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ARCHAEOLOGICAL DIFFERENTIATION OF  
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IN SOUTHERN CALIFORNIA.

University of California, Los Angeles, Ph.D., 1966  
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Los Angeles

Archaeological Differentiation of Shoshonean and Yuman  
Speaking Groups in Southern California

A dissertation submitted in partial satisfaction of the  
requirements for the degree Doctor of Philosophy  
in Anthropology

by

Delbert Leroy True

Committee in charge:

Professor Clement W. Meighan, Chairman

Professor William A. Lessa

Professor Richard F. Logan

Professor Henry B. Nicholson

Ralph C. Altman, Lecturer

1966

The dissertation of Delbert Leroy True is approved,  
and it is acceptable in quality and  
form for publication on microfilm:

H. B. Nicholas

Richard F. Logan

William A. Lusa

Ralph C. Altman

Clement W. Meighan

Committee Chairman

University of California, Los Angeles

1966

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## PREFACE

The basic data and recognition of the possibility for isolating cultural patterns coincident with linguistic boundaries in San Diego County are the result of several years' work in that area by the writer. This work includes partial excavation of several villages and the examination of over 600 sites in the course of numerous areal surveys.

Much of the credit for the successful completion of these various projects is due (1) to Dr. William A. Lessa for his early encouragement and guidance into the field of anthropology, and (2) to Dr. C. W. Meighan for his guidance, training in archaeological techniques, and encouragement over a period of several trying years.

Most of the ethnographic conclusions contained herein are the result of over fifteen years' contact and work with the Luiseno in varying capacities. More specifically, these data were derived primarily from the following informants. The contributions of these Luiseno friends are gratefully acknowledged:

1. Henry Rodriguez--Potereo
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Artifacts utilized from the Luiseno core area site (SDI 308) were recovered by C. W. Meighan and W. Harrison. These unpublished data are included with the permission of both Dr. Meighan and Dr. Harrison.

Additional artifacts from the Diegueno area were examined from the San Diego Museum of Man collections. Permission to use the Museum facilities was generously granted by Clark Evernham, Director of the Museum. Work with the collections was aided by Clark Brott, who offered many helpful suggestions and ideas based on his own work in the Diegueno territory. Artifacts from the Indian Ranch area were recovered as part of the Panamint Project supported by a National Science Foundation Research Grant (coinvestigator with E. L. Davis).

The writing of the thesis itself and the many projects related to the final assembly of the supporting data were



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## VITA

- August 31, 1923--Born--San Pedro, California.
- 1947-1949--Institutional On the Farm Training Program in  
Sub-Tropical Horticulture, Palomar College, San  
Marcos, California.
- 1955-1959--Lower Division course work. Palomar College and  
University of California Extension.
- 1959-1961--Upper Division course work. University of Cali-  
fornia, Los Angeles. Major in Anthropology.
- 1961--A.B. in Anthropology, University of California,  
Los Angeles.
- 1961-1962--Graduate work in Anthropology, University of  
Arizona, Tucson.
- 1962-1964--Graduate work in Anthropology, University of  
California, Los Angeles.
- 1962-1964--Teaching Assistant, Department of Anthropology,  
University of California, Los Angeles.

## PUBLICATIONS

- 1954 Pictographs of the San Luis Rey Basin, California.  
American Antiquity, Vol. 20, No. 1.
- 1957 Fired Clay Figurines from San Diego County, Califor-  
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- 1961 Early Gathering Complexes of Western San Diego County, California. (With C. N. Warren and Ardith Eudey) University of California Archaeological Survey, Annual Report, 1960-61. Los Angeles.
- 1961a The San Dieguito Complex and Its Place in California Prehistory. (With C. N. Warren) University of California Archaeological Survey, Annual Report, 1960-61, Los Angeles.
- 1961b A Fired Clay Figurine from Santa Monica, California. (With C. N. Warren) The Masterkey, Southwest Museum Publications, Los Angeles.
- 1963 Archaeological Investigations at Batiquitos Lagoon, San Diego County, California. University of California Archaeological Survey, Annual Report, 1962-63, Los Angeles.

#### FIELDS OF STUDY

##### Major Field: Anthropology

Studies in Archaeology. Professors Clement W. Meighan, Emil W. Haury, Henry B. Nicholson, Raymond H. Thompson, and Richard S. Woodbury.

Studies in Socicultural Anthropology. Professors John Hitchcock, Pedro Carrasco, and Edward H. Spicer.

Studies in Ethnography. Professors Wendell Oswalt and Johannes Wilbert.

ABSTRACT OF THE DISSERTATION

Archaeological Differentiation of Shoshonean and Yuman  
Speaking Groups in Southern California.

by

Delbert Leroy True

Doctor of Philosophy in Anthropology

University of California, Los Angeles, 1966

Professor Clement W. Meighan, Chairman

Although relationships between linguistic distributions and cultural patterns have been of considerable interest to culture historians, little real effort has been made to document such relationships from archaeological evidence.

This thesis is an exploratory attempt to examine some possibilities for such documentation in a limited and defined area in Southern California. Environmental and time factors are held as constants and differences between the archaeological remains from two defined areas are considered to be cultural in nature. The coincidence of two rather distinct cultural patterns with the extant linguistically defined territories is interpreted as evidence that the defined differences were in some way related to linguistic factors. In this case, isolation resulting from linguistic differences is believed to have been reinforced by

differences in attitude and world view held by the historic occupants of the two areas.

The documented differences for the two defined local areas cannot be definitely linked to the linguistic boundaries for the larger Shoshonean-Yuman areas. There is some evidence, however, supporting the eventual definition of these two larger units in terms of two relatively homogeneous but clearly separable cultural entities. The exploration of such a potential is suggested as the second step in the future extension of this proposal.

A methodology of sorts is suggested and some indication of the inherent potential for such future extensions is presented, utilizing specialized attributes from a selected projectile point sample taken from existing published reports and resources.

A simplified reconstruction of the culture history of the San Diego County area based upon these new data collected for this study is presented. These new data permit the refinement of the existing reconstructions and divide the late prehistoric-protohistoric and historic segments of the sequence into two distinct areal patterns. One pattern (San Luis Rey I and II, Meighan, 1954) is typical of the area occupied by the Luisenño in historic times. The other is typical of the area occupied by the Dieguenño, and appears to be the end product of a continuous development out of the earlier milling stone substratum. The development was

modified by numerous influences from the north and from the desert regions to the southeast. The culture pattern, here, is located in the interior mountain regions in the southern part of San Diego County. It appears to be slightly different from similar Diegueño speaking groups located in the vicinity of San Diego Bay at the time of contact. The interior mountain area complex is tentatively termed the Cuyamaca complex, although the identity of this pattern as an entity separable from the Diegueno area at large must be confirmed by considerable additional work.

## SECTION I

### INTRODUCTION

The potential diagnostic value of validated relationships between ethnic and linguistically defined provinces and specific cultural elements has long been recognized by anthropologists. Little real effort has been made, however, to test these possibilities.

The general notion that Race, Language and Culture are clearly separable entities has long been accepted by many anthropologists. It can be stated with little qualification, for example, that any racial aggregate has the potential for the development of any cultural pattern and that this pattern can function as effectively with any one language as another. There are then no necessary correlations between kinds of cultures and kinds of languages, and no inherent tendencies for particular languages to be associated with particular cultural patterns. Because of this and because of a tendency by many anthropologists to see the linguistic aspects of a cultural situation as a distinct and separable system, most attempts to isolate significant correspondences between linguistic groupings and cultural patterns have been treated with considerable reserve and skepticism.

There are, however, data which support the notion that some language-culture correlations do exist, and some qualification of the generally accepted thesis must be considered. The effects which a language has upon a particular cultural development and the counterinfluences of such a cultural matrix upon the language itself, for example, have been documented in several linguistically oriented anthropological studies (Hoijer, 1962:258-277; Sapir, 1916; Voegelin, 1951:357-373; Whorf, 1941:20-38). With respect to these kinds of relationships, Hoijer, for example, states:

If language and culture have been regarded by some as distinct variables . . . it is perhaps because (1) they define language too narrowly and (2) they limit culture (especially in establishing culture areas) to its more formal and explicit features, those which are most subject to borrowing and change. It is quite possible that the features of a language (largely phonemic) by means of which we link it to others in a stock or family are among the least important when we seek to connect it to the rest of the culture. . . . (Hoijer, 1962:271)

Likewise, the possibility for correlations between cultural and linguistic boundaries has been explored and tentatively recognized in the early works by Kroeber, Klimek and others, even though there are in these selfsame studies considerable evidence for the independent existence of many cultural-linguistic elements (Kroeber, 1904, 1907, 1920; Klimek, 1935).

It would appear safe to assume, then, that there are some possibilities for significant language-culture history relationships. However, if, as has been suggested above,



there is no reason to suggest innate or necessary relationships between languages and cultures, the development of any particular cultural configuration in conjunction with a specific language is best seen in terms of historical factors which have in some way resulted in the isolation of the defined pattern. Two factors need to be considered with respect to this situation:

1. The effects of language upon a cultural development with respect to a molding of the perceptions of the speakers (Hoijer, 1962:258-277); Whorf, 1941:75-93); and
2. The simple fact that language is the basic mode of communication in all cultural situations and, as such, plays a primary role in the maintenance of cultural tradition. Since people interact mostly with those speaking the same language there should exist a common body of knowledge among speakers of a common language embracing thousands of traits or elements.

Attention here is focused upon the latter of these two considerations, although it is recognized that the so-called molding influences are at least partially involved in several aspects of such communication processes.

If it be assumed that communication is a prime factor in the maintenance of cultural tradition, it is also logical to assume that there will be some situations in which the

linguistic isolation between contiguous cultural groups would lead to the development of separable cultural configurations. With regard to such a potential it should be noted that differences in languages need not be absolute barriers to the interchange of ideas, nor that peoples speaking different languages must have different cultures. However, since the most effective interchanges take place by means of verbal communication, contact and the resulting potential for an exchange of ideas is easiest among groups speaking the same or similar languages. Conversely, such contact should be most difficult between groups with markedly different languages. There is then some natural tendency toward a cultural separation along linguistic lines even when many basic traits are shared because of a generalized adaptation to a similar habitat. This position is supported, at least in part, by Hoijer (19 :94), who states:

Far from being simply a technique of communication it [language] is itself a way of directing the perceptions of speakers and it provides for them habitual modes of analyzing experience into significant categories. And to the extent that languages differ markedly from each other so we should expect to find significant and formidable barriers to cross cultural communication and understanding.

It should be stressed, however, that all cultural situations would not necessarily respond in the same way to similar influences and situations, and that the maintenance of any cultural isolation depends primarily upon the unique historical background of each concerned cultural development. It is this historical background in combination with

the effects of an adaptation to a physical environment which provides the basis for every cultural pattern.

Much of the sociocultural configuration of most human groups has probably been molded in the process of adaptation to a set of environmental circumstances including both natural and social components. In general, adaptation to natural resources determines the mode of subsistence; this in conjunction with the technology available in any given situation will tend to determine the population potential. These factors combined serve to influence the direction of the social organization of each such group. All of these processes, in turn, however, will be influenced by a pre-existing historical background and the degree to which this background permits interaction between various groups of people from differing environmental or social circumstances.

In general, the more similar the habitat and subsistence are, the more likely it is that such groups will tend to develop similar cultural patterns. The relative degree of convergence among distinctive cultural entities operating within the same general environmental situation, however, depends upon several factors: (1) the length of time two or more groups have been adapting to the same habitat; (2) the range of available subsistence potential within the prescribed territory; (3) the technologies available for the exploitation of this potential, and (4) the relative degree of isolation between the concerned groups.

Although all of these factors are important in terms of the effects they might have upon cultural convergence, the most important single factor in the retention or development of a cultural identity is probably that of isolation. Such isolation can result from physical barriers or it can, as has been suggested above, be the result of cultural factors.

Within any environmental matrix where more than one separable group is involved, there are several leveling mechanisms which tend to reduce diverse cultural inventories into some more or less common pattern. At the same time, however, there are counter forces and historical factors at work resulting in the retention of particular and distinctive ways of life. (The consequent developments in terms of traits and artifacts many times reflect such distinctions.) These patterned differences in behavior permit anthropologists to isolate specific cultural components and--under some circumstances--to trace the development of certain patterns through time or space. It is the complexities resulting from the constant interchange of ideas and goods, the similarities or differences developing out of adaptations to a habitat, and the fact that such interchanges and adaptations take place with varying degrees of intensity and enthusiasm through both time and space which many times tend to overwhelm the anthropologist who attempts to treat such relationships on anything more than a casual and simplistic basis.

It is the contention of this thesis that the eventual definition of the culture history for any area and the development of broadly based synthetic studies related to such a culture history would be greatly enhanced by the development of works designed to resolve--either in terms of verification or denial--the questions which presently attend many linguistic-culture history relationships.

The recent work by Taylor (1961:71-81) illustrates the kind of situation where verification of specific linguistic-culture history and areal relationships would be helpful. Taylor has proposed that the coincidence of the distribution of the Desert Culture and the postulated distribution of Hokaltecan linguistic groupings are significant, and that the Desert Culture was carried by Hokaltecan speaking peoples. Further, he has suggested or reiterated the notion of a Uto-Aztecan intrusion into the area occupied by Hokaltecan. The distribution of linguistic groups as it existed at the time of contact was the end result of this intrusion and the subsequent cultural adjustments.

Using lexico-statistical data, the extant published literature in archaeology and ethnology for this area, and drawing upon his own field work, Taylor reconstructs a portion of the culture history for the Great Basin, the Southwest, and California. This work is admittedly speculative. It is, however, a logical explanation of the resulting cultural pattern and the postulated sequence of events

leading to this end is not inconsistent with the available data. However, other than those data recovered by Taylor himself from the State of Coahuila, Mexico, where a continuum of development is present, ranging from the milling stone horizon to the historic period, there are few documented connections between linguistic groups and archaeological assemblages. There are several areas where such relationships are suggested by the pattern of distribution, etc., but no real connecting links. Much of the ethnographic and archaeological documentation cited must be treated with some reservation insofar as it is applicable to this kind of scheme.

The point here is that while the generalizations made in this synthesis may be accurate, and while the basis for these generalizations may be sound, there is a marked gap between the hard core archaeological data and the synthesis itself for most of the area of concern.

The development of regional studies designed to trace the cultural patterns in a more specific sense throughout the defined area and the subsequent development of a number of local sequences indicating the presence or lack of some continuity between the milling stone (Desert Culture) horizon and the historic occupations would of course strengthen (or demolish) Taylor's basic premise.

Much of his position is based upon lexico-statistical information with regard to the distribution of the various

languages through time. These data, while helpful, are questioned by many linguists. The suggested relationships, then, would be greatly strengthened if they could be supported by additional reliable archaeological data. The comments here are not intended to suggest that the synthesis itself is in error, but are rather to indicate that a logical step at this point would be the gradual testing of this hypothesis with a number of detailed studies designed to produce the documentation needed to verify or refute the basic contentions.

A similar situation prevails with the work of Gunnerson (1962:41-45). Here a correspondence is seen between the linguistic distributions of several historic Shoshonean groups and the distribution of some identifiable archaeological patterns (the Virgin, Fremont and Sevier branches of the Anasazi). On the basis of these correspondences in spatial distribution and upon some linguistic data Gunnerson suggests that the Pueblo occupants of these cultural developments were, in fact proto-Plateau Shoshoneans. A number of problems are present in this suggested relationship. The most significant from the standpoint of this thesis is the lack of a documented continuity between the earlier occupations and the historic ones with regard to the archaeology.

Rogers' earlier work dealing with the history of the Yuman peoples in Southern California and the Colorado River area suffers from the same weakness. There is a certain

amount of logic in his thesis and there is little question but what he had considerable evidence at hand to support his various contentions. He did not, however, have the kinds of archaeological data needed to actually validate such a thesis. At the time he was writing there was not one usable published report for the Colorado River area dealing with an excavated archaeological site. His excavations in San Diego County were limited to one area and the data from these later sites were never processed. Even to date no site has been excavated in Western Arizona (Walapai) that provides anything remotely suggesting the kind of data needed to support or refute Rogers' hypothesis.<sup>1</sup> The results claimed by Rogers were in fact based almost entirely upon surface collected materials and astute observations as to their various distributions.

The crux of this whole discussion is that while the syntheses proposed by Taylor, Gunnerson, Rogers, and others are not necessarily in error and may well represent valid reconstructions of the history for their various areas, they are based upon tiny scattered bits and fragments of data and upon some still questionable methodologies. For the most part this is recognized by all parties concerned and no claims for absolute control over these data have

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<sup>1</sup>Euler has excavated a couple of cave shelters and some data are available now which were not available during the time Rogers was writing (Euler, 1956, Ph.D. dissertation).



been made. The comments above are not intended as criticism and are mentioned only to point up the areas where additional data could contribute to such synthetic studies.

It is suggested, then, that the value of such syntheses is directly related to the data upon which they are based. The definition of these schema can only be made by substantial amounts of documentation which define the distribution of diagnostic elements through time and space for all areas of concern. The continuity of these data in both dimensions is vital to the eventual definition of the culture history of any area. These kinds of data do not exist at the present time.

The development of a number of local archaeological sequences within the area at large and the determination of the degree of relationship between these sequences is believed to be a necessary step in the establishment of larger broad scale studies. Further, the verification of relationships between specific archaeological components within these sequences and linguistic groups on the basis of coincident distributions and established continuity through time would be a critical and necessary part of any planned program.

So far as the culture historian is concerned the possibility for some significant correlations between cultural and linguistic boundaries raises two questions of import in the archaeological definition of cultural developments:

1. To what degree might language-culture relationships be reflected in material cultural remains; and
2. What is the potential for the recovery of these kinds of data from archaeological contexts.

This dissertation represents an attempt to establish some correlations between linguistic and cultural boundaries and to test the potential for the definition of such boundaries by means of archaeological data. The aim here is not the final solution of the many complex problems involved. It is, rather, an exploratory attempt to examine one region to see whether patterns of archaeological data can be correlated with linguistic distributions.

## SECTION II

### METHODOLOGY AND ASSUMPTIONS

It is assumed that the detailed examination of a rather large archaeological sample from a relatively small area which includes representatives from two distinct linguistic groups will--under certain circumstances--provide the basis for the kind of differentiations with which we are concerned. The methodology suggested here is designed to define cultural units from a limited number of diagnostic traits. Hopefully, these elements can be traced through both time and space. Many complex factors must be recognized in such an approach and the need to consider several significant variables leads to a number of qualifications bearing upon the potential significance of the results. These qualifications or specifications are set forth as guidelines to define the bounds of this study:

1. In general, the solution of the kinds of problems with which this thesis is concerned depend upon the examination of a substantial body of data collected with these specific problems in mind;
2. These data to be most effective must be assembled and classified on the basis of clearly defined criteria and by archaeologists with comparable

levels of expertise;

3. The criteria used must be taken from those elements found in the so-called "average" open sites and should not include unusual or perishable items normally found in particular and locally favored situations;
4. Samples should be taken from and comparisons made of sites or components that are of the same relative age;
5. Comparisons should be made only for elements derived from similar environmental zones and the diagnostic artifacts utilized for such comparisons should be such that any existing differences may be attributed to cultural factors and not to differential exploitation of environmental resources;
6. The sample used should be taken from those sites where the relationships between the recovered material culture items and the ethnic-linguistic groups known to have occupied the area can be documented. Further, this should be an area which has been occupied for a considerable period of time by the same two (and not more than two) separable linguistic groups.

The successful application of these specifications to the solution of the defined problem must be made with reference to several basic theoretical assumptions. These

assumptions are outlined below:

1. Archaeological "types" when properly defined represent the normalized behavior of people as this behavior is manifest in the formal and functional attributes of the surviving artifacts;
2. A satisfactory methodology for the definition and study of cultural developments and process is represented in the proper application of the Comparative Method; and
3. Recognition that the Comparative Method itself assumes that similarities in form, function and meaning--with several notable exceptions--represent or are a function of relationship. That is to say that those items which are most similar are most likely to be related and, conversely, that differences are seen as reflections of a degree of separateness in either time or space, or both.

Within the frame of reference defined by the above stated qualifications and considering the implications inherent in the basic theoretical assumptions, concern here is focused upon the isolation of typical traits from two cultural groups, each affiliated with a specific linguistic family and occupying similar environments. A suggested procedure for the evaluation of the resources of these defined areas which hopefully will lead to the isolation of the specific diagnostic criteria is presented in the

following outline form:

1. Selection of an area where two distinct linguistic groups are known to have existed, and where there is reason to believe that this occupation persisted for some significant time prior to historic contact (in this case the Western Great Basin and California areas occupied by Yuman and Shoshonean speakers);
2. Selection of an area within each of the two linguistically defined provinces described above occupying the same basic environmental and ecological situation, and on the basis of ethnographic data, believed to have been typical of the area at large. This area is herein designated the core area for each linguistic province. (Map 1 illustrates these core areas in the two linguistic provinces and indicates the relationships between the core areas and the area at large.);
3. Selection of a number of sites within each core area having adequate artifact samples and where the specific occupation of the site can be documented on the basis of historical or ethnographic sources of information;
4. Comparison of the core area samples from excavated sites with samples collected from sites outside of the core area but from within each of the

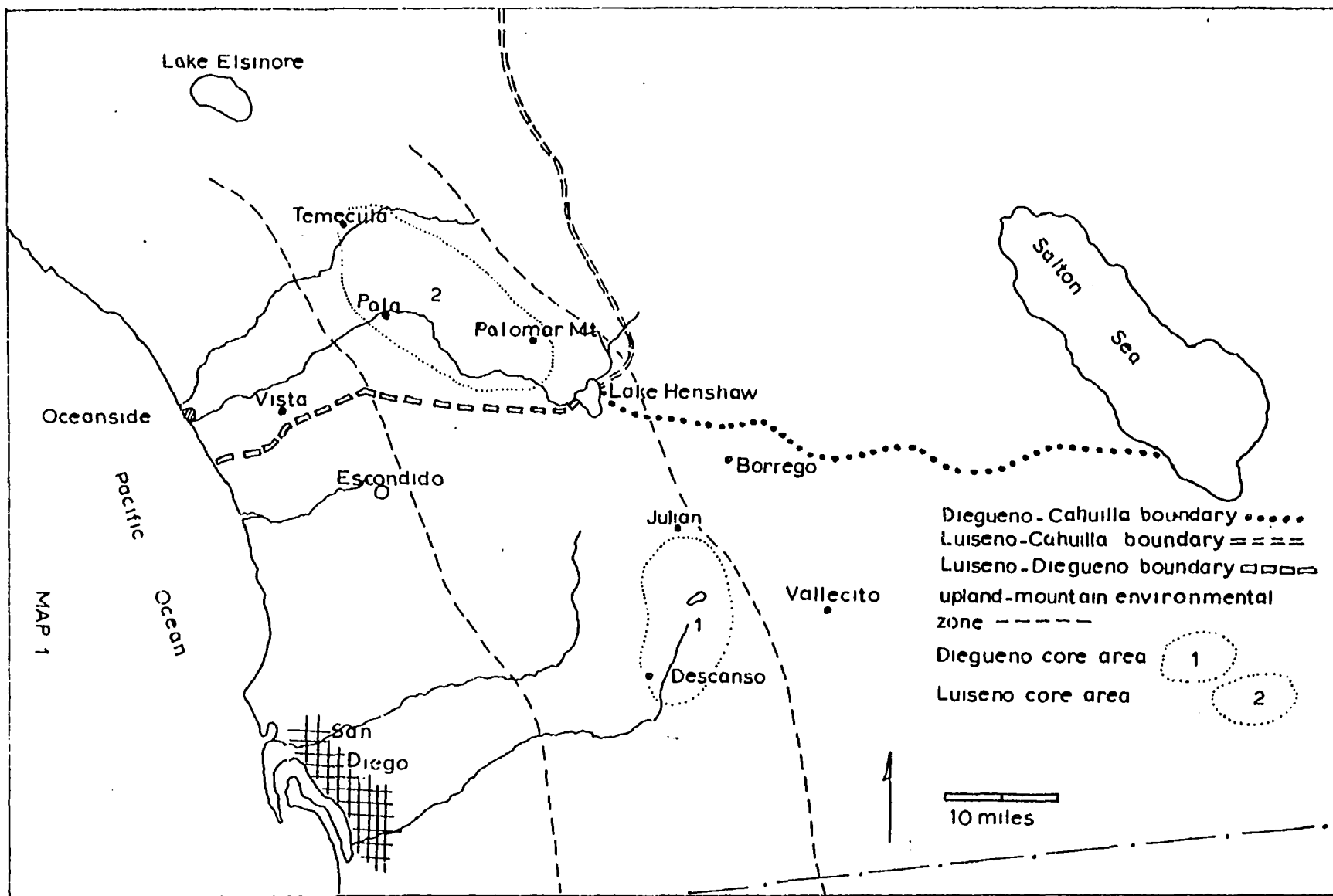
designated linguistic provinces to determine the relative degree of cultural homogeneity within each of the linguistic provinces;

5. Comparison of the samples from each of the two core areas and the two linguistic areas at large to see if they are different in any significant way; and
6. Presentation of the derived results of all of the above comparisons in the form of percentage differences where only two units are being compared, or, in the case of more complex relationships, in the form of some suitable statistical technique.

With the above stated qualifications, assumptions, and procedures in mind it is suggested then that if it is at all possible to separate the cultural entities which occupied any given portion of the western Great Basin and Southern California in proto- and late prehistoric times, to isolate specific characteristics marking one such cultural grouping as different from another, or to relate such cultural differences to specific linguistic families on the basis of archaeological data, it could be done most effectively (1) in those areas established as Shoshonean or Yuman in clear-cut ethnographic terms, (2) in an area where both groups occupy similar ecological niches, and (3) in an area where the direct historical approach permits the establishment of the continuity of the historic-prehistoric pattern.

Because it appears that the mountain Diegueño and the Luiseno who occupied contiguous territories in San Diego County, California, during historic, protohistoric and late prehistoric times had developed similar adaptations to the same ecological niche and at the same time are representatives of the Yuman and Shoshonean linguistic families, it is proposed that a detailed examination of the archaeology of the areas occupied by these two groups will produce data contributing to the definition of the prehistoric cultural boundaries. Hopefully, this definition will lead to the isolation of cultural traits characteristic of the Yuman or Shoshonean speaking groups within a defined and limited spatial and temporal range. Such data, if they are properly definitive and adequately documented, could under optimum circumstances provide the basis for similar studies in adjacent regions and conceivably would prove to be of value in the definition of cultural provinces in those areas where ethnographic data are no longer available.





## SECTION III

### HISTORICAL BACKGROUND

This section is a summary statement covering those earlier works in the western Great Basin-Southern California region which are in some way concerned with language-culture relationships. It is not intended to be all inclusive and only those papers believed to have some significance in terms of the present work are included.

