction of points with parallel-sided stems, and the late phase is characterized by a predominance of contracting-stem points. It must be noted, however, that attempts to

statistically demonstrate the morphological validity of these point forms as reliable time-markers have thus far failed (Hughes 1983: 85; Farber, Ritter, and Jensen 1984).

Finally, as for the Tehama Pattern concept, recent consensus has been that although the term is poorly suited to its purpose the concept does merit further consideration (J. Johnson and Theodoratus 1984: 189-190). The Tehama Pattern has been most closely associated with the Yana and, perhaps to a lesser extent, with the Pit River groups (Achumawi, Atsugewi) and the Shasta (Clewett and Sundahl 1982a). However, “Mill Creek Complex” (Baumhoff 1957: 31-32) has long served as a designation for prehistoric Yana culture, and it is suggested here that it continue to do so. Moreover, as proposed above for the Shasta Complex, Late Period spatial aspects and temporal phases can be appended as appropriate to the Mill Creek Complex concept. Other complexes might also be named to represent the material remains of ancestral Achumawi and Shasta populations which, in turn, could likewise be internally differentiated into Late Period aspects and phases.

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NOTES

1. Four of the sites excavated in 1984 by Raven have been further excavated by William Hildebrandt and Mark Basgall, Far Western Anthropological Research Group, Inc. According to Hildebrandt (personal communication 1985), the excavated sites and components, and those excavated by Raven as well, generally predate the Late Period, with only a thin veneer of Late Period materials in the uppermost strata. While he felt that significant deposits of Late Period materials are present at these sites, they probably lie outside the areas of potential highway construction impact, and therefore have not been extensively explored. Hildebrandt concluded that neither the presence nor absence of manos and metates in the Late Period components at these sites has been conclusively established. He added, however, that he would not be surprised by their occurrence in Shasta Complex assemblages.

2. Some of the site assemblages containing manos also feature flaked stone artifacts, fashioned from Grasshopper Flat obsidian, that display hydration bands measuring ca. three microns or more. This has been advanced as evidence for the existence at these sites of pre-Shasta Complex (or pre-Late Period) components, and it is argued that the manos date to these earlier occupations. W. Hildebrandt (personal communication 1985) informed the author that a number of Gunther series projectile points, almost universally considered to mark the Late Period in northern California, and made of Grasshopper Flat obsidian, were recovered from shallow strata lying atop Middle Period strata at several sites in the upper Sacramento River Canyon. These points yielded a mean hydration value of 2.8 microns, which this author interprets as a refutation of the notion that hydration bands approaching three microns in width necessarily reflect Middle Period age.

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