These works can be treated in three separate but related categories: (1) studies concerned with the definition of linguistic boundaries; (2) ethnographic studies aimed at the definition of cultural provinces; and (3) archaeological research in the area of concern.

At the time of historic contact the western Great Basin and Southern California regions were occupied by several aboriginal groups belonging to two distinct linguistic stocks: Yuman and Chumash speaking peoples of the Hokan stock and several groups speaking various Shoshonean languages.

The boundaries for the various ethnic groups present at the time of contact were defined almost entirely from linguistic studies, and from informant data describing the territories of each extant group as they were remembered

during the early years of the present century.

Probably the earliest attempt to define the linguistic provinces in this part of the United States was that of Powell and Ingall (1873). In the two decades following, additions to this knowledge were made by several writers including Gatschet, Putnam, and Powers, with the result that the basic outlines of the historic linguistic provinces were established by the turn of the present century. In the several decades that followed, this basic knowledge was expanded and refined in works by Kroeber, Dixon and others. It was obvious at an early date that the defined linguistic provinces were distinct entities with no transition dialects separating the various areas. Thus the linguistic boundaries reported in these works were usually clear cut and were for the most part accurate representations of the ethnic distributions as they existed in early historic times. The pattern of ethnic-linguistic occupation for California and the Great Basin at the time of contact and for the early historic period had been drawn and a number of conclusions related to the culture history of the area were made on the basis of these distributions. By 1904, for example, Kroeber was able to lump the linguistic groups of California into three large categories. They were correlated with the three main cultural provinces of the state. During this period considerable effort was channeled into studies relating to the distribution of the various languages in the

Great Basin, as well as to their genetic relationships bearing upon the definition of cultural developments within the area. Because of these studies it was possible at a relatively early date to state that the Shoshonean occupation of California and portions of the western Great Basin was a relatively recent intrusion into an area previously held by Hokan speaking peoples. Further, the data available at that time suggested that, although the so-called Shoshonean intrusion was relatively recent, it was of sufficiently age to permit the development of several Southern California groups "in place," and Kroeber was able to suggest a considerable time span separating the division of these groups from the parent stock (Kroeber, 1907:164). In more recent years a number of works have been published dealing with the genetic relationships of the various languages in this area.

Table 1 represents an outline survey of some publications dealing with territorial definition and linguistic-cultural relationships. Map 2 illustrates the linguistic distributions in the area as they were defined on the basis of the cited studies, and indicates the wedge-like character of the so-called Shoshonean intrusion into the area at large.

During the same time that these various ethnic-linguistic provinces were being defined, and many times as part of the same or related projects, a number of studies

Table 1

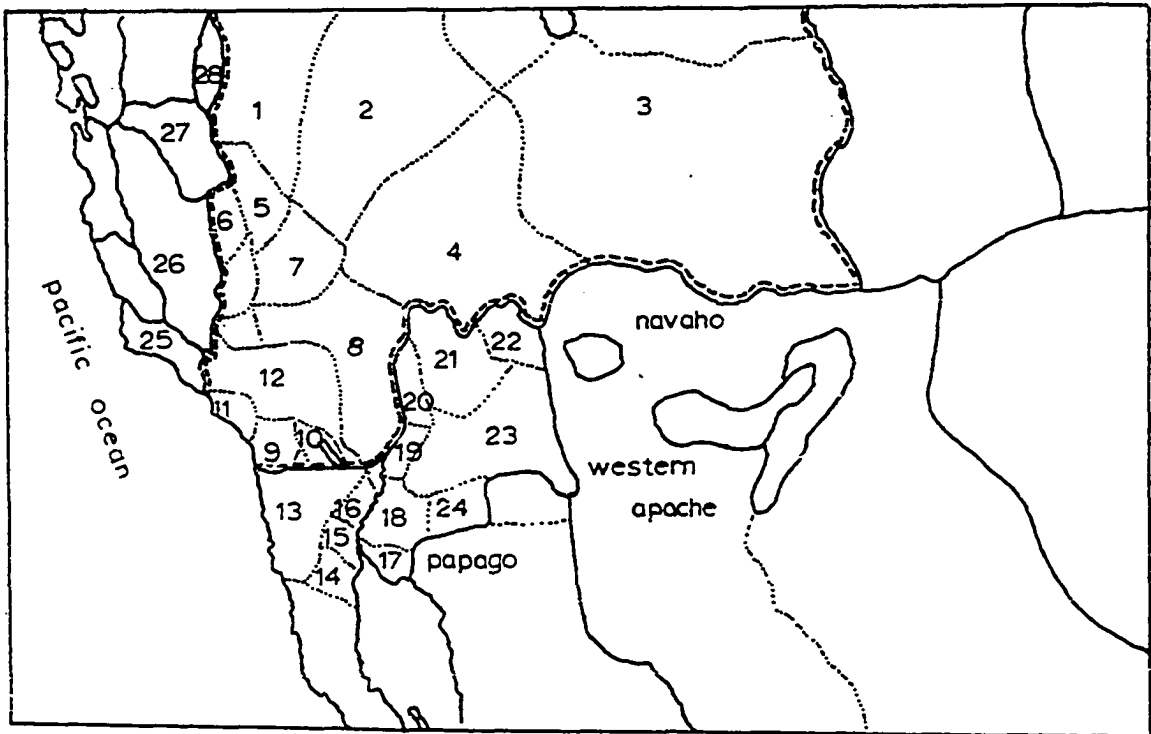
Early Linguistic Studies Concerned with the Definition of  
Linguistic Boundaries and Linguistic-Cultural  
Relationships

- Powell and Ingall, 1873.
- Gatschet, 1876. In Report of the Chief Engineer--III.
- Powers, 1877. Tribes of California.
- Gatschet and Putnam, 1879. In the Wheeler Report.
- Powell, 1891. Linguistic Map North of Mexico.
- Kroeber, 1904. Correlates linguistic and cultural provinces.
- Kroeber, 1907. Shoshonean Dialects of California. Isolates four Shoshonean regional groupings.
- Dixon and Kroeber, 1919. More detailed grouping of various linguistic units into larger aggregates.
- Kroeber, 1934. Uto-Aztecan languages of Mexico. Concern with relationships among various Uto-Aztecan groupings in western North America.
- Steward, 1937. Linguistic Distribution and Political Groups of the Great Basin Shoshoneans. Linguistic studies concerned with genetic relationships between groups and with the synthesis of regional culture histories on the basis of predominantly linguistic data.
- Romney, 1957. The Genetic Model and Uto-Aztecan Time Perspective.
- Whorf, 1935. The Comparative Linguistics of Uto-Aztecan.
- Hale, 1958. Internal Diversity in Uto-Aztecan: I.
- Hale, 1959. Internal Diversity in Uto-Aztecan: II.
- Lamb, 1958. Linguistic Prehistory in the Great Basin.
- Taylor, 1961. Archaeology and Language in Western North America.

Table 1 (continued)

Gunnerson, 1962. Plateau Shoshonean Prehistory.

Hopkins, 1965. Great Basin Prehistory and Uto-Aztecan.



- |                     |                 |
|---------------------|-----------------|
| 1. northern paiute  | 13. DIEGUEÑO    |
| 2. western shoshone | 14. AKWAALA     |
| 3. ute              | 15. COCOPA      |
| 4. southern paiute  | 16. KAMIA       |
| 5. eastern mono     | 17. COCOPA      |
| 6. western mono     | 18. YUMA        |
| 7. panamint         | 19. HALCHIDHOMA |
| 8. chemehuevi       | 20. MOHAVE      |
| 9. luisefño         | 21. WALAPAI     |
| 10. cahuilla        | 22. HAVASUPAI   |
| 11. gabrielino      | 23. YAVAPAI     |
| 12. serrano         | 24. MARICOPA    |
|                     | 25. CHUMASH     |
|                     | 26. YOKUTS      |
|                     | 27. MIWOK       |
|                     | 28. WASHO       |

----- Shoshonean boundary

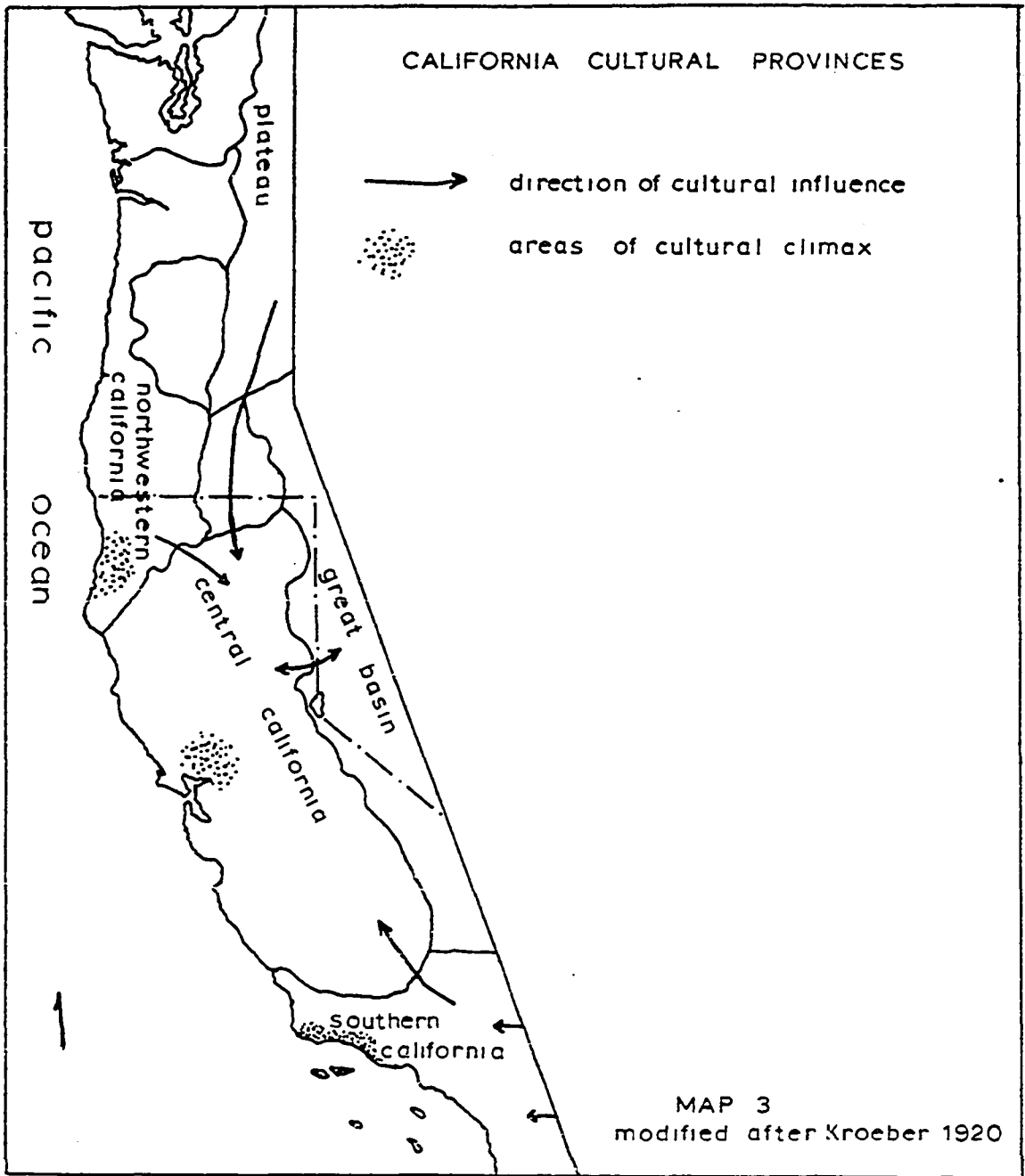
MAP 2  
LINGUISTIC DISTRIBUTIONS

were instigated and carried out which were concerned with the definition of cultural provinces within the same general area.

Recognition of the Culture Area as a potentially useful classificatory device in western North America was made at least as early as 1895. At this time Mason was able to isolate some eighteen areas with significant correlations between geographic provinces and ethnic-cultural elements. Interest in the basic Culture Area concept and an on-going detailed examination of the ethnographic resources of California led to the definition of a number of cultural provinces in that area soon after the turn of the century. During the several decades that followed, a number of papers were published dealing with the concept of cultural provinces in California and the relationships of these provinces with adjoining areas. The general results of these works are summarized on Map 3, which indicates the culture provinces and areas of culture climax in California as they were seen in the late 1920s.

As knowledge of the California ethnic provinces accumulated it was possible to see relationships between them and the adjacent areas in the Great Basin and the Southwest more clearly. At this time several studies were focused upon the definition of Southwest-Great Basin-California relationships, and as early as 1928 archaeological and ethnographic work within this larger area had progressed to the point

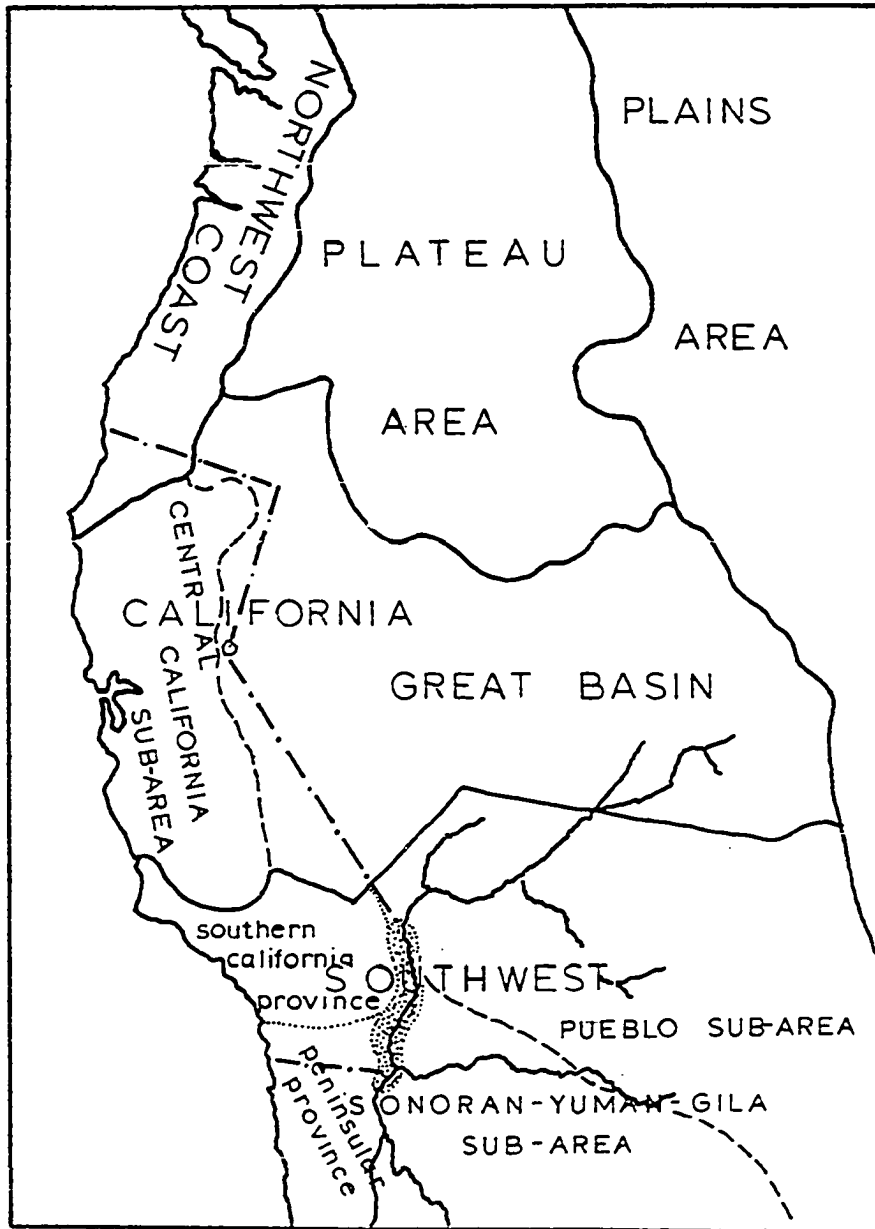




where the classification of the various component provinces, and the synthesis of the more obvious cultural developments, could be developed with some degree of confidence. The culmination of this interest is summarized for that period of time in the Culture and Natural Areas of North America (Kroeber, 1939). Basically, this work incorporated all of the extant data on geographic, ethnic, and cultural provinces. It is of concern here only with respect to Kroeber's attempts to see the California culture provinces in relation to the larger Great Basin and Southwestern culture areas. Map 4 illustrates these relationships.

Here, Southern California is seen as a subprovince of the Sonoran-Gila-Yuman Subarea of the Southwest Culture Area. Within this Southern California region, Kroeber was able to isolate three more or less distinct regional developments:

1. Southern California proper, which included the Shoshonean speaking Luiseno, Cupeno, Cahuilla, Serrano and Gabrieleno ethnic groups, as well as the Hokan speaking Chumash;
2. Peninsular California, including the Yuman speaking Diegueño, several Yuman speaking groups from Baja California and possibly the Seri ethnic groups; and
3. The Colorado River area occupied by several Yuman speaking groups including the Kamia, Yumas, Mohave, Cocopah, and Halchidhoma, as well as the Shoshonean



- CULTURE AREA BOUNDARY
- - - SUB-AREA BOUNDARY
- ..... PROVINCE BOUNDARY
- ..... COLORADO RIVER PROVINCE

MAP 4  
 modified after Kroeber, 1923; 1939

speaking Chemehuevi who were, however, regarded as recent arrivals in the area.

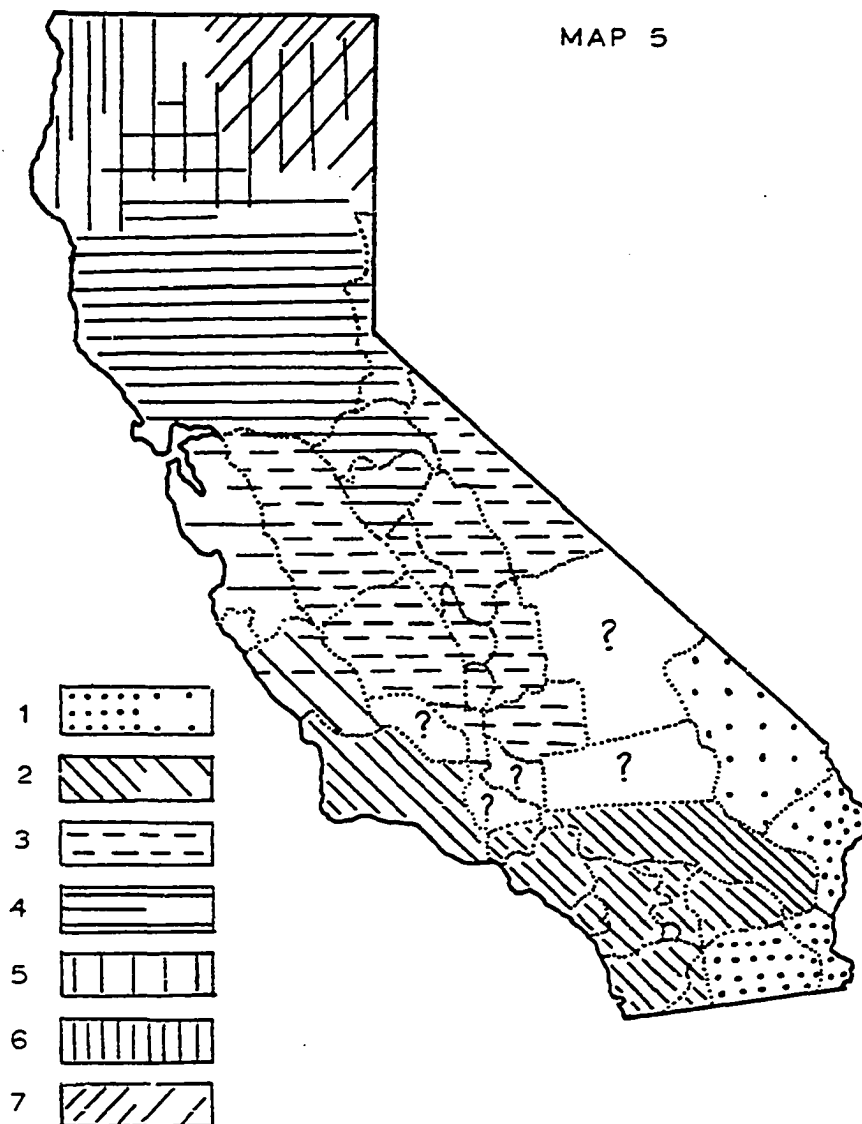
On the strength of these distributions it was possible to see some general correlations between cultural provinces defined on the basis of clusters of trait similarities and the ethnic-linguistic groupings identified at the time of historic contact. There are, however, within these data numerous instances where the cultural patterns appear to transcend the linguistic boundaries. In spite of several interesting correlations supporting the notion of significant relationships between cultural and linguistic provinces, Kroeber interprets much of the extant patterning and localized variations in terms of geographical separation and ecological adaptation to desert, mountain, and coastal environments; and to differences resulting from differential intensities of cultural development, e.g., climax versus marginal areas of development all within the same basic cultural milieu (Kroeber, 1941, in Drucker, 1939).

The general conclusions reached by Kroeber and his co-workers in this regard were confirmed by the statistical evaluation of the same data made by Klimek (1935). The examination of the University of California, Berkeley, culture element lists resulted in the blocking out of a number of what Klimek called "cultural strata," and it was possible --using this method--to see the relationships between the various component elements in such strata expressed in terms

of a "coefficient of similarity." Using this statistical approach Klimek was able to isolate fourteen blocks or "strata," each in some way related to seven cultural provinces and to six linguistic families. From these results he was able to conclude that there was a significant correlation between the various linguistic groups and certain cultural patterns. These correlations, however, although clear cut and definite for some portions of the cultural pattern, did not fit across the board and there were, in many instances, a number of traits which crossed over the ethnic-linguistic boundaries in several kinds of overlapping relationships. Because of this, he could not seem to separate the infra-Southern California subprovinces in any clear-cut manner.

Thus in spite of the fact that the two basic Southern California linguistic provinces had been obviously modified by two different and separable spheres of influence, there were enough elements held in common so that it was impossible to see these two areas as culturally distinct. The general results of Klimek's work as it applied to the delineation of California cultural provinces and their relationships to linguistic provinces is presented in Map 5 and in Table 2.

The general conclusions made possible by these various studies are seen in the recognition (1) that Southern California as a whole could be separated from the rest of



CULTURAL PROVINCES IN CALIFORNIA

after Klimek, 1935

Table 2  
Coefficients of Similarity between Linguistic  
Families and Cultural Provinces

Linguistic Families	Cultural Provinces					
	<u>Colorado River</u>	<u>Southern California</u>	<u>San Joaquin</u>	<u>Central</u>	<u>Northwestern</u>	<u>Northwest Coast</u>
Hokan	54	<u>14</u>	<u>34</u>	10	<u>07</u>	<u>02</u>
Shoshonean	06	89	28	<u>64</u>	<u>27</u>	<u>24</u>
Penuti	<u>30</u>	<u>44</u>	40	59	<u>37</u>	<u>34</u>
Yuki	<u>12</u>	<u>18</u>	<u>18</u>	48	<u>15</u>	<u>14</u>
Athebascan	<u>18</u>	<u>26</u>	<u>26</u>	<u>40</u>	88	35
Algonkin	<u>08</u>	<u>12</u>	<u>12</u>	<u>26</u>	<u>10</u>	83

Negative coefficients are underlined.

After Klimek (1935).

California; (2) that within the Southern California area more than one subarea could be recognized on the basis of certain culture element distributions; (3) that Southern California cultural provinces had been influenced by Great Basin and Southwestern cultural developments; and (4) that there was a definite but sometimes weak correlation between many of these patterns and the linguistic provinces existing at the time of historic contact. However, the Southern California area at large seems to have shared a significant number of traits across the board and many of the recognized differences were attributed to variations in cultural intensity, to differences in ecological adaptation, and to differential influences from without.

Adaptation to a similar habitat and considerable exchange of goods and ideas over a period of many centuries or millenia were credited with the elimination or submergence of many of the originally existing cultural differences, although in some unexplained way this leveling process was able to operate without any significant effect upon the linguistic identity of the various groups. Some of the more important references pertaining to these cultural provinces and intercultural relationships are presented in Table 3.

Although some archaeological data were probably considered in the development of the conclusions reached in the above mentioned studies, most of these conclusions were the



Table 3

Important References Pertaining to Cultural Provinces  
and Intercultural Relationships

- Mason, 1895. Early definition of culture areas in North America.
- Kroeber, 1904. Types of Indian Cultures in California. Definition of basic cultural provinces.
- Wissler, 1914. Material Culture of the North American Indians.
- Kroeber, 1920a. Yuman Indian Tribes of the Lower Colorado. Summary listing of historic occupants.
- Kroeber, 1920b. California Culture Provinces. Defines four basic areas marked by distinctive patterns. Discusses relationships between Southern California, Colorado River area and the Southwest.
- Kroeber, 1922. Elements of Culture in Native California. Summary discussion of infra-California relationships and some attempts to see California developments in terms of extra-Californian influences.
- Kroeber, 1923. History of Native Culture in California. Reconstruction of prehistory based upon previous ethnographic studies. Defines four basic periods of development and relates each to specific culture elements and linguistic affiliations. Attempt to see developments in California in terms of extra-Californian influences as well as internal forces.
- Lowie, 1923. Cultural Connections of California and Plateau Shoshonean Tribes. Relates California province (Central California) to Great Basin substratum.
- Kroeber, 1925. Handbook of California Indians. Source book. Summary descriptions of all ethnographically defined groups as of that date.
- Wissler, 1926. The Relation of Nature to Man in Aboriginal America.
- Kroeber, 1928. Native Cultures of the Southwest. Brief summary descriptions of Southwestern ethnic groups.
- Gifford and Lowie, 1928. Notes on the Akwa'ala Indians of Lower California.

Table 3 (continued)

- Spier, 1929. Problems arising from the Cultural Position of the Havasupai.
- Klimek, 1935. The Structure of California Indian Culture. Statistical evaluation of culture element data. Differentiates cultural provinces and correlates with linguistic groups.
- Kroeber, 1937. Culture Element Distributions--III. Area and Climax. Defines climas and marginal culture developments in California.
- Kroeber, 1939. Culture and Natural Areas of North America.
- Steward, 1939. Some Observations on Shoshonean Distributions.
- Zingg, 1939. Reconstruction of Uto-Aztecan History.
- Kirchhoff, 1954. Gatherers and Farmers in the Greater Southwest: a Problem in Classification.
- Underhill, 1954. Intercultural Relations in the Greater Southwest.
- Gunnerson, 1962. Plateau Shoshonean Prehistory.

result of ethnographic and linguistic studies of Southern California and Great Basin Indian groups.

Over a period of the past seventy-five years or so a number of archaeological investigations have been made in the area of concern, and considerable data were recovered which bear upon the culture history of the area at large. Most of this work was not directly focused upon the kinds of problems concerning this thesis, and for the most part these data need not be considered in the present context.

In order to indicate the scope and range of these works, however, and to provide points of reference for those students not familiar with the archaeology of the area, selected references are presented in tabular form in Table 4. This presentation is not intended to represent complete coverage of all archaeological publications for the area at large, but it does include most of the more significant works. Map 6 indicates the location of those excavations and surveys most pertinent to the present thesis.

Most of the serious works here, including both ethnographic and archaeological studies, were intended as limited local and regional projects. A few, however, represent attempts to synthesize developments over the larger area.

Although there has been a general acceptance of some of these schemes, most are unconvincing and fail at least in part to stand up to critical examination because they

Table 4

Summary Outline of Archaeological Investigations in  
Southern California and Adjacent Regions

Chumash Area

A number of early excavations and collections are known, but most information is of limited use in present day studies. Included in these earlier studies are works by:

De Cessac, Several excavations prior to 1872.

Schumacher, 1875, 1877, 1878, and 1880 and several more from about the same period of time. Represents valuable observations of early archaeological situations. Primarily artifact descriptions.

Rau, 1876. Describes Santa Barbara area artifacts.

Abbott, 1879. Describes Santa Barbara area artifacts.

Putnam, 1879. Describes Santa Barbara area artifacts.

Harrington, 1928. Report on excavation of Burton Mound in Santa Barbara area.

Rogers, D. B., 1929. Resumé of sites and archaeology of Santa Barbara area. Defines three periods or phases of development: Oakgrove, Hunting culture, and Canaliño.

Olson, 1930. Chumash Prehistory. A classic work.

Woodward, 1933. Los Angeles museum excavations in Ventura County.

Strong, 1935. Archaeological exploration of eastern Chumash territory.

Carter, 1941. Report on excavations at Point Sal.

Wallace, 1954. Report on excavation of Little Sycamore site. A milling stone occupation.

Peck, 1955. Excavation of site at Zuma Beach.

Wallace, 1955. Archaeology of Gilmore Ranch site, Ventura County.

## Table 4 (continued)

- Curtis, 1959. Arroyo Sequit: Investigation of a late coastal site in Los Angeles County, California.
- Kowta and Hurst, 1960. Excavations at the Triunfo rock-shelter in Ventura County.
- Reinman, 1961. Report on excavations at Whale Rock Reservoir.
- Greenwood, 1961. An analysis of midden constituents from the Goleta site.
- McKusick, 1961. Report on excavations at Goleta-Santa Barbara region.
- Ruby, 1961. Report on excavations at Zuma Mesa, Los Angeles County.
- Susia, 1962. Excavations at the Soule Park site, Ventura County.
- Clemmer, 1962. Detailed description of Chumash House ruin.
- Wallace, 1962. Archaeological survey work in Arroyo Grande Creek Watershed, San Luis Obispo County.
- Eberhart and Babcock, 1963. Archaeological Survey of Mutah Flat, Ventura County.
- Deetz, 1963. Archaeological Investigations at La Purisima Mission.
- Harrison, 1963. Unpublished dissertation dealing with site at Dos Pueblos and Chumash cultural developments.

In addition to the above mentioned publications, a number of works by Orr should be mentioned. He has published some thirty-six papers on the Chumash area over a period of the past thirty years.

For a more detailed bibliographic coverage of Chumash archaeology see a Bibliography of the Chumash and their Predecessors by E. N. Anderson, Jr., UCAS-R, No. 61, 1964.

Table 4 (continued)

Los Angeles Basin Area

Winterbourne, 1935, 1937, and 1938. W.P.A. excavations in South Coastal area. Long Beach environs. Results patchy and collections not generally available for study.

Treganza and Malamud, 1950. Excavations at the Tank site. Preliminary report on early site in Santa Monica Mountains.

Walker, 1951. Report on excavations at five sites in Los Angeles County. Includes brief report on stratified site at Malaga Cove. Mostly concerned with milling stone horizon sites.

Peck, 1955. Excavations at Zuma Beach; may be Chumash territory.

Treganza and Bierman, 1958. Final Report on the Tank site.

Wissler, 1958. Excavations at Deer Canyon site, Santa Monica Mountains. Late prehistoric or protohistoric site.

Rosaire, 1960. Excavations at a site at Encino, San Fernando Valley. Milling stone horizon.

Ruby, 1961. Excavations at Zuma Mesa. Predominantly milling stone horizon artifacts.

King, 1962. Excavations at Parker Mesa, Santa Monica coastal area. Milling stone horizon site.

Channel Islands

(Other than those in Santa Barbara Region)

Data from these sources may be used to supplement data from mainland sites under some circumstances.

Meighan and Eberhart, 1953. Survey on San Nicholas Island.

Meighan and Rootenberg, 1957. Excavations on Catalina Island. Late horizon steatite quarry and workshop area camp.

Table 4 (continued)

Meighan, 1959. Excavations at Little Harbor, Catalina Island. Produced artifact assemblage of intermediate age and typological characteristics. Important in mainland-island relationships.

McKusick and Warren, 1959. Surveys on San Clemente Island.

Rosaire, 1959. Excavations on San Nicholas Islands.

Reinman and Townsend, 1960. Excavations on San Nicholas Island.

#### South Coast and Orange Counties

Winterbourne, 1940. W.P.A. excavations on Goffs Island at Newport. Preliminary report in manuscript form available.

Lytton, 1963. Survey and excavation at Laguna Niguel.

#### San Diego County--Coastal and Intermediate (Valley and Upland Mountain Provinces)

Rogers, 1929. Report on surveys describing San Dieguito cultural materials. San Diego County coast and intermediate valley provinces.

Rogers, 1939. More general work describing cultural developments for both San Diego County and the interior deserts. Defined La Jolla, San Dieguito and Yuman developments for San Diego County area.

Rogers, 1945. A general synthesis concerned with the development of Yuman speaking peoples in Southern California and Marginal Southwest.

Harding, 1951. Redefinition of La Jollan culture based upon excavation in San Diego coastal area.

Moriarty, Shumway and Warren, 1959. Excavation of La Jollan site at Scripps' Estates. Dated La Jollan components and skeletal material.

Warren and Thompson, 1959. Excavation of La Jolla site at Del Mar on San Diego coast.

Table 4 (continued)

- Shumway, Hubbs and Moriarty, 1961. Further discussion of Scripps Estate site; La Jolla culture on San Diego coast.
- Crabtree, Warren and True, 1963. Excavation of two La Jolla sites near Batiquitas lagoon, San Diego coast.
- Warren, 1964. Unpublished dissertation dealing with culture change and sequences on San Diego coast.
- True, 1958. Definition of Pauma complex. A milling stone manifestation in the interior mountain regions of San Diego County.
- Warren, True and Eudy, 1961. Survey of milling stone sites in western San Diego County.
- Warren and True, 1961. Excavations at the C. W. Harris site. Additional definition of San Dieguito complex based on stratified deposit.
- Wallace, 1962. Surveys in Buena Vista Creek watershed. Concerned mostly with milling stone sites in intermediate valley province of San Diego County.
- True, n.d. Escondido Creek Watershed Survey. Describes a number of milling stone sites and a couple of late protohistoric sites in northwestern San Diego County.
- True, n.d. San Luis Rey River Basin Survey. Describes number of sites within drainage of San Luis Rey River.
- For the inland provinces in the later time periods only a few studies may be cited:
- Treganza, 1942. Describes general survey in southern San Diego County and Baja California.
- Heye, 1919. Describes a number of artifacts from the interior mountain regions. Provides no detailed provenience.
- Mykrantz, 1927. Describes artifacts from interior San Diego County, and discusses burial patterns from Diegueño territory.
- Wheeler, 19 . General description of a couple of sites and artifacts from Descanso, California.



## Table 4 (continued)

- Meighan, 1954. Describes the excavation of a small village in northern San Diego County. Defines San Luis Rey complexes.
- McCown, 1945. Description of the excavation of a small site in Diegueño territory. Includes description of several cremations.
- McCown, 1947. Typescript manuscript. Report on excavation of site in Santa Margarita River near Fallbrook in Luiseno territory.
- McCown, 1955. Report on excavations from historic Luiseno village of Temeku. Near present town of Temecula.

San Diego Desert Provinces and Imperial County

- Meighan, 1958. Survey of Borrego State Park.
- Wallace, 1958, 1960. Survey work in the Anza portion of Borrego State Park.
- Wallace, 1960b and 1962d. Excavations of shelter at Indian Hill in Anza-Borrego State Park.
- Reinman, True and Warren, 1960. Excavation of small rock shelter on Coyote Mountain.
- Townsend, 1960. Partial excavation of open site in Grapevine Canyon, Borrego State Park.
- Brott, n.d. (manuscript in preparation). Excavated in village located in Mason Valley. Recovered data on cremation practices and small artifact sample.

Colorado Desert and Western Arizona Region

- Rogers, 1939. Description of several early lithic complexes including Lake Mohave (Playa), Pinto Basin, and Armagosa.
- Campbell, 1931. Survey of rock shelters and open sites in Twenty-nine Palms region.
- Amsden, 1937. Description of Lake Mohave artifacts.
- Campbell, 1937. Description of sites and artifacts from Pinto Basin.

## Table 4 (continued)

Schroeder, 1953. Survey of lower Colorado River area.

Ezell, 1954. Survey in Papagueria.

Breternitz, 1957. Survey of lower Gila River basin.

Harrington, 1937. Excavations at Willow Beach on Colorado River.

Schroeder, 1961. Further and more extensive excavation of the Willow Beach site.

Harner, 1958. Reports on general conclusions drawn from excavations of Bouse site. No details on excavation or artifact descriptions.

Davis, 1962. Described excavation of stratified midden in cave shelter near Essex, California.

Donnen, 1964. Reports on results of cave shelter excavation in Providence Mountains and presents sequence for area in general.

Studies aimed at the synthesis of available archaeological materials from these areas in general are scarce. A few citations which deal with this aspect of the local archaeology are presented below.

Rogers, 1945. General synthesis of Yuman prehistory.

Wallace, 1945. Classifies number of local developments and develops several broad categories or stages of development.

Meighan, 1959. A synthesis which stresses the basically Archaic character of most Southern California developments.

Wallace, 1962. A summary of desert prehistory.

Harner, 1958. A ceramic sequence designed to unify the lower Colorado developments in late prehistoric times.

## Table 4 (continued)

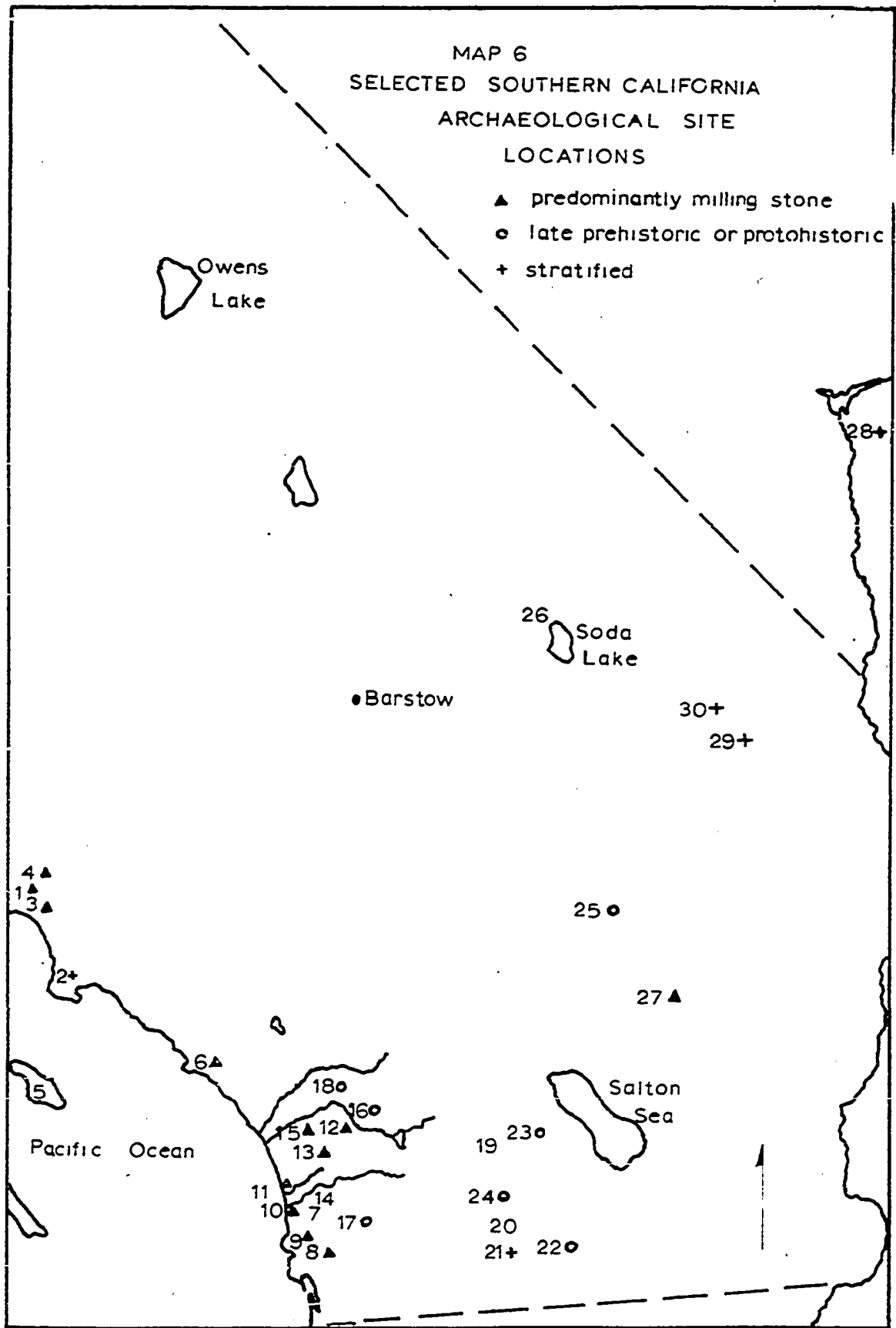
Euler, 1956; Euler, 1958; and Euler and Dobyns, 1956.  
Defines the development of the Pai cultural pattern  
and relates it to developments to the east and to the  
Yuman patterns in the west.

Schroeder, 1960. The Hakataya concept. An overall scheme  
designed to put all of the late prehistoric cultures  
in the marginal Southwest and California into some  
usable frame of reference.

## Map 6. Selected Southern California Archaeological Sites

- |   |           |
|---|-----------|
| 1. Tank Site; Treganza and Malamud, 1950, 1958. Milling stone                     | 16. SD    |
| 2. Malaga Cove; Walker, 1951. Stratified--milling stone--late                     | 17. San   |
| 3. Encino; Rosaire, 1960. Milling stone   | 18. Teme  |
| 4. Parker Mesa; King, 1962. Milling stone   | 19. Surv  |
| 5. Little Harbor; Maighan, 1959. Intermediate maritime                            | 20. Surv  |
| 6. Laguna Niguel; Lytton, 1963. Milling stone--late                               | 21. Indi  |
| 7. San Dieguito complex survey; Rogers, 1929.<br>Premilling stone                 | 22. Coyo  |
| 8. La Jollan complex; Harding, 1951. Milling stone                                | 23. Grap  |
| 9. Scripps Estate; Moriarty, Shumway & Warren, 1959. Milling<br>stone             | 24. Maso  |
| 10. Del Mar; Warren and Thompson, 1959. Milling stone                             | 25. Surv  |
| 11. Batiquitos Lagoon; Crabtree <u>et al.</u> , 1963. La Jolla--<br>milling stone | 26. Lake  |
| 12. Survey; True, 1958. Milling stone   | 27. Pint  |
| 13. Survey; Warren <u>et al.</u> , 1961. Milling stone                            | 28. Will  |
| 14. Harris Site; Warren and True, 1961. Premilling stone                          | 29. Essee |
| 15. Survey; Wallace, 1962. Predominantly milling stone sites                      | 30. Prov  |

16. SD 132; Meighan, 1954. San Luis Rey I site--protohistoric
17. San Vicente Dam; McCown, 1945. Late protohistoric
18. Temecu; McCown, 1955. Historic village--late
19. Survey; Meighan, 1959. Borrego State Park
20. Survey; Wallace, 1958-60. Anza State Park
21. Indian Hill; Wallace, 1960-62. Stratified--milling stone  
and late
22. Coyote Mountain; Reinman et al., 1960. Late
23. Grapevine Canyon; Townsend, 1960. Late protohistoric
24. Mason Valley; Brott, n.d.
25. Survey; Campbell, 1931. Primarily late prehistoric sites
26. Lake Mohave; Amsden, 1937. Primarily premilling stone
27. Pinto Basin; Campbell et al., 1937. Milling stone
28. Willow Beach; Harrington and Schroeder, 1937-61.  
Stratified
29. Essex; Davis, 1962. Cave shelter--stratified
30. Providence Mountains; Donnen, 1964. Stratified shelter



represent reconstructions of prehistoric situations on the basis of a few scattered and poorly documented archaeological data, upon extrapolations from ethnographic data collected some 100 years after the aboriginal culture began to disintegrate, and upon the manipulation of linguistic data and sometimes controversial lexical-statistical interpretations.

In any case, however, there is little reason to question the linguistically defined boundaries for the ethnic provinces, and the general pattern which emerges from these synthetic studies--for the historic and protohistoric periods at least--appears to be sound. Attempts to move beyond such generalizations, however, must be made with some care, for if there has been substantial agreement as to the potential for general correlations between linguistic and cultural boundaries in California, there has been little or no agreement with regard to the specific definition of the component cultural elements, their relationships, nor the processes and events responsible for such relationships.

## SECTION IV

### THE LUISEÑO AND DIEGUEÑO--ETHNOGRAPHIC CONSIDERATIONS

Although the initial contact between the Indian inhabitants of Southern California and the Europeans may have taken place as early as 1540 with the arrival of Ulloa (Markey, 1952), and some intermittent contact was possible in the intervening years, the first really significant foreign influences were felt at the time of the founding of the mission San Diego de Alcalá in 1769. The founding of the mission San Juan Capistrano in 1776 extended this influence to the northern margins of the combined Diegueño-Luiseño territory. In 1797 the mission San Luis Rey de Francia was established on what is now the San Luis Rey River some five miles inland from the coast.

Throughout the period from 1769 to 1834, when the missions were secularized, continuous pressures were maintained upon the Indian population as part of a directed change program designed to reduce the existing cultural patterns and to reestablish them in line with the accepted dogma of the Catholic Church. The effects of this mission program and the subsequent settlement of the more arable portions of the area by ranchers in the early post-mission period resulted in the disruption and decimation of the Indian



settlement pattern and population. As a result, that portion of the Indian population which managed to survive as an identifiable entity did so primarily by retreating into the interior mountain and desert regions and attaching themselves to the surviving indigenous villages. This early disruption of the aboriginal settlement pattern and the relocation of the surviving population in the interior mountain villages has resulted in an almost complete lack of ethnographic knowledge for the coastal and intermediate valley regions. Because of this, the most reliable ethnographic information has been collected in the interior mountain provinces.

#### The Luiseno

At the time of contact the Luiseno were a hunting and gathering people with a strong inclination toward seed and plant food subsistence. Plant foods were collected from named locations belonging to the village as a whole, and from more specific locations belonging to lesser social units. Smaller plots, individual trees, rock outcrops, eagles' nests and berry patches belonged to specific family units and in some instances to individuals. Nearly all resources of the environment were exploited in a highly developed seasonal round which extended from the valley floor to the mountain tops. Villages were scattered at fairly regular intervals along the flanks and at the base of the mountains. Generally they were located along

perennial streams or near reliable springs. Each village contained several residence houses, sweat house structures and special ceremonial enclosures. Each village complex operated as a separate, autonomous social and economic group within a well defined territory which was defended against trespass. These territories were distributed, in nearly all cases, so that in addition to the valley lands around the main village each group had a strip of territory extending up the mountain slopes with permanent acorn gathering and hunting camps located along the mountain crest. Map 7 indicates the distribution of villages and territories for several Luiseno village units in the vicinity of Palomar Mountain.

Starting in the spring, greens and bulbs were gathered in the valley lowlands and, as the season developed, ripening food resources were followed into the higher elevations. During the summer the bulk of the village populations moved into the highlands where berries, roots and greens were collected until the ripening of the fall acorn crop. Most gathering was done by women and children but the acorn harvest probably involved both male and female participation. The staple acorn crop was stored in woven caches and pottery ollas.

Hunting was a male occupation and was oriented toward a variety of small animals which, for most species, were taken on a year round basis. Rabbits, woodrats, squirrels,

and other small animals, as well as quail and pigeons, were taken with snares, nets, and deadfall traps, as well as with the bow and arrow. Rabbits and woodrats were also killed with a throwing stick. Deer were important in the subsistence and were hunted with a bow and arrow. Hunting was an individual or family rather than a communal operation. The bow used was a self bow of willow or ash. Arrows were composite with a cane shaft and a short hardwood foreshaft. For small game the tip of the foreshaft was only sharpened. For larger game, however, a triangular stone point was hafted to the foreshaft tip.

The material culture here was generally simple and involved few complex technological elements. Acorns and other seeds were usually parched on coiled basketry trays. Seeds were ground in a stone mortar or upon a milling stone, depending upon the size of the seeds or upon the intended use of the resulting meal. The end product of this grinding process was leached (in the case of acorns) using a basket or a sand basin technique. The leached meal was normally boiled into a gruel or mush. Such boiling was either in baskets, using hot stones, or direct fire boiled in pottery vessels. Both baskets and pottery were made by women. Wood was worked with simple nonspecialized flakes and scrapers. A convenient fist-sized rock was used as a hammer. Nets were woven of milkweed and other fibrous materials and were used for general carrying, for making traps and for

special ceremonial uses.

Clothing was minimal during warm weather. Women wore an apron of hide or shredded bark. Men most often wore nothing. In the winter animal skins and woven rabbit fur robes provided needed warmth.

In addition to the array of items made for everyday use, several material culture items were made for decorative or ceremonial use. Ornaments were made of shell and bone. Ritual items included small mortars, quartz crystals, ceremonial baskets, feather bands and skirts, feather bundles, figurines and stone pipes.

The aboriginal social organization is not known in any detail but the lineage or sib probably formed the basic social unit. Descent appears to have been patrilineal and residence was normally patrilocal. Lineages were exogamous and it is probable that each village or some grouping of villages formed an endogamous unit.

Religious functions formed an important part of the cultural pattern and were quite complex. These activities were handled by a religious chief who was the nominal head of each intravillage group. A paha performed specialized functions at ceremonial activities and was generally considered to be an assistant to the chief. Ritual activities were performed to increase the acorn crop, to prevent trespass, to make peace, to initiate the young and properly to dispose of the dead, who normally were cremated.

Because of the general nature of the above statement, individual citations and sources of data have been deleted. References to Luisño culture and the sources of the above information are presented in Table 5, which is located at the end of this section.

The Diegueño

Diegueno subsistence, like that of the Luisño, was primarily oriented toward plant resources with the acorn providing the basic staple food supplies. Hunting activities were focused upon deer and, in some areas, upon mountain sheep. Small game utilization was about the same for both areas, as was the general seasonal round, which included both valley lowlands and the highland mountain summer camp pattern. Hunting and food processing tools appear to have been similar in terms of most of their general characteristics. Food storage was the same in both areas. Ceremonial apparatus described for the Diegueño include wands, crystals, steatite heating stones used in girls' puberty ceremonies, feather aprons and headgear, rattles and effigies made for special mourning rites. The Diegueño religious practices have been greatly influenced by the Chingnichnich cult, which is believed to have moved into Diegueño territory very late.

Similarities and Differences

It is not important here to describe the historic

Luiseno and Diegueno culture in anything more than a general sense and it should suffice to say that an earlier general adaptation to a similar environment and subsistence, along with the interchange of a number of ideas and traits in post-contact times, has resulted in many similar culture elements in both areas.

However, a more detailed examination of these various relationships reveals that in spite of these many obvious similarities there are important differences which set the two peoples apart.

The Luiseno, for example, were conservative and relatively docile peoples who had settled into well defined territories on a band or sib level of integration. There was no known tribal identification. Ownership of resources was very important and the concept was well developed. Ceremonial and social activities were oriented toward the common good of the village unit and the maintenance of the status quo.

The Diegueno, in contrast, held many traits in common with the Yuman speakers of the Colorado River area and were aggressive, restless and individualistic. They tended to identify with a tribal level unit, although the local band seemed to have been the basic economic unit. Territoriality was less important than with the Luiseno and there seems to have been considerably more freedom of movement within the larger tribal territory and, as a result, considerable

contact with the Colorado River tribes. Ownership of resources was of less importance and, although each local group had its own areas which it normally occupied, the resources in adjacent areas could be exploited in time of need. Some resources in the area at large were available for all members of the larger group regardless of their territorial location.

Table 6 presents the primary sources of ethnographic information on the Diegueño.

Table 5

Luiseno Ethnographic References

Boscana, 1846  
 Sparkman, 1908  
 Dubois, 1908  
 Kroeber, 1908  
 Gifford, 1918  
 Strong, 1929  
 Harrington, 1934  
 Drucker, 1939  
 White, 1953, 1957, and 1963

In addition to these published references for which detailed bibliographic information is presented in the list of references at the end of the thesis text, considerable information has been collected by the writer in the course of some fifteen years of ethnographic inquiry among the Luiseno. Informants contributing to these data are listed below.

Thurman McCormick--Rincon Reservation

Max Calac--Pauma Reservation

Max Peters--Pauma Reservation

Ray Pachito--Pauma Reservation



Table 6

Diegueño Ethnographic References

<u>Author and date</u>	<u>Area of discussion</u>
Dubois, 1901, 1904, 1905	Discusses religious practices and mythology
Waterman, 1908	Discusses religious practices
Gifford, 1918	Provides some data on social organization
Spier, 1923	Describes customs of the southern <u>Diegueño</u>
Kroeber, 1925	Provides a summary statement on customs
Davis, 1919, 1921	Discusses mourning rites and religion
Johnson, 1914	Discusses general customs
Lee, 1937	Discusses general customs

Also, considerable general information upon settlement patterns and customs are to be found in the manuscripts of Judge Benjamin Hayes, edited by Woodward (1934).

Detailed citations for these references are presented in the bibliography which follows the thesis text.

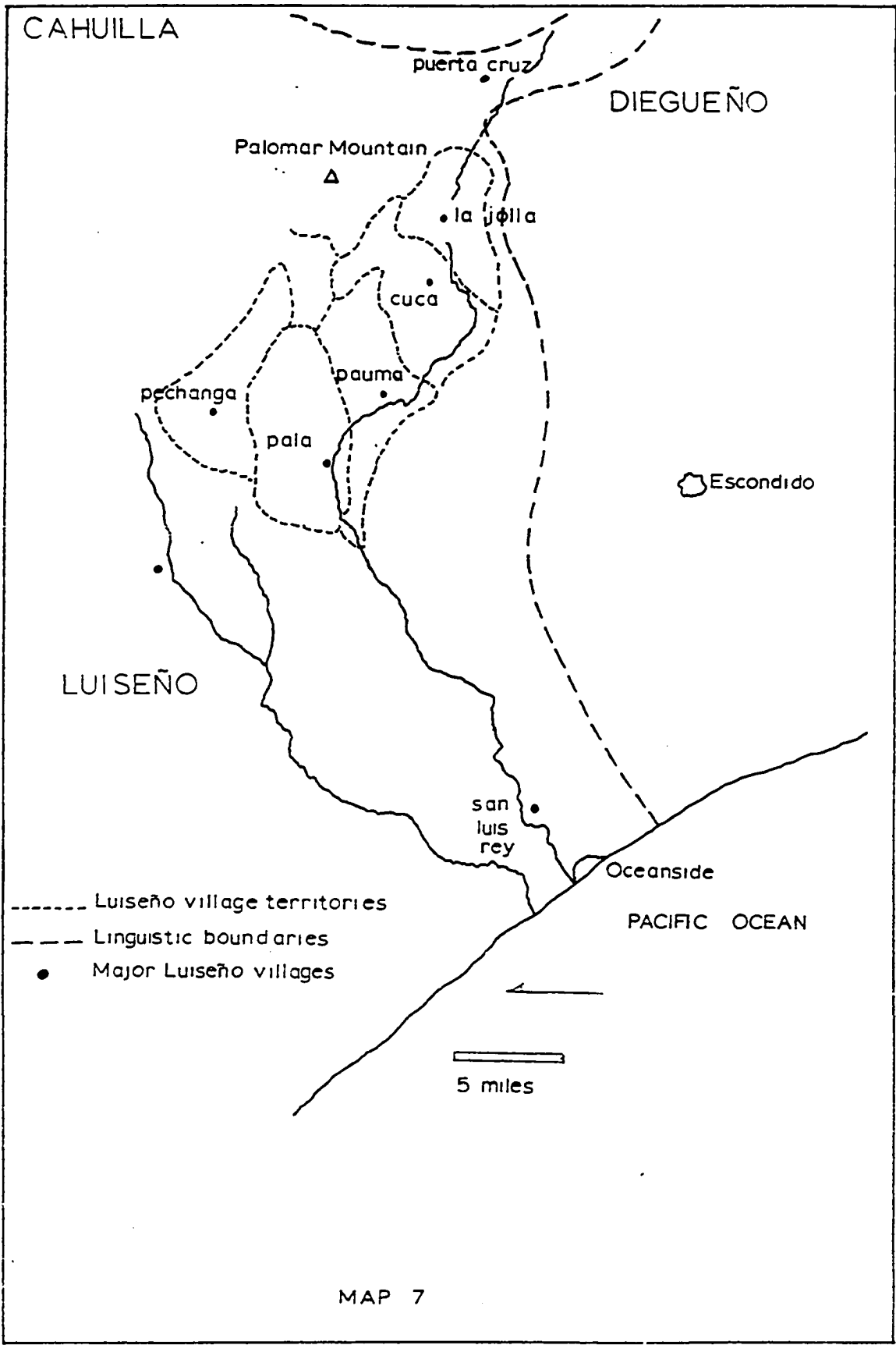
## SECTION V

### THE AREA

Historically the Luisiño and the Diegueño occupied the whole of what is now San Diego, and portions of Orange, Riverside and Imperial Counties in Southern California. The Diegueño, in addition, occupied a territory extending some distance south into Baja California (see map 2).

It is possible to see this area in terms of three separable physiographic, environmental and climatic zones: (1) a coastal province; (2) an intermediate mountain and foothill zone; and (3) a desert province.

The coastal province is confined to a narrow strip of territory paralleling the Pacific Ocean. This strip of land seldom exceeds five miles in width. It is characterized by a terrace-like topography broken by steep sided drainage channels. Along the immediate coast, silted-in embayments mark the points where the primary drainage systems debouch into the Pacific. Along the northern and eastern slopes of the many steep-sided canyons dissecting the area, a rather heavy chaparral cover includes several good subsistence resources. Gallery forest occupied many of the stream bottoms down to the point where they met the embayments. The upper portions of these lagoon-like features were probably



marshlands for at least a substantial portion of the recent prehistoric period.

The intermediate foothill and mountain zone to the east ranges from thirty to fifty miles in width. It contains a number of significant topographical and physiographic features, and includes a wide range of potential subsistence resources. The area in general corresponds to the boundaries of the physiographic and geologically defined Peninsular Range province.

The desert to the east is in itself a complex geographic and physiographic province. It includes, along with the more typical desert terrain, mountain topography and vegetation, a specialized riverine environment along the Colorado River, and the various phenomena related to ephemeral lake developments within the interior basins.

Although the relative importance of both the coastal and desert areas is recognized, the primary concern here is with the inland mountain regions in general, and more specifically with that portion of the interior upland province located in what is now San Diego County, California.

The mountainous interior portion of San Diego County coincided in general with the Peninsular Range province. Physiographically this province consists of a series of uplifted batholithic plutons which have been considerably dissected by a number of generally westward flowing streams.

The eastern margin of this province is marked by a steep and clearly defined scarp separating the interior mountain region from the desert. In contrast, the western face slopes gradually toward the Pacific. Although the gradient here is relatively low, the surface in general is characterized by a number of features displaying considerable relief. Much of this western slope consists of a series of erosion surfaces occurring at increasingly higher elevations from west to east. These surfaces appear as plateau-like features marked by occasional residual peaks. They are cross cut by the basically westward flowing drainage pattern. This, plus local erosion, has produced considerable variation in elevation on each surface, giving the region a rather rugged and mountainous appearance.

The western margin of this area is marked by a coastal range remnant which in this locale is represented by a low ridge of pre-Cretaceous volcanic formations. This ridge is overlain on the west (within the coastal province) by Cenozoic marine deposits. It has been intruded on the east by a complex series of Cretaceous plutonic batholiths characteristic of the Peninsular Range province in general.

Elevations within the Peninsular Range province itself range from 500 to over 6,000 feet above sea level in the Laguna mountain range.

Distribution of precipitation within this zone is determined on the basis of elevation, distance from the

coast, and local exposure. Fairly well defined vegetative zones can be correlated with this rainfall distribution.

Within each of these major areas of vegetation, there are localized micro-environmental situations. This tends to create considerable diversity within any given area. In spite of this localized variation, however, the general pattern for the area at large remains remarkably consistent and the resources found in one location will likewise be found in most other parts of the area, albeit sometimes under different local circumstances.

The majority of the area, and particularly the steeper slopes, supports a dense chaparral cover of varying composition and density. The more conspicuous genera making up this community include Quercus, Adenostoma, Rhamnus, Ceanothus, Arctostaphylos, Rhus, and Erigonum, as well as several species of plants from such genera as Photina, Prunus, Garrya and Salvia. The lower slopes and portions of the canyons, although they may not be strictly within the chaparral communities, support species from many of the above genera, as well as several varieties of Opuntia, Yucca, Eriodictyon, Ribes, and Lupine. Several species of oaks are found along the bottom lands, on adjacent benches and on the slopes leading up into the canyons. Nearly every stream channel supports some gallery forest cover. The basic community here consists of oak, willow, cottonwood, and sycamore, but includes, among the secondary growth,

grape, blackberries, rose, and many of the species previously cited for the basic chaparral communities. In addition to this shrubby perennial cover, there are significant stands of herbaceous annuals and a number of less conspicuous perennials, all contributing to the aboriginal subsistence potential on a seasonal basis.

At elevations above 4,000 feet, the vegetation is characterized by mixed stands of oak and coniferous forest and a high altitude chaparral. Included in these communities are Quercus kelloggii, Quercus chrysolepsis, Quercus wislizenii, Pinus coulteri, Pinus lambertiana, Pinus ponderosa, Pseudotsuga macrocarpa, Abies concolor, Libocedrus decurrens, and, more rarely, Pinus parryana and Pinus monophylla.

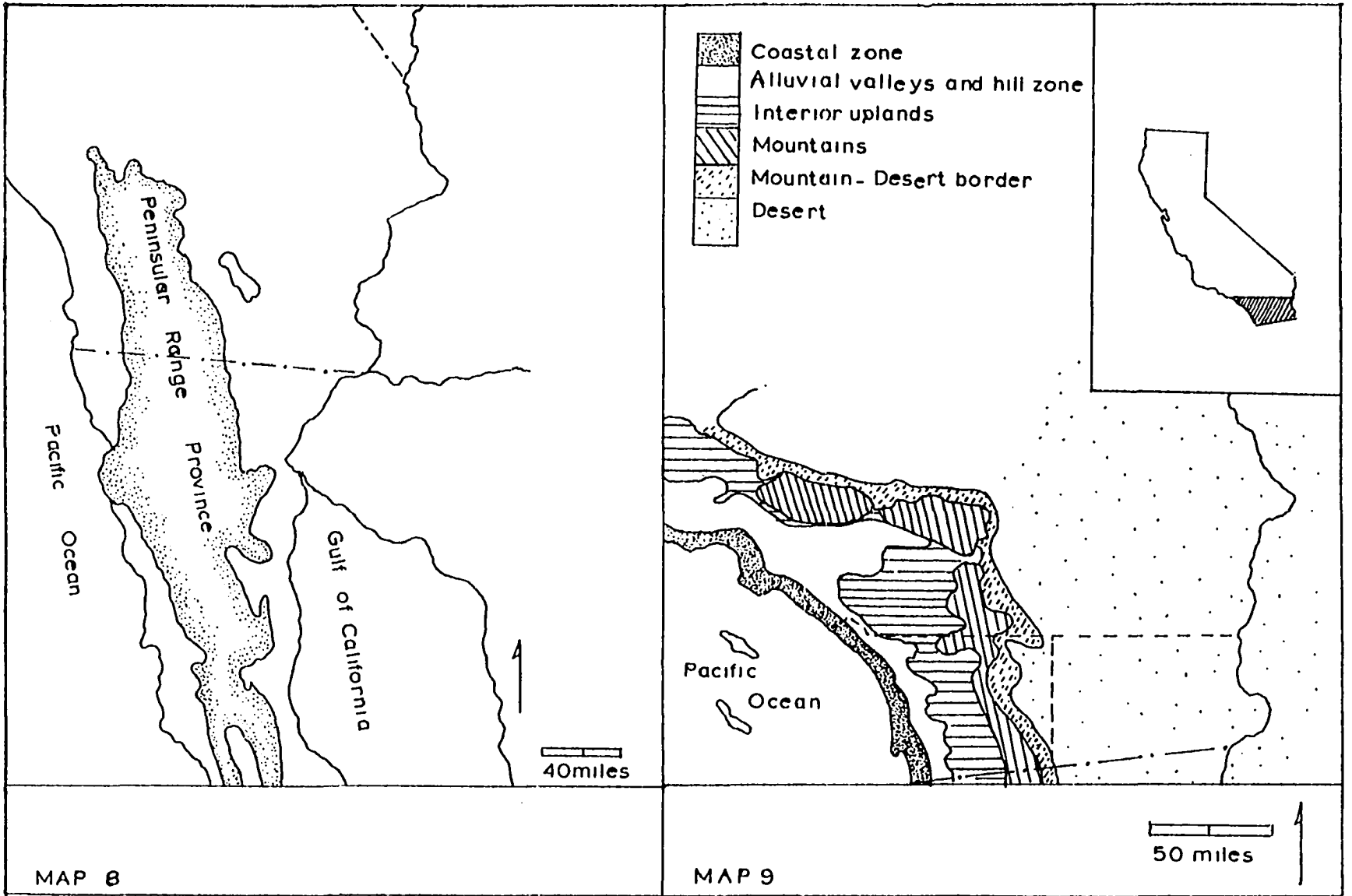
The area at large supported a substantial animal population including deer, hare, rabbit, fox, bear, coyote, bobcat, mountain lion, and a number of kinds of rodents. Quail and pigeon were common and a number of seasonal migratory birds stopped here enroute. Most of these and several species not mentioned all contributed to the Indian subsistence.

The significant thing here is to stress the fact that those portions of San Diego County and portions of adjacent counties within the Peninsular Range physiographic province can be considered part of one essentially identical environmental zone; that this zone includes within its confines

a wide range of vegetative and animal resources under climatic conditions extremely favorable for aboriginal subsistence. There is every reason to believe that no significant changes have taken place in the composition of this biota within at least the last two to three millenia.

Map 8 indicates the position of the Peninsular Range province in relation to the area at large. Map 9 illustrates the zonation of the Southern California area and the degree to which the interior uplands and mountain zones correspond to the margins of the Peninsular Range province.





## SECTION VI

### THE SITES

Artifact collections were examined from a number of sites in both the Luiseno and Diegueno territories. The basic sample was derived from five excavated sites, three within what has been designated the Luiseno core area and two from the Diegueno core area. These basic collections were supplemented with samples from surface collected materials from nine sites within the Luiseno core area and eight sites from the Diegueno core area.

To provide additional coverage, samples were examined from several sites within the linguistically defined territories, but outside of the defined core areas.

#### Core Area Sites--Luiseno Territory

SDI 308.--This site is the historically known village of Molpa described by Luiseno informants as part of the Cuca village complex (Herman Calac and Henry Rodriguez, personal communication, 1954). On the basis of ethnographic information, historic accounts, and upon the presence of historic artifacts within the upper levels of the midden debris, there is little doubt that this site represents a Luiseno village occupied in early historic and protohistoric times.

The site is located on a north facing slope above a bench-like feature skirting the southwestern flank of Palomar Mountain. The elevation is about 2,800 feet above sea level.

The location is marked by a conspicuous group of granitic bedrock exposures containing numerous bedrock grinding features. A series of springs at the foot of the slope provided ample water. The vegetation is typical of what has been described as oak parkland savannah (Aschmann, 1959:39-40; Munz and Keck, 1949). Here, the rather rolling low relief terrain is marked by scattered oaks and occasional patches of chaparral. Much of the area is open grassland. This parkland is limited to a rather small area in and around the site proper but similar terrain is found here and there throughout the larger area. The steeper slopes surrounding the site area are typically chaparral covered and the canyons and streams extending up the mountain slopes are marked by thick oak stands and gallery forest.

This site was discovered by the writer in the late 1940s and was designated Rincon 77. In 1954 it was brought to the attention of C. W. Meighan at the University of California, Los Angeles, and was partially excavated by him in 1955 and 1956. William H. Harrison, at that time a graduate student in the Department of Anthropology, UCLA, assisted Dr. Meighan with the excavation and was responsible

for at least part of the documentation of the derived artifact sample. Most of the sample from this site used in the present study was recovered during these excavations and the writer wishes to express his appreciation for the use of the resulting data.

During the two seasons of excavation a total of thirty-four cubic yards of midden was examined in the protohistoric component. The site was dug in five by five foot excavation units located over what appeared to be the heaviest midden deposit. Each pit was excavated in arbitrary six-inch levels with trowels and shovels. All of the removed deposit was sifted through a one-quarter inch mesh screen. A total of 704 artifacts was recovered from this sample. They are presently in storage at the Department of Anthropology Museum, University of California, Los Angeles, under the accession number 116.

The site contains three separable components: a pottery bearing level in the upper portions of the midden (San Luis Rey II, Meighan, 1954); a similar component without pottery (San Luis Rey I, Meighan, 1954); and indications of a pre-Luisño pre-San Luis Rey milling stone component (Pauma complex, True, 1958).

The upper thirty inches of the deposit is considered to be the San Luis Rey II occupation (protohistoric), even though the majority of the pottery was taken from the upper eighteen inches, and a few scattered sherds were recovered

as deep as forty-eight inches.

The San Luis Rey I deposit extends from the thirty inch level to the bottom of the midden. Because of the nature of the deposit, rodent activity and various digging activities of the occupants themselves, the division line between the two components is in no way clearcut. This presents no problems insofar as this present paper is concerned.

The Pauma component was discovered on a small knoll lying at the base of the slope occupied by the village proper. Here, there is a complete lack of midden and few outward signs of occupation other than those which can be attributed to downslope movement of debris from the village proper. This location was tested with a narrow exploratory trench. Artifacts recovered here are of little concern in this thesis and the focus of attention is upon the San Luis Rey II component.

SP1 682.--This site represents a late prehistoric village located on the north bank of the San Luis Rey River some five miles downstream from the present town of Paia. The site occupies a small bench-like feature at the base of a conspicuous rocky promontory some 300 feet above sea level. The adjacent river bottom area, until very recently, was characterized by a dense gallery forest. The steeper hillsides above the river support a typical chaparral cover.

It is possible that this site represents the village of Tomka (Raymond H. White, personal communication, 1959).

The location of the site in the heart of the Luisenõ territory, as well as the nature of the artifact sample, supports the contention that the occupation here, at least during the terminal stages, was protohistoric Luisenõ.

The site is characterized by a dark midden deposit and a number of conspicuous bedrock milling stones. It was first recorded in 1947 by the writer during the course of a survey of the San Luis Rey River drainage. In 1958 and 1959 the site was partially excavated to add to the extant knowledge of the San Luis Rey complexes (True, manuscript in preparation). As a result of these excavations, and from test pits excavated in 1960 on the margins of the midden area, two components can be identified: (1) a San Luis Rey II occupation; and (2) an earlier milling stone horizon (Pauma complex) which underlies the San Luis Rey stratum. No San Luis Rey I stratum has been identified, but this hiatus is of no concern here.

For the purpose of this thesis all artifacts recovered from the midden deposits in the 1958-59 excavations and the upper twenty-four inches of the 1960 test pits are considered to be the San Luis Rey II component.

The site was excavated in five by five foot units in arbitrary six-inch levels. All midden was sifted through one-quarter inch mesh screen, and a substantial portion of the sample was run through a one-eighth inch mesh screen. A total of twenty-five cubic yards of San Luis Rey II

midden was examined and 474 artifacts were recovered. The artifacts are stored at the Department of Anthropology Museum, University of California, Los Angeles, under the accession number 463.

Temeku.--To add further to the Luiseno sample and to provide a check upon the artifacts recovered from the two previously described sites, the artifacts collected by B. E. McCown from the village of Temeku (1955) are included in this study. Artifacts from this site are stored in the San Bernardino County Museum.

The village of Temeku is located on the southerly bank of Murietta Creek some two miles south of the present town of Temecula. The Temecula valley to the east is presently open grassland and sparse, thin scrub brush. The river bottom itself is now nearly denuded of vegetation, but, in earlier times, was a dense gallery forest. The steep hillsides behind the site are chaparral covered and marked by conspicuous granodiorite outcroppings. In favored locations along the base of the hills numerous oaks are found growing in small groves.

The site is considered to be the historic village or Temeku and was mentioned by Hayes as being the location of the ruins of a mission assistencia constructed between 1800 and 1821 (McCown, 1955:51-52). The site may have been occupied as recently as 1900 (McCown, 1955:53).

The interpretations presented by McCown are of little concern here. However, the fairly large sample of artifacts and the location of the village along the eastern and northern margins of the upland Luisño core area make it a desirable addition to the present analysis.

It is probable that the vast majority of the sample represents a San Luis Rey occupation. Concern here, however, is with the artifacts from the upper five levels (the San Luis Rey II component).

#### Surface Collected Sites from the Core Area

To check the results from the core area excavated sites, and the feasibility of working with surface collections in this kind of study, a number of artifacts was examined from several additional sites within the Luisño core area.

SDi 616.--This is the historic village at Pauma. Considerable ethnographic and historic data are available for this location. House remains were still in evidence in the early '30s and surviving Indians can still locate several special areas such as the "dancing spot," the place where the boys' ant ordeal took place, and the place where "an old man witch" had his house.

The surface collections from this site were made over a period of some fifteen years, and are the result of a systematic examination of the site surface at regular



intervals. Other collections are known to have been made here in earlier times, although except for the removal of portable mortars it is unlikely that such collections contained significantly different artifacts.

The site is located on the east bank of Pauma Creek about six to ten feet above the creek bed, some two miles upstream from the junction of Pauma Creek and the San Luis Rey River. The elevation is 900+ feet above sea level, and the area is in a "frost free" thermal belt. Vegetation consists of a remnant gallery forest in the creek bottom, considerable oak stands along the benches marginal to the valley, and the typical chaparral cover on the steeper slopes.

SD1 721,--This site has not been described ethnographically and no historic artifacts are known to have been recovered from it. It was probably part of the village complex located at the site of the present Agua Tibia Ranch. The artifacts recovered are typical of San Luis Rey II occupations in sites of known historic affiliation in the area. The village is located on a small bench along the west side of Agua Tibia Creek, about 1,200 feet above sea level.

The site is reasonably intact, although some surface collecting has taken place sporadically over the past thirty years. The artifact sample from this site is small, however, since the surface of the midden is heavily overgrown.

The vegetation here is similar to that described for the Pauma village above.

SD1 789.--This is a small camping location in the middle of Pauma wash. The area is not described by informants as a habitation site, although a well developed midden is present. It is a region noted for several mythological activities involving the culture hero Wiyot. No historic remains have been recovered from this location. The terrain here is flat boulder and cobble covered land and, at present, is a poor place to camp. Vegetation consists of low brush, sage, cacti, and a few scattered oaks. The artifact sample is typical of protohistoric camps over the region at large. The elevation is 800 feet above sea level.

SD1 245.--This is a small village or camp site at the junction of Agua Tibia Creek and the San Luis Rey River. No historic material has been recovered here and there is no ethnographic reference to the location. The site is small and has produced only a handful of artifacts, although it has been examined several times over a period of years. It is located on a small bench seventy-five to one hundred feet above the San Luis Rey River and is approximately 750 feet above sea level. The river channel below the site is thick gallery forest, and the slopes above it still support substantial oak groves even after some twenty years of "sub-normal" precipitation.

SD1 243.--This is a small camp area on the slopes of Palomar Mountain within the territory of the village of Cuca. The site is marked by a dark midden deposit and a scattering of chipping waste and artifacts. It is located along an intermittent stream channel within an extensive oak grove. The elevation is about 2,850 feet above sea level. No historic materials have been recovered here and the location is not described ethnographically as a specific habitation site. However, the area itself is referred to as Na pi ra (Peters, personal communication, 1958).

SD1 515.--This habitation area is located at an elevation of 2,750 feet above sea level along a perennial stream. The area supports substantial oak groves and other cover typical of the region. The site was occupied historically by known ancestors of Luiseno informants, and was probably not abandoned until after 1870. The area has not been subjected to intensive examination, but the midden is probably in excess of three feet deep. The general appearance of the site is typically that of a protohistoric village in this area, with a dark midden, scattered chipping waste and artifacts scattered over approximately two acres of territory.

SD1 520.--This is a small camp or village located along the eastern side of the San Luis Rey River some three and one-half miles downstream from the present village of Pala.

The site occupies a sunny exposure on the slope of a small hill adjacent to the river and lies some thirty feet above the river bed. The elevation is about 300 feet above sea level. Vegetation is presently confined to thin chaparral on the adjacent slopes, but the river bottom was a dense forest as recently as 1945.

No ethnographic references are known for this location and no historic materials were recovered. The site is characterized by a number of well developed bedrock mortars, midden and a scattering of potsherds, chipping waste and artifacts.

SD1 789,--This is a small village at the junction of Lusardi canyon and the San Luis Rey River. This site is located at an elevation of 2,450 feet above sea level. The area is characterized by numerous oaks, heavy chaparral and Artemisia. The midden is well developed and is at least thirty-six inches deep. The location is known ethnographically as Yu il-la ka and has produced historic artifacts. The site surface is normally covered with considerable vegetation, and a substantial part of the area was destroyed with the construction of the highway. Because of this, the sample recovered here is limited, although the site has produced numerous potsherds and chipping waste is common on the exposed ground following heavy rain.

The sites outlined above were selected for inclusion in this sample because it is believed that they are typical of the protohistoric occupation here and because they are more or less average for the area at large. That is to say that the sample recovered from any one of these sites as a result of a number of visits and reasonably intensive collecting is about what an archaeologist could expect to recover from any site in the area with similar treatment. The range of locations includes several kinds of sites from a large village at Pauma to a small temporary camp site at SDI 243. The circumstances related to the recovery of artifacts here range from open surfaces where every rain will expose several artifacts to sites which never have more than a few square feet of midden surface out in the open in any one year. The sites described above range from the ragged remnants of villages left after being subjected to a variety of construction and farming activities to sites which probably were nearly untouched at the time of their discovery.

Some villages in the sample were still occupied in historic times; others were abandoned prior to the time that firm contact was made in the area, but are known ethnographically to have been occupied by specific peoples. Still other village sites are known ethnographically but no specific sib or clan grouping can be associated with their occupation. Several camp areas are within the immediate

spheres of influence of these villages and have produced similar artifacts, but cannot be identified ethnographically.

In addition to those specific sites described above, the general pattern can be extended to numerous other locations within the larger area. This pattern appears to be consistent throughout the area and is as typical at 5,000 feet elevation among the mixed broad-leaf-coniferous forest as it is in the scrubby river bottom or wash sites at elevations near sea level.

It is possible to define the settlement patterns for several of the autonomous local communities on the basis of both ethnographic and historic data, as well as with archaeological evidence. This pattern includes semi-permanent locations in the lowland villages and summer camps in the higher elevations. Although such summer camp sites or villages have not been included specifically in this sample, there is no question as to their affiliation, and, on the basis of previous work, it is possible to state categorically that the artifact assemblages from the lowland villages and those from the summer camps are identical (Meighan and True, unpublished manuscript).

#### Diegueno Core-Area Excavated Sites

The basic data for this area were derived from one site excavated with careful controls. These data are supplemented with portions of a sample taken from a similar village in the same area. Unfortunately, only part of the total sample

from this latter site is available for study. All of the recovered projectile points and specialized ceramics were examined, but the heavy lithic tools known to have been taken from the deposit are unavailable.

SDi 860.--The basic core area site for the Diegueño territory has been designated SDi 860 in the University of California Archaeological survey file. It is also known under the field designation Cuyamaca Rancho State Park 16, and is in all probability the site designated W-314 in the San Diego Museum of Man file.

Although this site cannot be designated specifically as one of several named Diegueño villages in the area, there is no question as to its affiliation, nor as to its temporal placement. The site is located in the heart of the Diegueño summer camp area. The artifacts recovered are identical with those taken from adjacent named villages, and there is, within this sample, considerable evidence for occupation well into historic times. On the basis of its location and some poorly documented historic references, it is possible to suggest that this was the summer camp area for the village of "Jamatayume" or, as it is presently known, Samataguma.

The site lies on the East Mesa within the confines of what is now Cuyamaca Rancho State Park at an elevation of 4,800 feet above sea level. The East Mesa in general is characterized by a low relief surface consisting of rolling

parkland and meadow covered terrain broken by occasional ridges and canyons. Much of the area is forested with stands of oak, pine and high altitude chaparral.

The site itself occupies an open grassy swale surrounded by a low chaparral covered ridge and several bedrock exposures.

SD1 860 was partially excavated by the writer during the summer of 1962. The excavation here was carried out with five by five foot units and arbitrary six-inch vertical controls. All removed midden was sifted through one-quarter and one-eighth inch mesh screens. The deposit depths ranged from eighteen inches in the cemetery area to thirty-six inches in the living areas. No evidence of natural stratigraphy was observed. Pottery was recovered from all levels and there appear to be no significant shifts in artifact types from the top to the bottom of the deposit. Occupation here probably includes the historic, proto-historic and late prehistoric periods and is the same as that referred to by Rogers (1945) as Yuman III.

All artifacts recovered from this excavation are stored at the University of California, Los Angeles, Department of Anthropology Museum under the accession number 360.

To supplement this sample, a number of collections made by the San Diego Museum of Man from sites in the same area were examined.

Several of these sites were partially excavated under



the auspices of the San Diego Museum of Man. None of the results have been published. The collections are located (1) in the State Park Museum at Cuyamaca; and (2) are in "inactive storage" in San Diego. Many of the artifacts have not been processed or catalogued and are stored just as they were brought in from the field. For various reasons, it was not possible to locate all of the materials taken from any one site. Projectile points, worked steatite, and specialized ceramics artifacts were available from one important site, however, and these materials have been included in the analysis.

SD1 913,--This village, known locally as Arrowmakers Ridge, was one of several villages in this area known to have been occupied in historic times. It is recorded under the field number CRSP 108. The San Diego Museum of Man designation is W-211. This is probably the village of Pilcha, although this identification is not certain (Rensch, 1950).

The site is located on a rocky wooded ridge at the base of the West Mesa overlooking the Green Valley portion of the Sweetwater River drainage. It is in a small parkland swale surrounded by bedrock exposures at an elevation of 4,600 feet above sea level. Vegetation at the site includes mixed coniferous-broadleaf forest and dense chaparral.

Water is available at the base of the ridge a few hundred yards from the site. The excavations at this site

uncovered many cremations, and a rather large artifact sample, including close to 2,000 projectile points, large numbers of arrowshaft straighteners, and many ceramic items of interest. The site deposit was more than thirty inches deep. Rogers has suggested the possibility of some typological changes through time, but on the basis of the analysis of a similar sample from SD1 860, the deposit will be treated as a single component (M. J. Rogers, unpublished field notes).

#### Diegueño Core Area--Surface Collected Sites

Surface collections from eight additional sites within the Diegueño core area were examined.

SD1 853.--This village is located at an elevation of 2,700 feet above sea level along the northern base of Stonewall Peak in what is now Cuyamaca Rancho State Park. It was surveyed in the 1961 Park Survey and designated CRSP 5 and CRSP 15. Earlier work by the San Diego Museum of Man included some "test pitting" and the area has been subjected to sporadic pot hunting over a period of some thirty years. The site is carried in the San Diego Museum records as W-247. This is the historically and ethnographically described village of Ah-ha kew a mac (Rensch, 1950:8) or Cuyamaca as it has come to be known. It was still occupied from time to time as late as 1870.

SD1 862.--A small village on the East Mesa at an

elevation of 4,650 feet above sea level. The environment here is identical to that described for the core area excavated site SDi 360. The site was recorded as CRSP 18 in the 1961 Cuyamaca Survey and is carried in the San Diego Museum of Man files as W-315. The midden is well developed and a number of bedrock mortars are found in the outcrops along the southern and western margins of the site. This locale probably has never been excavated. It is likely that this is one of the five villages known as the "rancherías of the Mesa de Huacupín" (Rensch, 1950:22). At least one of these villages was still occupied in 1870 (Rensch, 1950:22), although no historic remains were recovered from the surface here.

SDi 863.--This site on the east mesa is probably the village of Hua-cu-pin or the main village of the "five little mesas" described for this area (Rensch, 1950:22). The Cuyamaca survey designation here is CRSP 23. This is probably the site carried as W-212 in the San Diego Museum of Man records. This is clearly a protohistoric and historic Diegueño village. Although no record of excavations has been published, and no collections were located from such excavations, evidence on the site indicates that considerable digging has taken place at some time in the past.

The site occupies a low ridge along the western rim of the East Mesa and lies at an elevation of some 4,680 feet above sea level. Much of the area is open meadow land,

although all of the canyons and ridges are forested with oak and some coniferous vegetation. Test pits indicated a midden depth well in excess of twenty-four inches. A rocky outcrop in the area contains numerous bedrock exposures and a considerable number of bedrock milling stones and mortars was recorded.

SD1 903.--This site probably is a part of the historic village of Hual-cu-Cuish. The present location of the Boy Scout camp at the northeastern foot of Cuyamaca Peak has been designated Hual-cu-Cuish (site CRSP 140 in the State Park Survey), but it is likely that this location was but one of several areas making up the larger village complex. Several smaller sites have been recorded along the base of the ridge east of the small canyon separating Cuyamaca Peak from Middle Peak. The main site, however, is believed to be the location designated CRSP 98 in the Park Survey and to which the UCAS number SD1 903 has been assigned.

Although historic information is available attesting to the occupation of this village during the same time that Cuyamaca and the village of Yguai were occupied in the same area, no historic remains were recovered as a result of surface collections made here. It is not known whether or not this site has been excavated, but no artifacts were encountered in the San Diego Museum of Man collections. The midden deposit exceeds thirty-six inches in depth. The site is marked by substantial amounts of chipping waste and

scattered artifacts are still quite common in spite of regularly organized depredations emanating from the adjacent Boy Scout lair. The location lies at an elevation of 4,750 feet and faces a large meadow extending to the village of Cuyamaca about one mile to the northeast.

SD1 858.--A village or camping area located along the western side of Green Valley at the base of Arrowmakers Ridge near the junction of Japacha Creek and the Sweetwater River. The bench-like location here has some midden development, and is marked by scattered chipping waste and artifacts, as well as bedrock mortars. No historic remains were recovered as a result of the survey collections and it is not possible to determine whether or not this was a part of the village complex of Mitaragui referred to by Hayes (1934:143) and by Rensch (1950:17-19).

The elevation is about 4,150 feet above sea level and it is probable that this was a summer camp of a group from the Guatay or Descanso region to the south.

SD1 857.--This location is probably a slightly detached portion of the camping area described above. In general, the above descriptions may be applied and no further comments are in order. This location was designated CRSP 9 in the Park Survey, and apparently does not have a site number in the San Diego Museum files.

SD1 1027.--This is a camp site or village located in the northern end of Green Valley within the present Cuyamaca Rancho State Park. The site occupies a point of land near the junction of the Sweetwater River and Stonewall Creek at an elevation of 4,150 feet above sea level. There is some midden here along with considerable chipping waste and scattered potsherds. No historic data are available for this locale, and no historic artifacts were recovered as a result of the survey collections. The sample, however, suggests that the site is part of the same tradition and in a sense is related to the above described historically occupied sites.

SD1 901.--This site probably represents the village of Pisclim described by Rensch (1950:16). It is designated CRSP 96 in the State Park Survey, and is site W-263 in the San Diego Museum of Man files. The location is on the eastern slope of Cuyamaca Peak at an elevation of about 4,900 feet. No historic remains were recovered from the surface survey. The San Diego Museum of Man records describe this as a Yuman III site which is "pure western Diegueno." It is described further as a large summer village characterized by numerous "metates." Mortars seemingly are relatively rare (unpublished site records on file at the San Diego Museum of Man).<sup>1</sup> Excavations were made in the

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<sup>1</sup>Note: at least ninety bedrock mortars were recorded during the CRSP Survey, 1961.

cemetery and a total of 121 cremations were recorded. These excavations were carried on in 1937 under the supervision of George Carter and M. J. Rogers. It is assumed that the recovered artifacts are stored at the San Diego Museum of Man, although no special effort was made to locate these remains. Apparently no excavation was attempted outside of the cemetery area.

In addition to the above described sites, artifacts collected more or less at random from several of the above villages have been included in the analysis (collections made by State Park personnel). This sample has been designated "General Park Survey" in the tabular presentation, and should not be confused with the samples from specific sites resulting from the State Park Survey made in 1961 (True, 1961, unpublished manuscript, State Division of Beaches and Parks).

The artifacts recovered from the above described sites are believed to be representative of all the upland Diegueño occupation are.

Because the Diegueño territory included considerable portions of the desert to the east of the Peninsular Range scarp, it is necessary to examine artifacts from at least one major desert village site to be sure that there are no significant variations in artifact types resulting from ecological differences.

C-144 (San Diego Museum of Man designation).--This is the village of Net nook in Mason Valley. It is the winter village of a group occupying one of the previously described sites in the Cuyamaca highland region. It is located along Vallecitos Wash a few miles upstream from the village of Ha Wi at the site of the historic Vallecitos stage station. Most of the site has been looted by pot hunting activities spread over a period of several decades. Some controlled excavation has been carried on here, however, and several cremations from this site are presently located in the San Diego Museum of Man. In addition to this earlier work, a more recent excavation, under the direction of Clark Brott, removed several cremations from a portion of the site. The materials recovered from these latest excavations are being processed for publication at the present time (Brott, personal communication, 1965). The artifact sample from this site is sufficient to indicate that there are no significant differences between the artifact assemblages in the desert sites and those in the highlands to the west, at least during the protohistoric time period.

Artifacts from three other Diegueno sites were included in this analysis. One has been recorded as the village in the Piñon Basin. Artifacts from here are in storage at the San Diego Museum of Man. This site is located between the Pinyon Mountains and Vallecito Mountains in what is now Anza-Borrego State Park. The elevation probably is



somewhere between 3,000 and 4,000 feet.

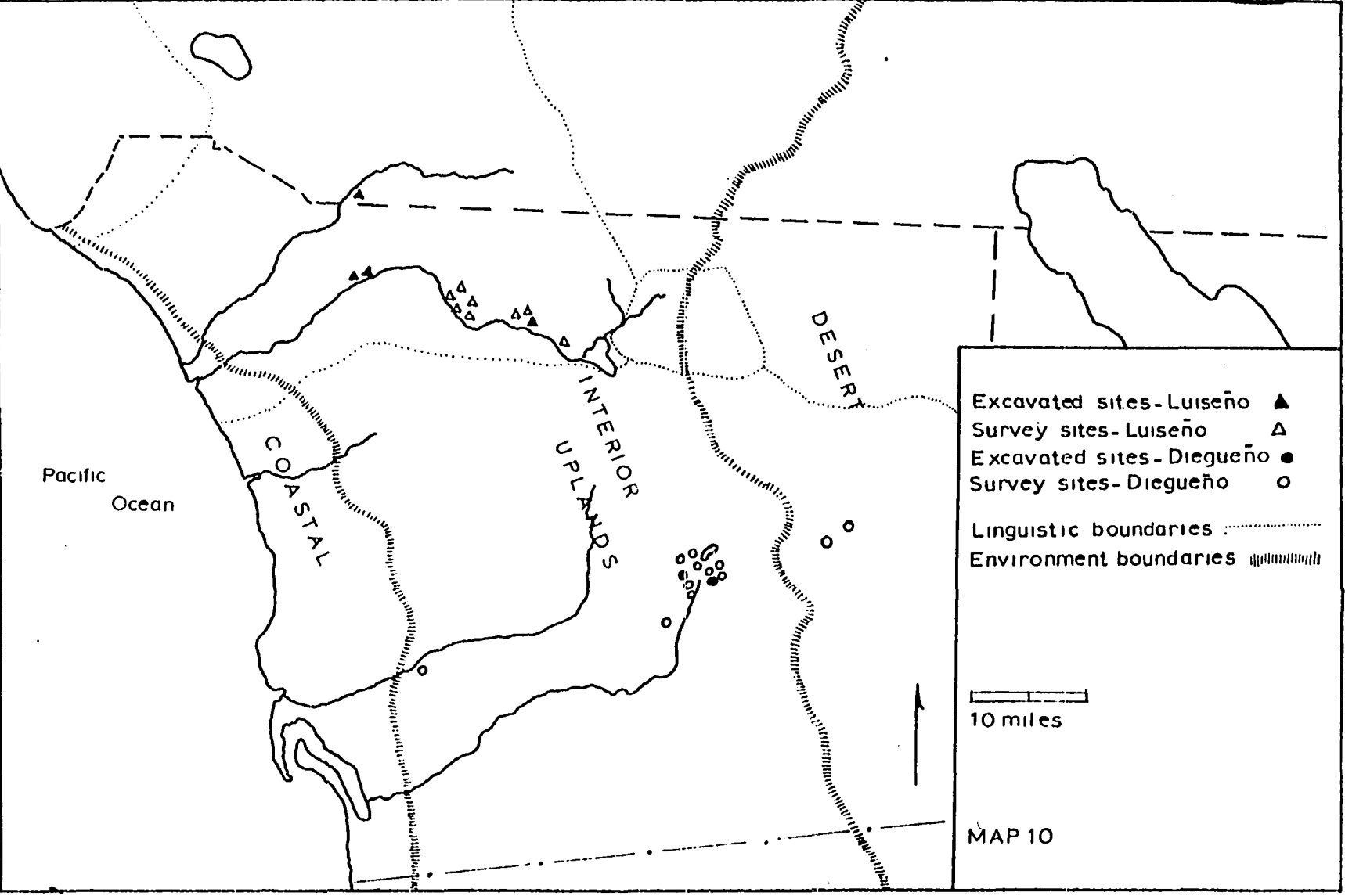
Another site for which a small artifact sample is available in the San Diego Museum of Man is designated W-131. The location is in Mission Valley, not far from the present city of San Diego. There are few data available on the site itself, although it is well within the Diegueno territory, and was considered by Rogers to be "Yuman III" (San Diego Museum of Man site records).

One site from the lower valley on the western side of the Cuyamaca area has been included here. Designated W-202 in the San Diego Museum of Man files, this site is referred to only as the Descanso villages. This would make the location one of the winter campsites for the villages described above on the western edge of what is now Cuyamaca State Park. No additional information on the site is available, although several sites in this area have been examined by the writer and all appear to belong to the same upland Diegueño pattern.

In summary, it can be stated that although only a relatively small portion of the larger San Diego County area has been included here in terms of actual site representation, the pattern of site selection includes a number of varying ecological situations. More importantly, perhaps, this pattern provides excellent coverage for those areas within the upland interior provinces. This concentration of effort was planned for the purpose of establishing a solid base

from which other localized studies could be extended. The addition of data from sites outside of this upland area represents a token effort to illustrate the relative homogeneity for each of the two core areas at large. It is suggested, however, that before the final evaluation of the specific cultural developments for these marginal areas can be written and the internal variations known to exist within each of the larger patterns can be defined, special surveys and excavations designed to produce samples adequate for such analyses will have to be initiated.

Map 10 indicates the location of the above described sites.



- Excavated sites-Luiseño ▲
- Survey sites-Luiseño △
- Excavated sites-Diegueño ●
- Survey sites-Diegueño ○
- Linguistic boundaries ·····
- Environment boundaries ~~~~~

10 miles

MAP 10

## SECTION VII

### THE ARTIFACTS

As would be expected for a hunting and gathering people on this level of sociocultural integration, the artifact inventory for both the Luiseno and the Diegueno tends to be simple and nonspecialized. The most elaborate aspects of both cultures lie in the reasonably complex development of socioreligious activities rather than in specialized subsistence or craft activities.

The limitation of this study to artifacts likely to be found on open sites tends to eliminate consideration of many specialized and perishable elements. But, if the criteria isolated here are to have value in the extension of this kind of study into other areas, the elements considered must be those available from so-called normal habitation sites, and not depend upon the fortuitous discovery of a shaman's cave or a religious chief's cache.

With these qualifications in mind artifacts from the core areas in both Luiseno and Diegueno territories have been examined and classified into types on the basis of formal, and wherever feasible, functional attributes. The classification uses a simple set of categories for each artifact class. Wherever possible the typology follows

those already used in the area. New categories are introduced only when they have not been previously defined for the area or when new data call for reexamination of the prior ordering. Following the description of each artifact type, a brief comment on the distribution of that artifact will be made in those instances where such distributions appear to be of value or interest. Comments on these distributions are, for the most part, limited to the immediate area of concern (San Diego County); to the areas immediately adjacent to the area of concern (the desert areas to the east); and to a somewhat random selection of key sites within the western Great Basin. In some cases where the artifact is rare within these defined territorial limits, the literature on sites outside this specified area has been examined. In general, the focus of attention is toward those areas to the south and east and to the north, northeast of the defined core areas. Little concern will be directed toward the areas to the northwest (the Los Angeles Basin, and Channel Islands), although the significance of these areas in the larger scheme of things must be considered ultimately.

The standardization of criteria and descriptive categories is considered to be a necessary first step in the ultimate development of comparative studies over any significant spatial or temporal province. The categories set up here are oriented toward this end, although it is

recognized that at this stage they are crude and subject to many adjustments and modifications. Sometimes the defined categories are arbitrary and in the final analysis some of these groupings may be merged or discarded. Many artifacts here are multipurpose and clear cut lines between the various functional categories are lacking. Thus, in some instances artifacts which have been assigned to specific categories are in fact part of a recognized functional continuum. Other tools are casual in nature and involve no conventionalized forms or special usages. Such implements do not readily lend themselves to comparative studies, but nevertheless must be considered significant in the manufacturing and subsistence activities of most peoples on this level of complexity. With the above qualifications in mind, the following preliminary classification of the artifacts recovered from sites in the two linguistic and ethnically defined areas is proposed as a first step toward the eventual definition of the cultural inventory of the area at large.

#### Projectile Points

Examination of projectile points from both the Luisño and Dieguño areas has resulted in a classification in which thirteen tentative types have been identified. Each of these "types" has a range of variation in form and size. This may represent deliberate attempts to create variant stylistic or functional forms, or, as is considered more likely, may represent a normal distribution resulting from

attempts to achieve some idealized form. Here, such factors as individual differences in skill and motivation as well as material workability are important factors.

For the present, the basic typology has been set up on the basis of visually observable attribute clusters. It is assumed that these defined categories in some way reflect the cultural bias of the makers and not that of the classifier.

Out of a total sample of over 5,000 projectile points, two general categories were isolated on the basis of size and weight:

1. Large points exceeding 2.5 grams in weight. These are considered to be dart or spear points.
2. Small, light weight points weighing less than 2 grams. These are assumed to be tips for arrows.

The division of points on the basis of weight follows the earlier suggestions of Fenenga (1953:322), although the size differential here is not quite the same. This separation is somewhat arbitrary, and it is considered likely that further investigations will eventually produce an intermediate class of points clearly out of the heavy dart point category, but at the same time not within the defined range of the small point tradition. In this area, these small points have an average weight of less than 1 gram.

There is little question but that the large point types are intrusive elements originating in earlier cultures

both from this immediate area and from the desert regions to the east.

The small point tradition makes up the majority of the sample here and can be divided into two general form categories: (1) triangular forms; and (2) leaf shaped forms.

Projectile points--Type 1.--Small triangular points with concave bases. This is the most common form in the area for this time period. There is considerable range in size and configuration in the sample and several variant forms must be considered:

1. Basal notch varies from less than 1 mm. to more than 6 mm.;
2. Basal notch is angular or "V" shaped;
3. Basal notch is rounded or "U" shaped;
4. Sides of the point are straight;
5. Sides of the point are concave;
6. Sides of the point are convex;
7. Configuration is long and narrow with somewhat parallel sides;
8. Configuration is short and angular with a broad base to length ratio.

The possibility of significant subtype categories in the above variations must be considered, but they do not seem to be significant in the present study.



Type 1 projectile points here correspond to Meighan's type 1 and type 4 (Meighan, 1954:220), and to McCown's type 2 and type 3 (McCown, 1955:59), for the San Diego County interior upland region. They are similar to Hunt's "triangular concaved base point" reported from Death Valley (Hunt, 1960:236-38); to Riddell's type 1 and type 2, and to variants b and d of the Cottonwood series from the Owens Valley Region (Riddell, 1951:figure 1; Lanning, 1963:252). This is a common form over much of Southern California, the Great Basin and portions of the Southwest in protohistoric and historic contexts. Figure 1, A-T illustrates the basic form and some variations.

Projectile points--Type 2.--A small triangular point with a straight base. The variant forms here include:

1. Straight sides;
2. Concave sides;
3. Convex sides;
4. A long narrow configuration with more or less parallel sides;
5. A short and more acutely triangular form with a high width to length ratio;
6. Serrated versus nonserrated forms.

Type 2 projectile points correspond to Meighan's type 2 (Meighan, 1954:220) and to McCown's type 1 and type 7 (McCown, 1955:59) for the San Diego County Region. It corresponds to Hunt's "triangular straight based" type from

Death Valley; to Riddell's type 3 and 5, and Lanning's variant a in the Cottonwood series from the Owens Valley region (Hunt, 1960:238; Riddell, 1951: figure 1; Lanning, 1963: 252). This form is reported from several areas in the western United States, although it is not as common as is type 1. Figure 2 A-H illustrates the basic form.

Projectile points--Type 3.--A small triangular point with a slightly convex base. The variant forms are the same as for type 2. The relative scarcity of this type suggests that it may turn out to be a variant form within the range of either type 2 or type 12 (leaf shaped) points.

Type 3 points are similar to Meighan's type 2A and to McCown's type 6 (Meighan, 1954:220; McCown, 1955:59). Hunt describes a single point of this type from Death Valley and Lanning reports three specimens from Rose Springs (Hunt, 1960:237; Lanning, 1963:252, Cottonwood series variant d). Riddell reports three specimens from INY-2 which he calls type 4 (Riddell, 1951:25). Although some other specimens are known from the area at large, this is not a common form. Figure 2, I-L illustrates type 3 projectile points.

Projectile points--Type 4.--Small triangular points with rudimentary side notches. The base may vary and three possible forms are suggested: (1) concave base; (2) straight based; (3) convex based. The side notches here are usually broad and shallow and give the impression of

indentations rather than sharply defined notches. There are seemingly no significant variations in side configuration and all specimens examined tend to be straight or nearly so below the notch indentation. This does not appear to be a common type within the Southern California-Great Basin provinces. This may be the result of a lack of reporting, however, and at least some type 4 points have been lumped into a general side notched category in other studies. Similar points are illustrated by Hunt (Hunt, 1960:240, figure 62). Another point in this category is reported from Churchill County, Nevada (Heizer and Baumhoff, 1961:227, figure 5), and a specimen of similar configuration is illustrated from the Rose Spring site (Lanning, 1963:335, plate 13 1). Outside of the Great Basin proper, type 4 points are reported from the southern Sierra by Hinds. In this context, however, they have been included within the "general side notched" category as this type is defined by Baumhoff and Byrne (Hinds, 1962: plate 1, n). Type 4 points are illustrated in figure 2, M-P.

Projectile points--Type 5.--Small triangular, concave based, side notched points. Several variant forms are included in this category:

1. Basal notch varies from less than 1 mm. to more than 6 mm. deep;
2. Basal notch is rounded or "U" shaped;
3. Basal notch is angular or "V" shaped;

4. Sides of point are straight;
5. Sides of point are convex;
6. Sides of point are concave;
7. Configuration is long and narrow with more or less parallel sides;
8. Configuration is short and more acutely triangular with a broader width to length ratio.

These variations plus elaborations such as varying kinds of serrations suggest the possibility for subtype designations.

Type 5 points are typical of what have been called Desert Side Notched points and the grouping here includes both the General and the Delta subtypes (Baumhoff and Byrnes, 1959). The sample includes a wide range of forms, material, and workmanship. Figure 3, A-H illustrates some of these variations.

The distribution of this point type is widespread over much of Southern California and the Great Basin, although in many reported occurrences few data are available with respect to frequency or provenience. A single type 5 point was reported from the San Luis Rey I type site by Meighan (Meighan, 1954:220), and McCown recovered a few side notched points from his excavations at the Fallbrook number 7 site (McCown, n.d.). Treganza (1942:152-63) illustrates type 5 points recovered from northeastern Baja California and parts of southeastern California, although no specific provenience or artifact frequencies are reported. Wallace

(1962:16) recovered seven type 5 points from the excavations at Indian Hill in Anza-Borrego State Park, and other scattered occurrences have been reported from the Anza-Borrego region. Townsend (1960:254 and plate 3) reports them from Grapevine Canyon in Borrego State Park; McCown recovered several from the excavations at San Vicente Lake (McCown, 1945:262); Hicks found "some" in Baja California (Hicks, 1959:65), and they are known from several unspecified locations in the Mohave Desert (Rogers, 1939: plate 18). The type has been recovered from many sites in the Great Basin and the Southwest. Hunt (1960) and Wallace (1958) both found this type in Death Valley. In the Owens Valley region, type 5 points are described by Riddell (1951), and by Lanning (1963). Baumhoff and Byrnes (1959) describe the distribution of this form for much of California (see their maps 1, 2, and 3). Both Shutler (1961) and Schroeder (1961) report type 5 points from the Lost City area of Nevada, where the form is identified with the Paiute occupation. Heizer and Baumhoff (1961:125) have reported this type from Churchill County, Nevada, and it is relatively common on late sites in the Panamint Valley area (True and Sterud, n.d., ms. in preparation).

Projectile points--Type 6.--Small triangular side notched points with straight bases. Some variation in configuration is noted: (1) straight sides; (2) concave sides; (3) convex sides; and (4) a form wherein the

length/width ratio separates a long narrow form from a short and more acutely triangular one. Type 6 points are illustrated in figure 3, I-J. This type is not common in the area and may eventually be included as a subtype within the larger type 5 series.

For San Diego County, references to this form in the literature are scarce. McCown (1945:262) reports a straight based, side notched point from San Vicente Lake, but does not indicate its frequency.

From the Great Basin, Hunt (1960: figure 62, z, a) illustrates two points which might fit into this category. Wallace (1958: figure 1, 14-15) reports this type, but does not indicate its frequency.

For the Sierra regions, Bennyhoff reports seven specimens from two sites (1956:33, figure 3, g, h, and i), and Hinder recovered nine type 6 points from several sites in the Southern Sierra area (1962:10;60; and plate 1, specimens h, i, and j). Meighan reports this type for the Clear Lake complex in the northern Coast Ranges of California (Meighan, 1955: figure 8).

Although no attempt was made to seek out all possible examples of this type, it appears that it is not a common form in the Great Basin, and California. It is, however, quite common in the southern Arizona Desert and was recovered from the Santa Cruz and Sacaton phases of the Hohokam in considerable numbers (Sayles, 1937:113, plates

LXXXVI, LXXXVII, and LXXXVIII). Similar forms have been reported for this same region by Withers (Withers, 1941 Master's thesis, University of Arizona).

Projectile points--Type 7.--Small triangular side notched points with a convex base (figure 3, K-L).

This type has not been reported in any published work for the San Diego County area. A hurried survey of the more obvious reports on the Great Basin likewise produced no specimens from that region. A similar form has been reported from Mono County and from the Wooden Valley complex, however (Meighan, 1955a: figure 2; 1955: figure 7).

Projectile points--Type 8.--Small triangular, concave based points with a central notch in the base. The central notching characteristic is found on several different basal configurations. These include both the rounded or "U" shaped form and the angular or "V" shaped form. It is likewise found in points made of a variety of materials and in various length to width ratios (figure 3, M-O).

This type is the same as Baumhoff's and Byrnes' Sierra subtype of the Desert Side Notched type. It has a wide distribution over much of the Sierra in California, the westernmost margins of the Great Basin, and in some portions of Southern California.

Campbell (1931:85) reports this type from the southern Mohave and Colorado Desert regions; both Wallace and Hunt

have recovered this type in Death Valley (Wallace, 1958: figure 1; Hunt, 1960:240). Similar forms were recovered from the Lost City Pueblo in southern Nevada (Shutler, 1961: plate 65). For the Owens Valley region and portions of Mono County, Lanning reports a single specimen from the Rose Springs site, and Meighan found one specimen in his Mono County Survey (Lanning, 1963: plate 13, j; Meighan, 1955a:40). Schroeder (1961:143-148) recovered this type from the excavations at Willow Beach on the Colorado River. They have been reported from sites in Churchill County, Nevada (Heizer and Baumhoff, 1961:125), and are known from the southern Sierra Nevada regions where they have been reported by both Bennyhoff and Hinds (Bennyhoff, 1956: figure 4; Hinds, 1962: plate 1, specimens s, t, and u).

Projectile points--Type 9.--Small triangular side notched points with a straight base and a single small central notch (figure 3, P-Q).

This type is included within the Sierra subtype by Baumhoff and Byrnes and it is possible that there is no basis for its separation as a type here. Distribution of this form appears to be essentially the same as that of type 8.

Projectile points--Type 10.--Small triangular concave based points with a single small basal notch, but lacking side notches (figure 4, A-B). This form is not common and



the specimens recovered may be unfinished type 8 points. They have been reported from several locations, however. Campbell illustrates this type from the Twenty-nine Palms region of the Colorado Desert (Campbell, 1931:85). A nearly identical specimen was recovered from the Buena Vista site in the southern San Joaquin Valley (Wedel, 1941: plate 39, c). A similar point was recorded from the southern Sierra region (Hindes, 1962: plate 2 C, specimen g).

Projectile points--Type 11.--A small triangular point with side notches and serrated edges (figure 4, C-F). This is a very small and short point and should not be confused with the long slender serrated forms of side notched types described above. The distribution of this type is scattered and it is not common. The possibility that this is a drill or some nonfunctional chipped stone item, rather than a projectile point, should be kept in mind.

One type 11 point is illustrated from the Lost City area in Nevada (Shutler, 1961: plate 64, p), and a possible specimen may have been recovered from the Rustlers Rock-shelter site (J. T. Davis, 1962: figure 2 and plate 1, z). In this latter instance, however, it is probable that the illustrated point is an incomplete specimen of a General Side Notched type. No type 11 points have been reported from Death Valley, Owens Valley, or the California Sierra. One specimen was recovered from a site near Kingman, Arizona (True, n.d., ms. in preparation).

In contrast to the relative dearth of points of this type in the above mentioned areas, similar forms are found in southwestern Arizona in considerable numbers (Sayles, 1937: plate LXXXV; and Withers, 1941: unpublished Master's thesis, University of Arizona).

A variation on the basic form is noted wherein the serrations form barbs which point toward the tip (figure 4, F). This variation is noteworthy because of its similarity to barbed forms found in the Santa Cruz phase of the Hohokam sequence (Sayles, 1937: plate XC).

Projectile points--Type 12.--Small leaf-shaped points.

These are quite scarce in the described area of interest, although they are common in the adjacent regions to the northwest. This type has been reported by Lanning and Riddell from the Owens Valley region (Lanning, 1963:335; Riddell, 1951: figure 1, number 5). Figure 4, G-J illustrates the variations recovered in the San Diego County upland area.

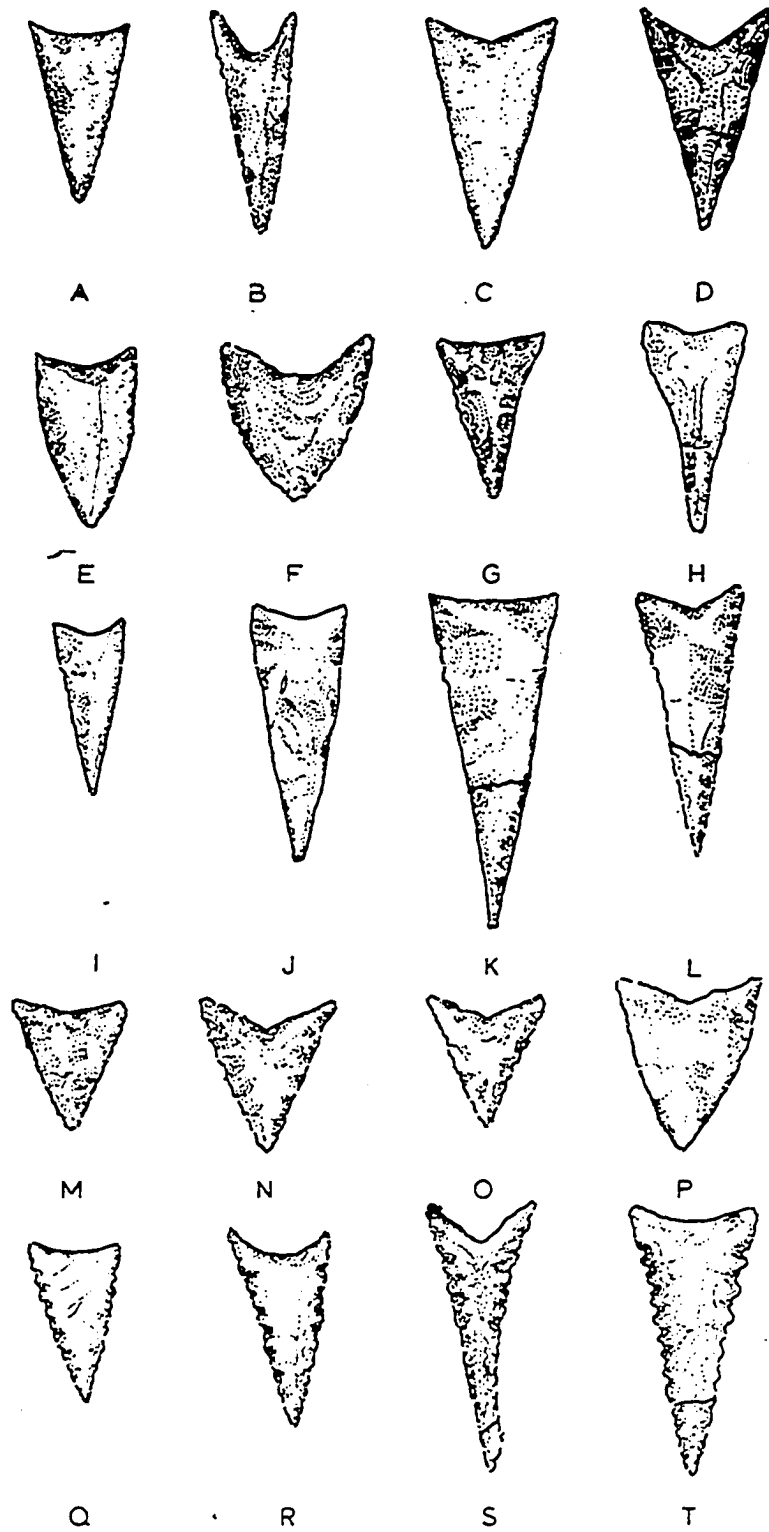
Projectile points--Type 13.--All of the large, heavier points are believed to have been used on darts or spears and have been lumped into this catch-all category. Since there is little question but that they are intrusive elements from earlier occupations, they have not been included in the analysis. Figure 4, K-R illustrates the range of forms represented in this sample.

Figure 1

## Type 1 projectile points

A.	Quartz, 21 mm. long; weight, .8 gram--	SD1 308-- <u>Luiseno</u>
B.	Chert, 29 mm. long; weight, .8 gram--	SD1 682-- <u>Luiseno</u>
C.	Quartz, 30 mm. long; weight 1.0 gram--	SD1 682
D.	Basalt, 29 mm. long; weight unknown	SD1 308
E.	Quartz, 21 mm. long; weight .7 gram--	SD1 308
F.	Chert, 21 mm. long; weight .7 gram--	SD1 308
G.	Basalt, 21 mm. long; weight .8+ gram--	SD1 860-- <u>Diegueno</u>
H.	Basalt, 27 mm. long; weight .7+ gram--	SD1 860
I.	Quartz, 22 mm. long; weight .6 gram--	SD1 308
J.	Basalt, 34 mm. long; weight 1.3 grams--	SD1 860
K.	Quartz, 44 mm. long; weight unknown	SD1 682
L.	Basalt, 33 mm. long; weight unknown	SD1 682
M.	Obsidian, 18 mm. long; weight, .4 gram--	SD1 860
N.	Chert, 20 mm. long; weight, .5 gram---	SD1 682
Q.	Quartz, 18 mm. long; weight, .4 gram--	SD1 308
P.	Chert, 24 mm. long; weight, .8 gram--	SD1 308
Q.	Felsite, 20 mm. long; weight, .4 gram--	SD1 860
R.	Felsite, 25 mm. long; weight, .5 gram--	SD1 308
S.	Basalt, 33 mm. long; weight unknown	
T.	Jasper, 34 mm. long; weight unknown	SD1 860

FIGURE 1



## Figure 2

## Type 2 projectile points

- |    |   |         |
|----|---|---------|
| A. | Chert, 18 mm. long; weight 1.0 gram--       | SDI 682 |
| B. | Felsite, 28 mm. long; weight unknown        | SDI 860 |
| C. | ? , 27 mm. long; weight 1.7+ grams--        | SDI 860 |
| D. | Basalt, 21 mm. long; weight, 1.0 grams--    | SDI     |
| E. | Quartz, 14 mm. long; weight, .4 gram--      | SDI     |
| F. | Felsite, 21 mm. long; weight, .7 gram--     | SDI 860 |
| G. | Rhyolite, 30 mm. long; weight, 1.5+ grams-- | SDI 860 |
| H. | Rhyolite, 32 mm. long; weight, 1.3 grams--  | SDI 860 |

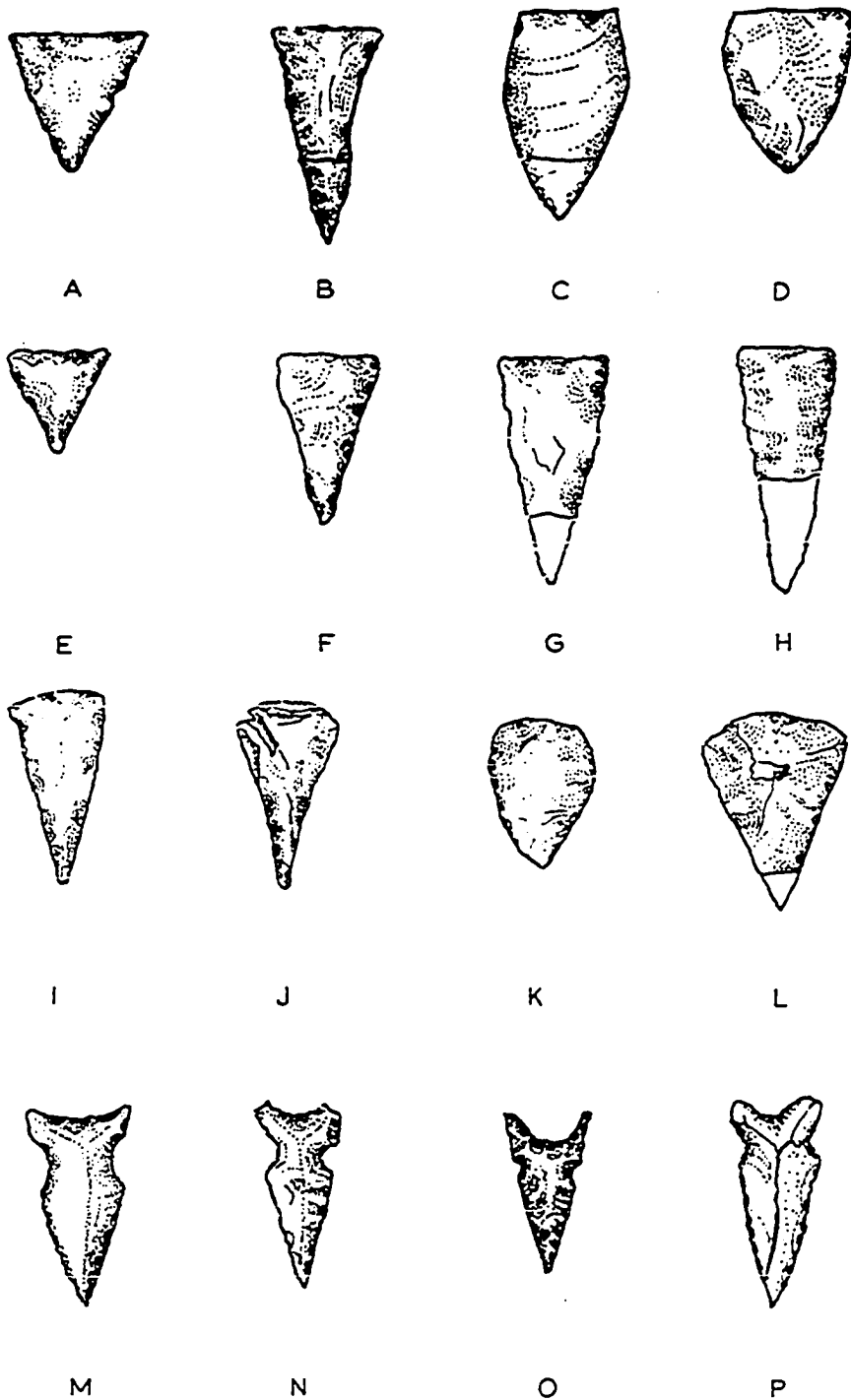
## Type 3 projectile points

- |    |   |         |
|----|---|---------|
| I. | Felsite, 24 mm. long; weight, .6 gram-- | SDI 860 |
| J. | Quartz, 23 mm. long; weight, .6 gram--  | SDI 308 |
| K. | Quartz, 19 mm. long; weight, .7+ gram-- | SDI 860 |
| L. | Chert, 26 mm. long; weight, 1.7 grams-- | SDI 860 |

## Type 4 projectile points

- |    |   |         |
|----|---|---------|
| M. | Basalt, 26 mm. long; weight, .9 gram--  | SDI 860 |
| N. | Felsite, 25 mm. long; weight, .5 gram-- | SDI 860 |
| O. | Felsite, 21 mm. long; weight, .4 gram-- | SDI 860 |
| P. | Chert, 28 mm. long; weight .6+ gram--   | SDI 308 |

FIGURE 2



## Figure 3

## Type 5 projectile points

- A. Rhyolite, 39 mm. long; weight, 1.0 gram-- SD1 860
- B. Chert, 45 mm. long; weight 2.2+ grams-- SD1 862
- C. Basalt, 41 mm. long; weight, 1.5 grams-- SD1 863
- D. Basalt, 29 mm. long; weight unknown SD1 860
- E. Felsite, 26 mm. long; weight, .8 gram-- SD1 860
- F. Basalt, 26 mm. long; weight .9 gram-- SD1 860
- G. Chert, 31 mm. long; weight unknown SD1 863
- H. Obsidian, 20 mm. long; weight, .5 gram-- SD1 860

## Type 6 projectile points

- I. Chert, 22 mm. long; weight, .5 gram-- SD1 860
- J. Chert, 28 mm. long; weight unknown SD1 860

## Type 7 projectile points

- K. Felsite, 23 mm. long; weight, .5 gram-- SD1 860
- L. Basalt, incomplete SD1 860

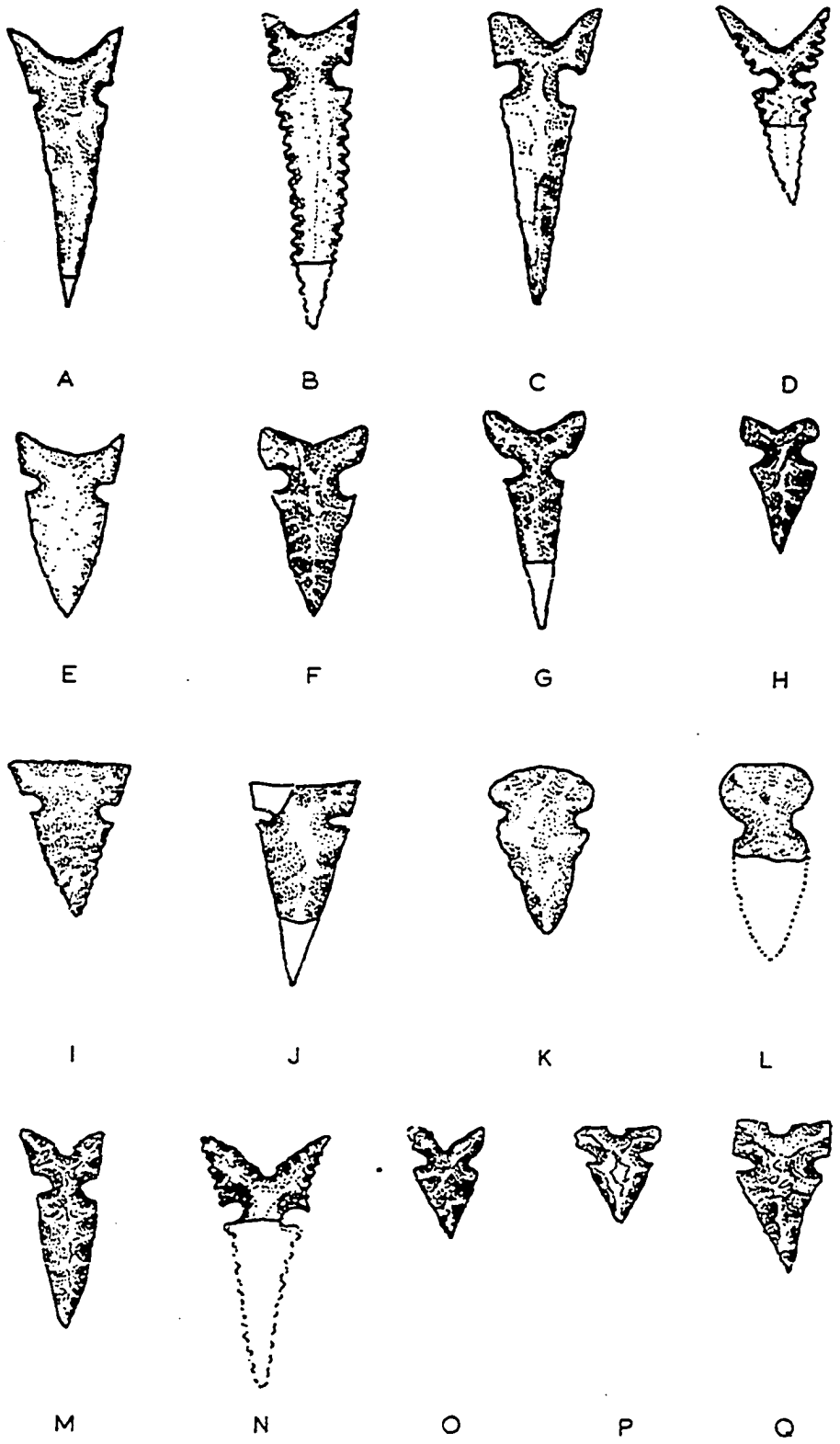
## Type 8 projectile points

- M. Basalt, 28 mm. long; weight, .8 gram-- SD1 860
- N. Basalt (fine grained) SD1 860
- O. Obsidian, 16 mm. long; weight, .3 gram-- SD1 860

## Type 9 projectile points

- P. Obsidian, 13 mm. long; weight, .3 gram-- SD1 860
- Q. Felsite, 21 mm. long; weight, .7 gram-- SD1 860

FIGURE 3





## Figure 4

## Type 10 projectile points

- A. Obsidian, 20 mm. long; weight, .5 gram-- SD1 860  
 B. Obsidian, 18 mm. long; weight, .4 gram-- SD1 860

## Type 11 projectile points

- C. Quartz, 18 mm. long; weight, .4 gram-- SD1 860  
 D. Obsidian, 23 mm. long; weight, .8 gram-- SD1 860  
 E. Quartz, incomplete SD1 308  
 F. Obsidian, incomplete SD1 860

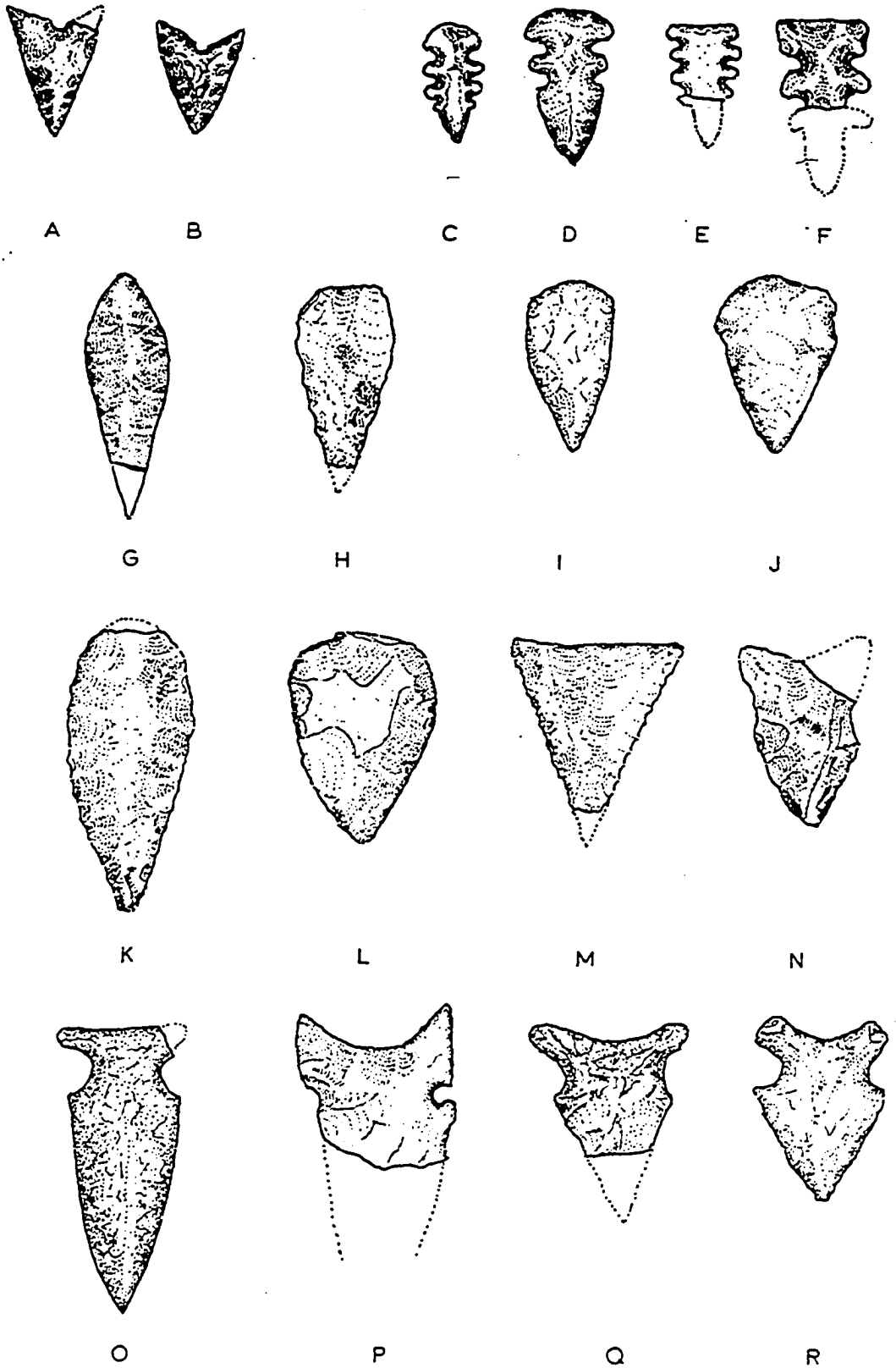
## Type 12 projectile points

- G. Quartz, 36 mm. long; weight, 1.8 grams-- SD1 682  
 H. Basalt, 31 mm. long; weight, 1.1 grams-- SD1 308  
 I. Quartz, 26 mm. long; weight, 2.0 grams-- SD1 308  
 J. Quartz, 27 mm. long; weight, 1.9 grams-- SD1 308

## Type 13 projectile points

- K. Basalt, 45 mm. long; weight, 5.2 grams-- SD1 110  
 L. Basalt, 32 mm. long; weight, 5.0 grams-- SD1 682  
 M. Basalt, 31 mm. long; weight, 3.5 grams-- SD1 110  
 N. Chert, 29 mm. long; weight unknown SD1 682  
 O. Quartz, 43 mm. long; weight, 6.0 grams-- SD1 682  
 P. Chert, incomplete SD1 308  
 Q. Basalt, 31 mm. long; weight unknown SD1 682  
 R. Basalt, 29 mm. long; weight, 3.1 grams-- SD1 860

FIGURE 4



## Knives

Artifacts believed to have functioned as cutting tools are grouped into several categories:

1. Bifacially flaked--conventionalized forms;
2. Bifacially flaked--irregular forms;
3. Irregular flake knives;
4. Utilized flakes.

### Bifacially flaked--conventionalized forms.--Artifacts

in this group are separable from projectile points primarily on the basis of size. They are usually well made, and may be either percussion or pressure flaked, or both. The following types are suggested, although it is not known that there is any functional or stylistic significance in these variations.

Type 1.--Triangular shaped with a straight base (figure 5, A). This is an enlarged version of a type 2 projectile point. The form is similar to McCown's type 8 "blade" (McCown, 1955:23). Similar knives are reported from the Lost City area in Nevada (Shutler, 1961:37 and plate 67, specimens g, k). Heizer and Baumhoff (1961:132) likewise illustrate similar artifacts from Churchill County, Nevada, and Hunt (1960:241-42) reports this type from Death Valley.

Type 1A.--A variation with convex sides and a slightly different appearance than type 1. This is more common than the straight sided form, but its distribution

is about the same. It seems to be more common in the Great Basin than in San Diego County, California. Figure 5, B illustrates this type.

Type 2.--Triangular straight-sided knives with a convex base (figure 5, C). The distribution is similar to type 1. Type 2 knives are more common in the Great Basin than in Southern California.

Type 2A.--Triangular form with convex base and convex sides (figure 5, D).

Type 3.--Triangular shaped with straight sides and a concave base (figure 5, E). This knife is similar in shape to a type 1 projectile point. A cursory examination of the literature suggests that it may be rare outside of the Southern California mountain areas. This may be more apparent than real, however, since many specimens classified here as knives may have been included in projectile point typologies in other classifications.

Type 3A.--Triangular-shaped concave based artifacts with convex sides (figure 5, E).

Type 4.--Type 4 knives are oval to leaf-shaped and tend to be broad and thin (figure 5, I). They are found on many sites in the Great Basin and are recovered occasionally from Southern California sites.

Type 4A.--Narrow, leaf-shaped knives with thick cross-sections. These implements are not unlike knives typical of the earlier San Dieguito component from San Diego County, California. Similar forms have been recovered from

several complexes throughout the Great Basin region (figure 5, G-H).

Hunt (1960:38-41) reports this type from her Death Valley 1 sequence. Similar forms are known from the Pinto Basin (Amsden, 1935: plate 11). It is known from the Kingman, Arizona, area (True, n.d., ms. in preparation), and from the New York Mountains in southeastern California (True, Davis, and Sterud, n.d., ms. in preparation). In general, this type tends to be associated with earlier rather than the more recent occupations and it is probably an intrusive element in the present sample.

Type 5.--Type 5 knives are asymmetrical forms (figure 6, A-B).

Type 6.--Type 6 knives are characterized by a contrasting base (figure 6, C).

Similar specimens have been recovered from sites in western Arizona, although, in its present context, there is a good possibility that it represents a projectile point type from an earlier horizon.

Bifacially flaked--irregular forms.--In addition to the above described bifacially flaked implements with rather clear-cut conventional forms, there is contained within the sample a number of knife-like artifacts which are irregular in outline and crudely finished. These artifacts are lumped under the heading Irregular, Bifacially Flaked knives (figure 6, D-F). The cultural significance of this category is unknown, and it would appear that few of the artifacts

contained therein will be diagnostic in terms of the present problem.

Irregular flake knives.--Irregular shaped flakes modified on one or more edge which are assumed to have been utilized for some cutting function. Such flake knives are differentiated from Bifacially Flaked irregular forms in that, here, only the cutting or working edge has been modified. Irregular Flake knives, in turn, are differentiated from scraping tools in that they are bifacially rather than unifacially flaked. This is, however, an arbitrary separation and may or may not represent some functional reality (figure 6, G-I).

Utilized flakes.--In addition to the knives described above (characterized by deliberate modification of one or more edges), a category of implements consisting of simple flakes modified only through use is recognized, which may have been used for either cutting or scraping functions (figure 10, F-G).

### Drills

No well developed drill "industry" is in evidence in the present sample. Several implements have been categorized as drilling tools, however, and a number of typological categories are suggested.

Type 1.--A short, stubby, bifacially-flaked, triangular shaped implement. Some specimens in this group are similar

## Figure 5

## Type 1--knives

A. Basalt, actual size-- SD1 682

## Type 1A--knives

B. Basalt, actual size--61 mm. long-- SD1 682

## Type 2--knives

C. Basalt, actual size-- SD1 308

## Type 2A--knives

D. Felsite, actual size--44 mm. long-- SD1 860

## Type 3--knives

E. Basalt, actual size-- SD1 682

## Type 3A--knives

F. Quartz, actual size--31 mm. long-- SD1 860

## Type 4A--knives

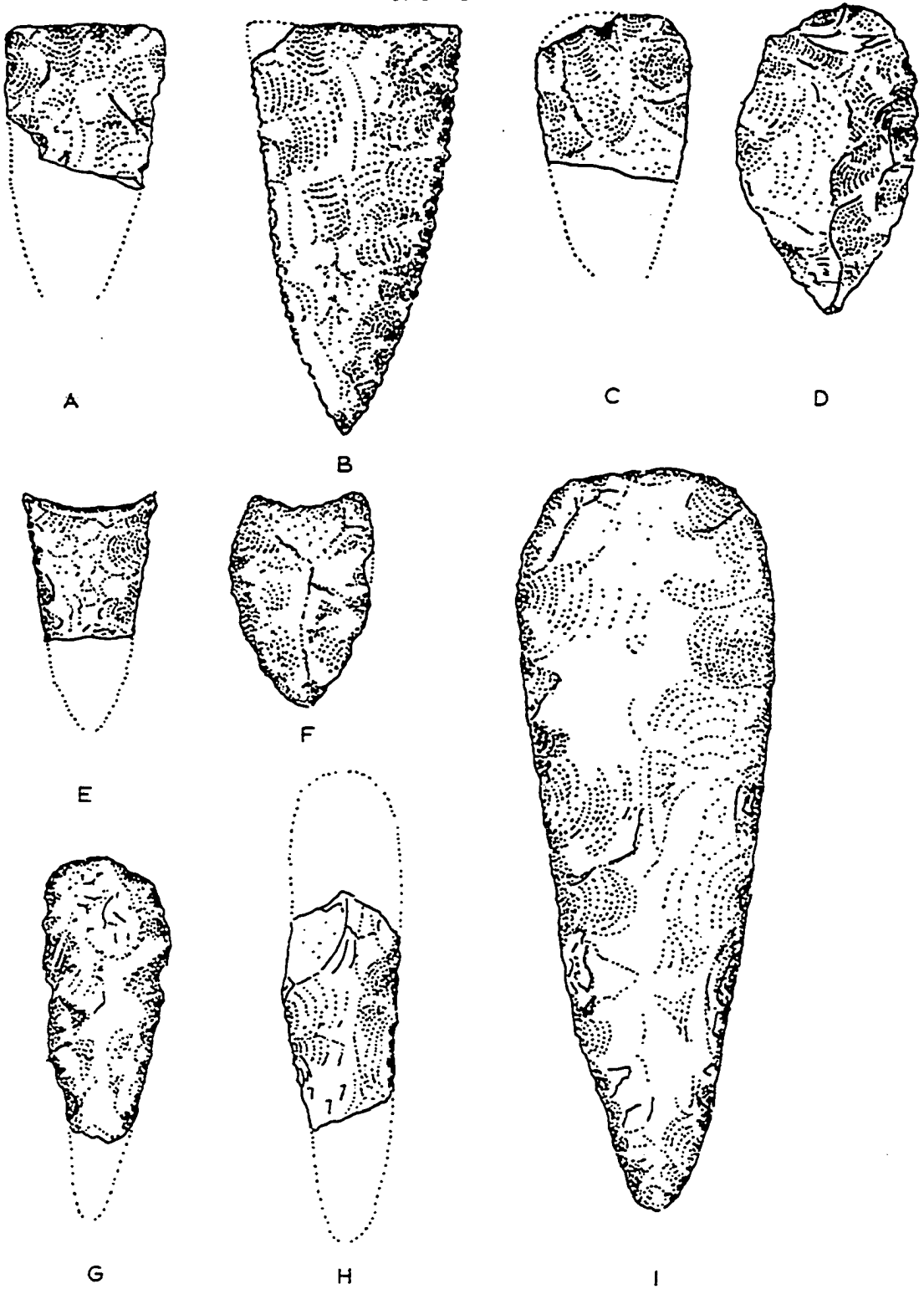
G. Quartz, actual size-- SD1

H. Felsite, actual size-- SD1 860

## Type 4--knives

I. Basalt, actual size--110 mm. long-- SD1

FIGURE 5





## Figure 6

## Type 5--knives

- A. Basalt, actual size--34 mm. x 25 mm.-- SD1  
 B. Felsite, actual size--40 mm. x 19 mm.-- SD1 863

## Type 6--knives

- C. Quartz, actual size-- SD1 308

## Type--bifacially flaked--irregular forms

- D. Basalt, actual size--32 mm. x 28 mm.-- SD1 682  
 E. Quartz, actual size--33 mm. x 22 mm.-- SD1 308  
 F. Rhyolite, actual size--34 mm. x 25 mm.-- SD1 853

## Type--irregular flake knives

- G. Basalt, actual size--39 mm. x 33 mm.-- SD1 308  
 H. Basalt, actual size--41 mm. x 20 mm.-- SD1 308  
 I. Basalt, actual size--37 mm.\* x 25 mm.-- SD1

\* Incomplete specimen.

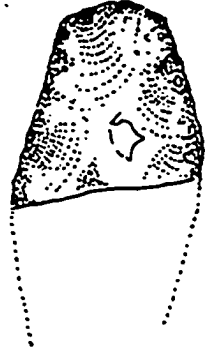
FIGURE 6



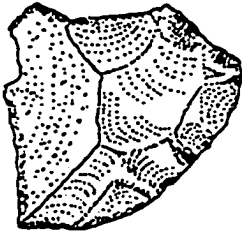
A



B



C



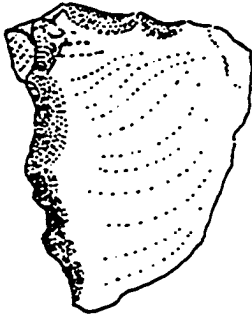
D



E



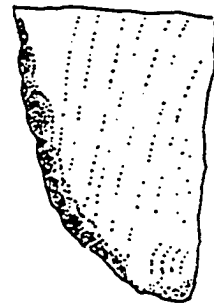
F



G



H



I

to projectile points and are differentiated only on the basis of the drill-like tip, usually marked by a definite wear surface or polish (figure 7, A-B).

Type 2.--A long slender generally asymmetrical form with a reasonably heavy cross section (figure 7, C-D).

Type 3.--An elongated triangular form with varying base configurations. This tool is separated from type 1, 2, and 3 projectile points on the basis of a heavier cross section and a tendency to be more crudely made. In some instances the tip will show wear and polish from use (figure 7, E-G).

Type 4.--Type 4 drills may be only variant forms of concave sided type 1 projectile points. The type here has been segregated from the above mentioned projectile points on the basis of the pronounced concave side configuration and a nearly round cross section near the tip (figure 7, H).

Type 5.--This is a specialized category with only one specimen in the present sample. It is possible that it represents a reworked type 7 projectile point and as such may be more or less unique (figure 7, I).

Type 6.--This form is not unlike type 1 projectile points. The differentiation is made on the basis of an asymmetrical cross section and the general lack of balance expected in a projectile tip. Specimens in this category

are marked by a pronounced hump on one side (figure 7, J). It is possible that such artifacts are unfinished projectile points.

The distribution of drills within this area has not been documented in any detail, and no drill typologies have been published for the later periods of time.

Meighan (1954:220) reports two drills from the San Luis Rey I type site, but does not describe the specific artifacts. McCown reports eight drills from the site at Temecu and four from the Fallbrook number 7 site, but few details are presented with reference to the specific artifacts or their provenience (McCown, 1955:24; McCown, n.d.: 7 and plate 7). Wallace has suggested that drills are rare in the Anza-Borrego State Park region and reports only two specimens from that area (Wallace 1962:9).

### Gravers

Included here are a number of flakes or worked implements with tips or edges suitable for grooving or incising. In some cases these working edges are found on scrapers, so that the category itself is not clearly defined. This lack of definition and the small size of the sample makes the category of little significance in the present study and no further discussion seems necessary (figure 7, K-L).

### Scrapers

The relative importance of scraping tools in the late

prehistoric and protohistoric periods in this area is not clear. Several activities were carried on which would call for some kind of scraping tool, but there does not seem to have been any developed scraper industry and the sample here is generalized and far from elaborate. A number of typological categories have been set up on the basis of some formal attributes, but it should be stressed that the specific function of these implements is not known. The groupings presented may or may not represent meaningful categories with respect to the applications of these tools in living situations. There was probably a great deal of overlap between types and many tools in this kit were undoubtedly used on an interchangeable basis. The classification suggested here attempts to follow the typology set up for the earlier occupations within this same area (see Warren and True, 1961; Warren, True, and Eudey, 1961; and Crabtree, Warren, and True, 1963).

Domed scrapers.--Artifacts of varying outline, but generally tending to be round to oval in shape. These tools were usually made on a heavy flake or a small core by percussion flaking. The cross section was most often plano-convex, and the cutting or scraping edge was formed at the intersection of the planar surface and the flake scars resulting from the shaping of the upper surface. Scraping functions were not always confined to this edge, however, and some specimens show wear facets on the flake scars of

the upper surface. Most specimens in this category are crude, but there is a wide range of quality and care in manufacture. Three categories of domed scrapers are suggested.

Type 1.--Circular to oval artifact, with some flaking over one-half to the entire periphery. The upper surface is usually shaped and the angle of the marginal flaking is most often steep. Some specimens with lower angled flaking have been included. A bulb of percussion may or may not be left on the planar surface (figure 8, A-B).

Type 1A.--Essentially the same as type 1, except that they may have a higher domed back, and are characterized by two planar surfaces intersecting at approximately right angles (figure 8, C).

Type 2.--An elongated form of the type 1 domed scraper. Similar to type 3 domed scrapers described for the earlier horizons in the same area (Warren and True, 1961:19) (figure 8, D).

Type 3.--Found in various forms, but characterized by concave shaped edges which form a beak-like point on one corner (figure 9, D).

The distribution of domed scrapers in the late prehistoric and protohistoric periods for the San Diego County region is unknown. Meighan reports ten scrapers from the San Luis Rey I type site, but does not attempt to break his sample down into types (Meighan, 1954:218). McCown describes

two types which are probably similar to the domed scrapers described here (McCown, 1955:24 and plate 24, specimens j, k, and l). For the San Vicente Lake site scrapers were recovered, but are not described (McCown, 1945:161-62). Wallace describes two scrapers "fabricated from small cores" from the Anza-Borrego area. These are probably the same as the domed scrapers in this typology (Wallace, 1962:15). Meighan (1959: plate 4, a) illustrates a type 1 domed scraper from the Borrego State Park Survey collections.

Basically this is a common artifact form, and specimens have been reported from several locations within the western Great Basin. The Rustler Rockshelter (J. T. Davis, 1962); the Lost City sites in southwestern Nevada (Schutler, 1961); the Willow Beach Site on the Colorado (Schroeder, 1961); and the Rose Springs site in the Owens Valley (Lanning, 1963), have all produced artifacts in this category.

Keeled scrapers.--Round to oval specimens made on small cores or heavy flakes. These artifacts are characterized by steeply flaked high backs and a keeled ridge. The upper surface looks like a bifacially flaked chopper or a heavy knife. Specimens in this category are separated from such choppers on the basis of an obvious planar surface, and by a lack of wear or abrasion along the keeled edge (figure 9, A). This form is not common in the sample and no attempt will be made to document its distribution.

Flake scrapers.--Modified flakes of varying shapes and dimensions with unifacial flaking along one or more edges. Flake scrapers are usually made on lighter flakes than domed scrapers and are found in a wide range of shapes. Modification is quite often confined to the working edge of the tool. The cross section is normally plano-convex, but may be tabular or triangular, depending upon the flake thickness and the degree to which the original flake has been modified.

Type 1.--A generally ovoid form with a plano-convex or tabular cross section. The overall configuration varies considerably and some quite irregular shapes are included. Modification may be over much of the upper surface, but most often is confined to the working edge (figure 9, B-C). This is a common tool throughout the area of interest but no distribution summary will be attempted since few of the existing studies have attempted to set up a detailed scraper typology.

Type 2.--Type 2 flake scrapers are similar to type 1, except that they have a rectangular outline form. There is some question as to whether or not this is a valid subdivision and it is possible that future evaluation will eliminate this group as a separate category (figure 9, E-F).

Type 3.--Modified flakes with a roughly triangular configuration and an elongated beak-like point on one edge. The form suggests some graving as well as a scraping



function (figure 10, A-B).

Type 4.--Small thin flakes modified either over the entire upper surface or just on the working edges. This tool is separated from type 1 and type 2 scrapers on the basis of its smaller size and the possibility that it may have been hafted. The form here is quite often rectangular and some care should be taken not to confuse these scrapers with historic gunflints (figure 10, C-D).

Cortex based scrapers.--Round to oval tools made on flakes struck from cobbles wherein the cobble cortex is left intact and forms the base of the implement. The upper surface is shaped by percussion flaking over all or most of the original flake scar. The cross section tends to be lenticular or plano-convex (figure 10, E). So far as is known at the present time this type has a limited distribution and is most common on coastal sites in Southern California.

Used flakes.--In addition to the above described categories of scraping tools, many flakes were used on a casual basis for scraping purposes. In this case, no modification of the original flake was attempted and it is considered likely that such a tool was used once or twice then discarded. Flakes having some indication of such usage have been classified into two categories:

Type 1.--Irregular unmodified flakes with use chipping or wear on one or more edges. A considerable range

of size may be present and such flakes could have functioned either as cutting or scraping implements. This category of tool appears to be common over much of the area of concern, although in many instances they are not described in detail nor are their frequencies indicated. Used flakes, type 1, here correspond to flake scrapers, type 6 in the local coastal typology (Crabtree, Warren, and True, 1963).

Type 3.--Long slender flakes with a length that is more than twice the flake width. These are true blades, although it is considered unlikely that their manufacture, as such, was deliberate. No developed blade industry is suggested for this area. Modification of this flake is confined to the working edges and was the result of use rather than deliberate shaping.

In addition to the two categories of used flakes described above, another similar category has been defined which is probably not in itself an actual tool type.

Type 2.--These are flakes with chipping or wear facets on one or more edges. They are differentiated from type 1 used flakes because they were modified as a result of use while they were part of another tool. As such they are considered to be the discarded waste product resulting from the sharpening or modification of some other tool, such as a scraper plane or heavy domed scraper. In some instances, however, type 2 used flakes were subsequently used as cutting or scraping tools and specimens have been

recovered with both a use-modified edge and the original wear and abrasion marks acquired while attached to the original tool.

### Scraper Planes

Scraper planes are defined here as any heavy duty implement made on a core or a heavy flake with a clear cut planar surface and some indication that this surface was used, or intended for use, in some planing or scraping activity. This indication may be in the form of wear facets on the planar surface or the presence of a definite manufactured cutting or working edge along the intersection of the upper and the planar surfaces. In most cases scraper planes in this context are crudely shaped, but a wide range of finish and workmanship is possible. Scraper planes are separated from the larger domed scrapers primarily on the basis of size. For the purposes of this analysis, if the artifact is larger than 70x50 mm. and has the described wear facets it has been designated a scraper plane. Size alone, however, is not the only factor and in some cases smaller artifacts have been included here on the basis of their configuration and obvious wear along the planar surface and on the heel of the artifact. Although there is some overlap here, large domed scrapers most often lack these wear facets.

Scraper planes--Type 1.--These are artifacts with a

generally ovoid outline and most of the upper surface modified by percussion flaking (figure 11, A-B). This type corresponds to type 1 scraper planes in the earlier coastal sequence (Crabtree, Warren, and True, 1963:335-36).

Scraper planes--Type 5.--High domed implements with a generally circular or slightly oval configuration. The flaking angle here is very steep and in some cases is nearly vertical and undercut along the margins at the intersection of the upper and planar surface. This form is sometimes referred to as a "horse hoof scraper" (figure 11, C). A variant form has two planar surfaces at right angles to one another similar to the previously described Domed scraper type 1A.

Scraper planes--Type 7.--Irregular implements with little or no modification of the upper surfaces. These are usually crude and poorly made, although the planar surface and some indication of wear are always present (figure 11, D).

The type designations above were adopted from the typology developed for the earlier coastal sequence. The missing numbers in the series are the result of types present in this earlier sequence, but not yet reported from these later contexts. This format has been retained to facilitate future comparisons in the event that further work produces some of the missing typological forms.

The overall distribution of scraper planes in the later prehistoric periods in Southern California has not yet been defined in any detail. For the San Diego County area, scraper planes were not reported from the San Luis Rey I type site (Meighan, 1954), and none were reported from the San Vicente Lake bed site by McCown (1945). McCown does, however, describe implements from the site at Temeku which he calls scraper planes. The artifacts in this case, however, would be considered large domed scrapers in the present classification (McCown, 1955: plate 24). Scraper planes have been reported from the Anza-Borrego State Park area along with artifacts referred to as "choppers," some of which might overlap with the scraper plane category as it is defined here. These are surface collections, however, and while they are in some instances associated with artifacts typical of the later time periods, their precise temporal placement is unknown (Wallace 1962a: table 1). In addition to these artifacts from the Mountain Palms Springs area, Wallace also reports scraper planes from the Indian Hill Shelter. Here artifacts described as scraper planes were recovered only from the lower levels in a stratified deposit (Wallace, 1962d:8-10). The Buena Vista Watershed Survey in northwestern San Diego County produced four scraper planes. However, only one specimen was associated with artifacts typical of the late sites in this area (Wallace, 1960:290-91).

For the western Great Basin as a whole there is little mention of scraper planes from late occupation sites. This may be due to reporting circumstances, however, and need not reflect the actual distribution of the artifacts themselves.

### Choppers

This category includes tools suited for heavy duty cutting or chopping. However, the functional designation is arbitrary and there is no evidence to indicate the actual use of these implements.

Two variant forms are given typological status. Similar tools have been described for the earlier La Jolla occupations of the area (Warren and True, 1961:17), and in one instance these same tools have been considered as part of a larger "hammerstone complex" (Crabtree, Warren, and True, 1963:333-334).

Type 1.--Heavy implements made on large natural or man-made flakes or cores. They are percussion flaked and trimmed to form a ragged bifacial cutting edge along one or more sides of the core. In nearly all instances, however, one side has been left for a hand hold and has not been sharpened (figure 12, A).

Type 3.--Implements made on water-worn cobbles with 1/4 to 3/4 of the periphery flaked to form a cutting edge. The flaking here is unifacial rather than bifacial.

Unifacial choppers are differentiated from scrapers and scraper planes by the lack of a developed planar surface on the chopper forms (figure 12, B).

The distribution of chopper-like tools has not been well defined for the late horizons in this area. The paucity of sample, however, may be due to the fact that the later horizons have not yet been adequately reported for many areas. In any case, the number of documented occurrences is small. Wallace (1962a:8) describes choppers recovered from sites in Anza Borrego, and it is possible that some of these specimens are from the later cultural contexts. Chopper-like tools are described from the Paiute-Pueblo levels in the Stuart Rockshelter (Schutler, 1960:9), and several specimens were recovered from the Willow Beach site (Schroeder, 1961:27-30). Similar artifacts have been recovered from sites in the Kingman, Arizona, area by the writer, although the temporal placement of these latter sites has yet to be determined (True, n.d.: ms. in preparation).

### Hammerstones

Pounding tools have been separated into four generalized typological categories on the basis of formal characteristics.

Type 1.--Core hammers with battering over most of the surface. This batter tends to obliterate the flake scars

on the original core, producing, in time, a globular form (figure 12, C).

Type 2.--Cobble hammers. Three subtypes are suggested:

Type 2A. A cortex based discoidal form made on a split cobble with batter confined to the edges. Portions of the cortex are left intact and only a portion of the edge shows batter marks (figure 12, D).

Type 2B. Similar to type 2A but wherein the entire periphery has been battered (figure 12, E).

Type 2C. Water-worn cobbles with batter on one or more surface, but with no other modification (figure 12, F).

Type 3.--A generally discoidal shaped core type hammer with the pounding confined to the edges of the artifact. No batter marks are present on any other surface (figure 12, G).

Type 6.--Irregular and unshaped cores and flakes used as pounding implements, but not conforming to any regular conventionalized form (figure 13, A).

In addition to the above described hammerstones, several artifacts probably represent intermediate forms or multi-purpose tools used for both pounding and scraping.



### Hammer-grinders

Irregular shaped cores and large flakes used for pounding, but differentiated from ordinary hammerstones by wear facets on one or more surfaces. Some kind of rubbing function has produced facets along the flake scars and edges of the tool. This wear is usually well developed along the heel of the implement (figure 13, B). Hammer-grinders are separated from scraper planes in that they lack an obvious planar surface.

### Hammer-scrapers

Tools representing either hammers modified by the creation of a planar surface, or a planing tool used also as a hammer. Their functional or classificational significance is unknown, and additional comment must await further study and an increased sample (figure 13, C).

The above mentioned categories of pounding tools are separated on the basis of morphological characteristics, and there is little reason to suggest functional differences for the variously described shapes. It is likely that more than one functional specialization is represented, but such a specialization cannot as yet be defined. The evidence for multi-purpose use has been mentioned, and there is some degree of overlap indicated across the entire scraper-plane-hammerstone complex.

The wide and generalized distribution of hammerstones

in nearly all sites in this area, plus a general lack of detailed typological description in most cases, precludes a distribution summary here. Most of the typological forms mentioned above are found in the majority of the described cultural contexts. It is unlikely that specific hammer types will prove to be diagnostic elements in this study. Hammer-grinders and hammer-scrapers have not been described from any late site in the area so far as is presently known and the only documented description of this tool type is from the La Jolla-Pauma components in the earlier horizons of the area.

### Ground Stone

Ground stone implements are represented by several kinds of implements, including mortars, pestles, milling stones, manos, arrowshaft straighteners and heating stones. Most elements here are related to food processing and subsistence, although some ritual items are included.

### Mortars

Detailed studies of the formal attributes of mortars within this area have not yet been made. Several typological categories are suggested, but the provisional nature of these groupings must be stressed.

Portable mortars--Type 1.--A deep basined form with a generally round concavity. These artifacts are used for pounding a variety of vegetable or animal products. The

term portable is misleading, however, and most specimens are not easily moved. Type 1 mortars are unshaped wide mouthed forms. In general, the depth of the concavity is  $1/2$  to  $3/4$  of the measured diameter of the mouth.

Type 2.--Similar to type 1, except that the exterior has been shaped and finished by pecking and polishing. In some instances this exterior may be embellished with inlay, incising or other decorative elements.

Type 3.--This type is a base element commonly used a basket hopper. The concavity is round and usually quite shallow. In some cases this may represent a stage in the manufacture of deeper mortars, in others it is a distinct and separable type.

Type 4.--These are usually small and well made, and sometimes decorated mortars. They are functionally suited for the grinding of small quantities of materials such as paint or medicinal elements. Locally such artifacts are most often associated with the Toloache ritual.

Type 5.--Mortars in this category are narrow mouthed with a nearly round opening and a deep pounding cavity. Here the depth of the cavity exceeds the diameter of the mouth opening. This form is not common in the San Diego area, but is typical of many areas in the Great Basin.

Mortars made of wood (usually mesquite stumps) were used in many of the desert regions. These types are not included here since they have not been recovered from local

archaeological sites.

At the present time distribution studies of the various forms described above are not feasible since adequate data are not available for most sites. The sample here is very small and it is unlikely that this artifact will contribute to the resolution of the problem at hand.

The general paucity of portable mortars on local sites can be attributed to several factors. For one, bedrock mortars were favored and most pounding was probably done on community bedrock mills. Secondly, many of the portable mortars used on the local village sites were collected in the early historical period by local ranchers and collectors. These have been transplanted to the gardens and patios of the area. Thus sites presently lacking such implements probably had several of them at the time the village was abandoned.

Failure to recover significant numbers of portable mortars from excavated sites is another problem. A possible explanation is advanced as a hypothesis consistent with what is known of the customs of the ethnographically described inhabitants of the area. In this regard it is suggested that mortars were passed from generation to generation, as was the use of bedrock milling stones. Portable mortars were probably not included in the mortuary offerings to the deceased. A limited number of such tools would be in existence at any one time and these implements would in

effect move upward as the deposit accumulated and as they passed from generation to generation. In this way most of the unbroken and not worn out mortars ended up in the hands of the most recent occupants of the village, and were left on the surface at the time the aboriginal subsistence pattern was abandoned.

Bedrock mortars.--Bedrock pounding features duplicate the same forms described for portable mortars, except that there are no shaped forms and no decoration. Two basic types are suggested:

Type 1.--A wide mouthed form with a depth roughly  $1/2$  to  $3/4$  the diameter of the opening.

Type 2.--Deep conical forms where the depth of the cavity exceeds the diameter of the opening.

A third bedrock feature, probably corresponding to the small "paint" mortars described above, is found on many sites. This is a small mortar-like depression with a diameter of some two to three inches and a depth of approximately one-half inch. These "mortars" are sometimes, but not always, associated with pictograph locations.

A similar feature many times associated with bedrock milling stones is probably not related to the aforementioned "pigment" mortars. Here a number of small cup-like depressions ranging in size from one to two inches in diameter are found grouped in the vicinity of community milling stones. Their function is not known, but they may represent acorn

cracking anvils.

A distribution resumé for bedrock mortars will not be attempted, both because of a lack of detailed studies for adjacent areas and because it is likely that similar complexes of features are probably associated in nearly all of the acorn gathering provinces of California and adjacent regions. Further, it is considered likely that many differences in mortars, as described above, are ecologically rather than culturally oriented.

### Pestles

The pounding implements used in the above described mortars can be separated into four categories.

Type 1.--A crude, heavy, unshaped implement with a generally triangular outline. Modification is only on the pounding tip, although some specimens have unshaped wear surfaces on one side. This form is associated with type 1 bedrock mortars and can be found in situ on the more isolated sites (figure 13, D).

Type 2.--Type 2 pestles are long, slender, and partially shaped with a generally round cross section (figure 13, E). This type probably belongs with the type 2 bedrock and the type 5 portable mortars, although the associations have not been established archaeologically within the core area sites.

Type 3.--Specimens here are usually small, light, and well shaped. All surfaces are finished. The form may be round and cylindrical or squared and subrectangular (figure 13, G-H). Items in this category are probably associated with ceremonial functions.

Type 4.--Heavy pestles of considerable dimension but with more finish and shape than type 1 (figure 13, F).

### Milling Stones

Artifacts and features used for the processing of small seeds, fiber and various animal products are common within the area of concern. Several variant forms must be considered, albeit the degree to which these forms may be related to specific cultural patterns tends to be limited. As with the mortars, two basic categories must be considered: bedrock and portable.

Bedrock milling stones.--Several distinct forms of bedrock milling stones are known and are probably the result of some as yet undefined cultural or functional differences.

Type 1.--Bedrock slicks. Polished surfaces on bedrock exposures where no cavity or depression is apparent. These slicks are typically about 6" x 9" in size, but areas up to 30" x 36" are known.

Type 2.--Basin-like depressions ranging in size from 5" x 6" to 8" x 12" and from 3/4" to over 1" in depth.

The shape tends to be ovoid, but varies from large shallow ovals to nearly round forms. The round forms may be bases for basket hoppers, although this suggestion is speculative. Likewise, the possibility that the round and oval forms may have some functional or cultural difference must be considered, but this too has yet to be demonstrated.

Type 3.--A narrow and sharply defined oval form. The depth many times exceeds 1-1/2 inches in contrast to the type 2 forms, where the depth rarely exceeds 3/4 of an inch.

A general lack of detailed quantitative information for bedrock milling stones limits the usefulness of a distribution resumé. No attempt will be made to describe the spatial distribution of these forms at this time.

Portable milling stones.--Several variant forms of portable milling stones are known. The more obvious of these formal differences have been given provisional typological status here, recognizing that such a typology may be subject to considerable revision. In general, portable milling stones follow the same formal patterns as do the bedrock types.

- Type 1. Unshaped slick (no obvious depression).
- Type 2. Unshaped shallow basin (2-20 mm. deep).
- Type 3. Unshaped medium basin (21-45 mm. deep).
- Type 4. Unshaped deep basin (over 45 mm. deep).
- Type 5. Shaped slick type.



- Type 6. Shaped shallow basin.
- Type 7. Shaped medium basin.
- Type 8. Shaped deep basin.
- Type 9. Double grinding area on same side.
- Type 10. Grinding surface on both sides of rock.

Several of the above divisions may represent stages in the natural development of a single type. However, this is not always the case, and it is unlikely, for example, that slicks as such are the initial stages of deeper types. Likewise, deep basin forms are not the necessary end result of long usage.

### Manos

The hand stones used with the above described milling stones are found in a number of variant forms. Although it is unlikely that they will be diagnostic in the present analysis, several simple typological categories are suggested:

- Type 1. Unshaped uniface.
- Type 2. Unshaped biface.
- Type 3. Biface or triface wedge section.
- Type 4. Pestle-mano combination.
- Type 5. Biconical (football shaped).
- Type 6. Shaped biface.
- Type 7. Shaped uniface.

Manos are present on nearly every site but are not considered potentially useful for diagnostic purposes at the

present time. These forms are not illustrated.

### Arrow Shaft Straighteners

For this artifact, two basic forms are noted, but the cultural or functional significance of these differences is unknown.

Type 1.--A generally elongated ovoid or rectangular form with a flat bottom and a convex top. The cross section is generally heavy. Several variations in detail are considered possible and more than one subtype probably exists. Such forms, however, are not present in the sample. The basic form here is characterized by a single working groove, longitudinal incisions on the top and usually some criss-cross or zig-zag incising between the longitudinal grooves (figure 14, A).

Type 2.--An elongated oval or rectangular form in which both the lower and upper surfaces are flat and essentially parallel. Within this grouping, two variant forms are recognized: (a) single grooved with incised design elements (figure 14, B); and (b) double or multiple grooves with or without design elements (figure 14, C).

Although arrow shaft straighteners are commonly known in Southern California, a cursory examination of the literature suggests that they may be relatively rare on at least some Great Basin sites. No attempt will be made to discuss

the distribution of this artifact.

### Stone Pipes

Stone pipes or "sucking tubes" are not common in the area, but several specimens are known. The size of the sample tends to reduce the value these artifacts might have for comparative purposes. Three variant forms are known and may prove to be diagnostic in future studies.

Type 1.--A conical form made in steatite. The surface is well finished, but is not decorated. The tube is conically drilled. Some specimens have asphaltum remains on the mouthpiece end (figure 14, D).

Type 2.--A smaller biconically drilled tube made of a soft micaceous material. There is no decoration and no attempt to polish or finish the exterior surface (figure 14, E).

Type 3.--A tubular form made in fine grained steatite with a provision for shell inlay around the bowl end and along the side (figure 14, F).

### Heating Stones

Included in this category are all heavy, relatively flat fragments of steatite which could have served as heating stones or as comals. Some specimens are biconically drilled on one end. No whole specimens are in the present sample, although they are known for the area.

Some specimens are assumed to have had a utilitarian function. Others may represent ceremonial stone crescents used in the Diegueño girls' puberty rites. These stones are described by Rust (1906:28-32). This crescent stone ritual described for the Diegueño had its counterpart among the Luiseno, where flat heated stones were used in the puberty ceremonies (Kroeber, 1906:32, in Rust).

The distribution of this ritual artifact has not been documented to any significant degree. Comals or similar artifacts have been reported from scattered localities in inland Southern California (Meighan, 1954:219; McCown, 1955:21), but a hurried examination of reports on several key sites in the western Great Basin failed to find mention of their existence there. They are relatively common for much of the Southern California coast and the off-shore islands, however, and have been reported from several sites in that area (D. B. Rogers, 1929; Rootenberg, 1961:28; Walker, 1951:60; and Meighan and Rootenberg, 1957:183).

### Bone Tools

Bone tools are important elements in many areas, but are of little significance in the present context. Those artifacts recovered, with few exceptions, consist of tiny fragmented pieces and seldom provide useful diagnostic information. The sample recovered here has been categorized only in general terms and no formal typology is proposed for this class of artifact.

### Decorative Elements and Ornamentation

Decorative elements are found on ceramics as incised and painted designs; as incised designs on arrowshaft straighteners and as designs on steatite and slate tablets. Fired clay pipe forms are decorated with both incised linear elements and puntate patterns.

The amount and quality of this decoration is limited, however, and the usefulness of this aspect of the culture as diagnostic elements is questionable. Most of this ornamentation and decoration consists of crudely executed zig-zag or hatched line elements.

Ornamentation, as it is represented in durable artifact forms, is confined to several kinds of beads and to a few simple pendants. Some pendant-like forms may have had a ritual function, and may actually be effigies of some sort.

### Beads

Beads are quite common throughout the area, although the present sample does not contain a large number of specimens. They are most often recovered in association with cremations. Because the patterns of the Diegueño cremations include the gathering of the remains and their subsequent placement into a localized disposal area or into a durable container, beads are much more common on Diegueño than on the Luiseno sites. No involved typology will be attempted since the sample actually examined was relatively small. In addition to their use as decorative elements

those beads categorized as spire-lopped Olivella (type 4) were used as teeth in the images burned as part of the mortuary practices in both areas (DuBois, 1905:625; Davis, 1919:18 and figure 4).

Beads--shell. Type 1.--Small round disc forms with a curved section (figure 14, G).

Type 3.--Medium sized semi-disc beads made from curved side sections of Olivella (figure 14, H).

Type 4.--Spire-lopped Olivella (figure 14, I).

Type 5.--Olivella center sections. Whole shells with both ends removed (figure 14, J).

Beads--bone. Type 7.--Small disc forms (figure 14, K).

Type 8.--Tubular forms made of bird bone (figure 14, L).

Beads--stone. Type 9.--Small disc forms (figure 14, M).

Beads--glass. Type 10.--Small round, generally spherical or slightly oblong forms--blue (figure 14, N).

Beads--fired clay. Type 12.--Tubular forms made of the stem fragments of broken fired clay pipes (figure 14, O).

Figure 14, P illustrates a drilled Domax shell.

### Pendants

A number of pendants have been recovered from both areas although they are most common in the Diegueño sites. Most specimens are simple oval or crude rectangular forms made in steatite or schist, with a single hole drilled in one end. Decoration is limited to a few simple scratched linear elements and no clear-cut stylistic differences are noted for the two areas (figure 14, Q-U). Drilled shell fragments probably representing pendant forms are occasionally found (figure 15, A). It is assumed that many more shell pendants were destroyed in the cremations.

In addition to the pendant forms described above, several small carved steatite elements have been recovered. These may be decorative pendants, or they may represent stylized effigy forms and may have some special ritual or religious functions (figure 15, B-D). The effigy specimens in this category are not unlike Canalino specimens illustrated by D. B. Rogers (1929: plate 74). The "Type 1 charmstones" recovered by Meighan from Little Harbor (Meighan, 1959: figure 10), have a similar configuration. The specimen illustrated by Wedel from the site at Buena Vista likewise appears to be similar (Wedel, 1941: plate 33, p).

A related category of artifacts is suggested in fired clay effigy forms (figure 15, E-G). Two specimens of this type were recovered here. One is modeled in clay and appears to be a bird or some fish-like form. The other, much

more stylized, follows the same configuration, but is fashioned out of a potsherd fragment. Both are perforated. This form of effigy (?) has so far been recovered only from the Diegueño territory. Other than the specimens described above only one similar artifact is known. Heye (1919: figure 23) illustrated a bird-like form made of a potsherd fragment and also a nearly identical steatite form (Heye, 1919: figure 23 and plate XII). Both of these items were found within cremation urns taken from Diegueño cemetery sites.

#### Ceramic Artifacts

Both the Diegueño and the Luiseno were using pottery at the time of historic contact and all ethnographically known villages have produced artifacts made of fired clay. Potsherds representing fragments of cooking and storage vessels were made in several forms and are the most common ceramic elements.

Such pottery vessels were constructed with a paddle and anvil technique and were fired in an uncontrolled atmosphere. Most pottery here was plainware, although incised rim decoration, some body incising, and painted elements are not actually rare. To date, no attempt has been made to analyze the range of potential variation within the area at large. Basically, most of this pottery falls into the Palomar Brown subtype of the Tizon Brownware tradition (Meighan, 1959:36-39; Euler, 1959:41-42).



Unfortunately, the sample consists almost entirely of unreconstructable sherds which normally are difficult to use to determine vessel forms. Ethnographically defined vessels from the two areas are illustrated in figures 5, H-T; 16, A-E.

Fired clay pipes.--Two basic types are known for the area, although there are several variations in terms of size, decoration and special features. A suggested typology includes:

Type 1. A "bow" pipe with a curved body characterized by a flange shaped handle (figure 16, G-I).

Type 2. A straight tubular form with no handle (figure 16, L).

Type 3. A tubular form and a flared bell (figure 16, H).

Fired clay figurines.--Anthropomorphic and zoomorphic representations of various kinds are known from the area and the present sample includes several specimens which are of some interest. Unfortunately, the sample is small and the provenience for some specimens poor. Because of this the significance of figurines in this study is limited and a typology based upon the available sample is, at best, weak.

Type 1.--Conventionalized anthropomorphic specimens with round cross sections and bulbous terminations. Most specimens are lacking heads and little is known of their

facial characteristics. It is likely that most specimens in this group have punctate eyes and incised features. Fragments of basal terminations sometimes contain impressions of acorns or similar seeds (figure 17, A).

Type 2.--Stylized anthropomorphic specimens with a round cross section and an apron termination (figure 17, B).

Type 3.--Stylized anthropomorphic forms with a flat cross section and an apron termination. Eyes and features here may be punctate and incised or may be applique "coffee bean"-like forms (figure 17, C).

Type 4.--Stylized anthropomorphic forms with a flat cross section and a tapered, but plain termination. The eyes here may be punctate or applique (figure 17, D-E).

Type 5.--Naturalistic anthropomorphic forms with well defined limbs and moulded torso features. Details of the head and eyes are not known for this type but it is suggested that the eye form would be punctate and the features incised (figure 17, F).

Miniature vessels.--A number of small ceramic vessels are present in the sample which are replicas of the larger functional forms found in the area. Most appear to be made of Tizon Brownware, although a few specimens are made of Desert Ware. All specimens are of molded construction. Some are finely made and finished, while others are little more than cup-like blobs into which a finger has been

pressed to form the cavity. The sizes of these vessels range from tiny "pots" some 12 mm. in diameter to bowls as much as 30 mm. in diameter. Most are undecorated, but some incised specimens are known (figure 17, G-L).

Functionally it is not known for sure whether these specimens were toys or represented specially made mortuary offerings. The existing evidence tends to support the latter, although the sample probably includes both. Ethnographically few data are available relating to these artifacts, but some references can be documented. Rogers (1936:19) indicates that small "cup-like" forms were made by the Diegueño, but he does not indicate their actual size, and no mention is made of their function. Waterman (1908: 307) describes a clothes burning ceremony where "small jars, baskets and other little things" are given to certain of the participants by the family of the deceased. It is unlikely, however, that this refers to the miniatures described above. DuBois (1905:625-28), however, describes the use of "tiny decorated ollas" which were placed in a small carrying net and put around the neck of the images used in the image burning ceremony. It is considered likely that at least some of the present sample represents this kind of artifact.

In addition to those specimens recovered from the core area sites in this survey, miniature vessels are reported from several other locations in San Diego County and the

western Great Basin.

Heye (1919:37) describes several specimens found in cremation urns in various locations within the Diegueño territory (see his map-plate 1). Although the specific provenience for these specimens is not given, it is probable that most of them were recovered in the excavation of a cemetery site near Vallecitos. Wallace (1962D:4) reports a miniature jar from Indian Hill in the Anza-Borrogo area. Campbell (1931:21) mentions the recovery of "several tiny broken bowls" and illustrates what appears to be a tiny olla (plate 34). The provenience for this find is not specific, but is said to have been within a radius of twenty-five miles from Twenty-nine Palms. The Hohokam made miniatures and Haury (1937: plate CLIV, in Gladwin et al.) illustrates fifteen miniatures from the Santa Cruz phase at Snaketown. He suggests that they were made especially to accompany cremations. During the Colonial period in the Hohokam sequence, cremations often contained a large number of sherds and a "single small vessel" (Sayles, 1937:96, in Gladwin et al.). Wasley (1960:258) describes a single specimen, and Johnson (1964:154) illustrates three vessels from the site U:13:9 located near Gila Bend, Arizona. Miniature vessels are likewise reported from Point of Pines in southeastern Arizona (Robinson and Sprague, 1965:448).

Similar artifacts have been reported from Death Valley, and Hunt (1960:224-230) describes a number of unfired clay

vessels representing both pots and baskets. Wallace (1965: 434-441) describes a cache of similar artifacts from the same general region.

Miniatures not unlike those described above have been recovered from several locations within the Southwestern Cultural province, including the site at Paragonah in southern Utah (Meighan, 1956:84).

While the purpose of these artifacts must remain uncertain, and the possibility exists that more than one function is involved, there is considerable evidence to suggest that these were in some way related to mortuary practices. The fact that nearly every known specimen was in some way associated with burials or cremations suggests some relationship, but does not of course prove that they were not playthings included or mixed with the funeral offerings. For the unfired specimens and particularly the artifacts recovered by Wallace in Death Valley, however, it would appear that their fragile nature eliminates the probability that they were playthings.

Fired clay rattles.--Parts of fired clay rattles have been recovered from several sites. The identification of these elements is supported by the ethnographic data for this area (Rogers, 1936:51) (see figure 16, F). In addition to the specimens recovered in the course of this study, several others are known from sites in the same general area. The San Diego Museum of Man has several such

fragments in storage. One specimen was recovered from Snaketown in southwestern Arizona (Haury, 1937:210, in Gladwin et al.).

Modified potsherds.--A number of modified sherds was recovered from several sites. These have been shaped and smoothed on their edges to form some tool or ornament (figure 16, J-K, M-N). Included are specimens believed to have been gaming pieces, vessel lids, vessel patches or unfinished ornaments. Similar biconically drilled forms are found. These appear to be like spindle whorls, and may represent a survivor from influences emanating from the Southwest. Rectangular forms are also common, as are more irregular shapes for which no function can be suggested. Sherds such as these are commonly used as pot scrapers in regions where scraping is part of the ceramic technology. In this region, however, there was little justification for such implements and their function is problematical.

In addition to the above described fired clay objects, several miscellaneous specimens were recovered. Included here are irregular lumps of fired clay, fired clay coils, lumps with impressions of vegetation on one side, and a number of basket impressed sherds.

## Figure 7

## Type 1--drills

- A. Basalt, actual size; 23 mm. x 19 mm. x 5 mm.--  
SD1 682
- B. Quartz, actual size; 21 mm. x 18 mm. x 6 mm.--  
SD1 682

## Type 2--drills

- C. Chert, actual size; 39 mm.\* x 21 mm. x 9 mm.--  
SD1 682
- D. Basalt, actual size; 25 mm.\* x 16 mm. x 6 mm.--  
SD1 682

## Type 3--drills

- E. Quartz, actual size; 30 mm. x 14 mm. x 9 mm.--  
SD1 682
- F. Quartzite, actual size; 32 mm. x 20 mm. x 5 mm.--  
SD1 860
- G. Basalt, actual size; 38 mm. x 16 mm. x 11 mm.--  
SD1 682

## Type 4--drills

- H. Rhyolite, actual size; 27 mm.\* x 19 mm. x 6 mm.--  
SD1 860

## Type 5--drills

- I. Obsidian, actual size; 16 mm. x 18 mm. x 4 mm.--  
SD1 903

## Type 6--drills

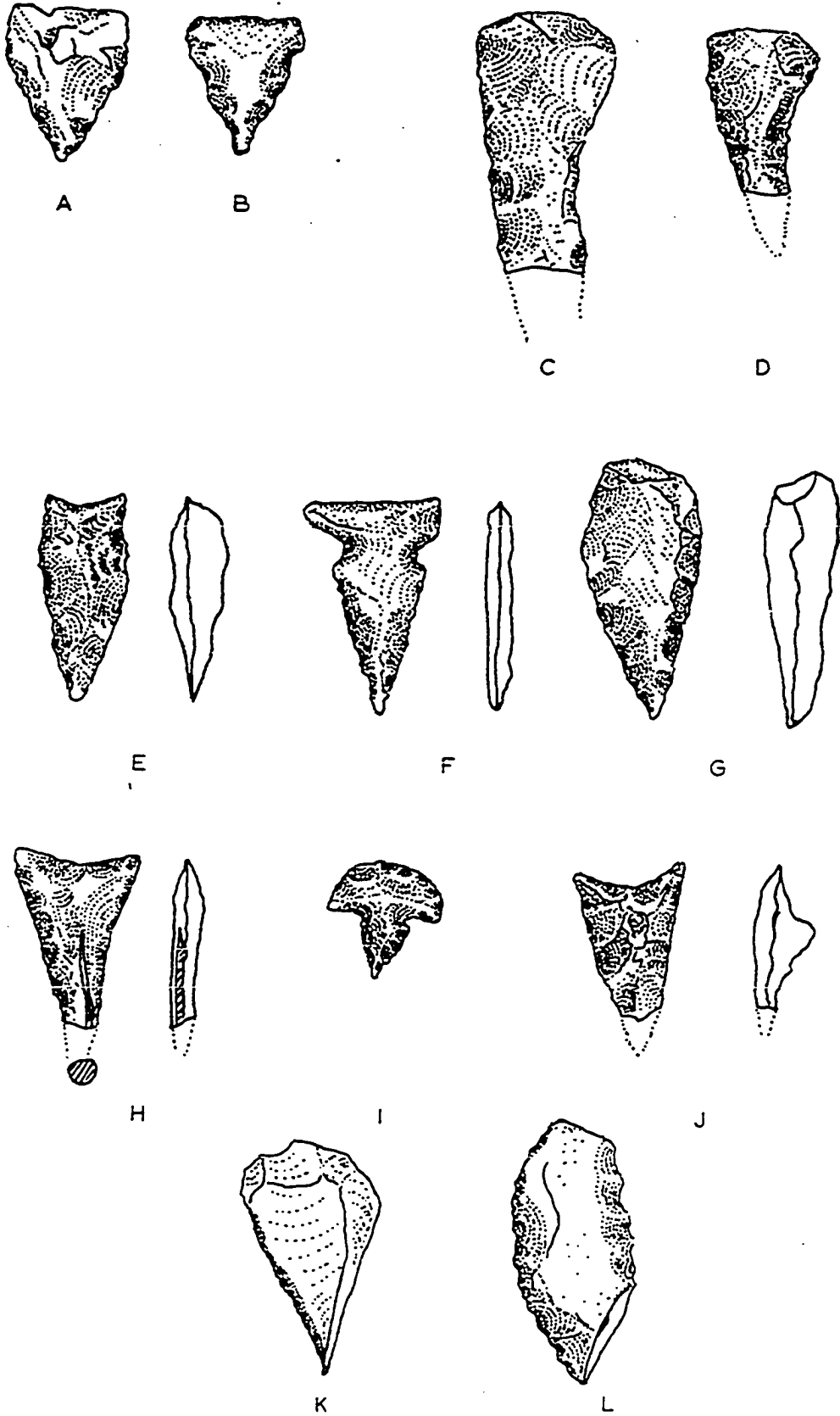
- J. Silicified Tuff, actual size; 21 mm.\* x 17 mm.  
x 10 mm.--SD1 860

## Gravers

- K. Basalt, actual size; 35 mm. x 20 mm. x 6 mm.--  
SD1
- L. Basalt, actual size; 39 mm. x 18 mm. x 4 mm.--  
SD1 682

\* Incomplete specimen.

FIGURE 7





## Figure 8

## Domed scrapers--Type 1

- A. Basalt, actual size; 61 mm. x 52 mm. x 28 mm.--  
SD1 860
- B. Felsite, actual size; 43 mm. x 32 mm. x 22 mm.--  
SD1

## Domed scrapers--Type 1A

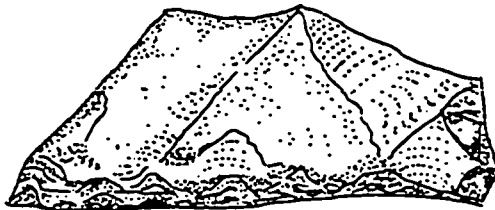
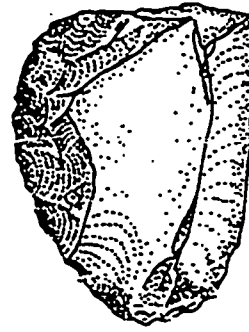
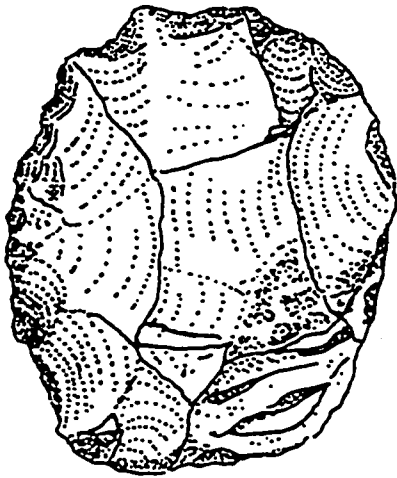
- C. Material unknown, actual size; 54 mm. x 41 mm.  
x 32 mm.-- SD1 308

## Domed scrapers--Type 2

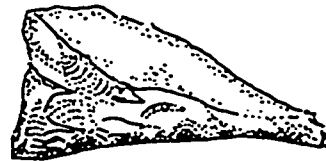
- D. Felsite, actual size; 49 mm. x 28 mm. x 16 mm.\*--  
SD1 860

\*Incomplete specimen.

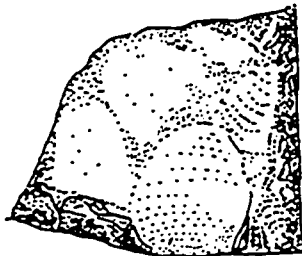
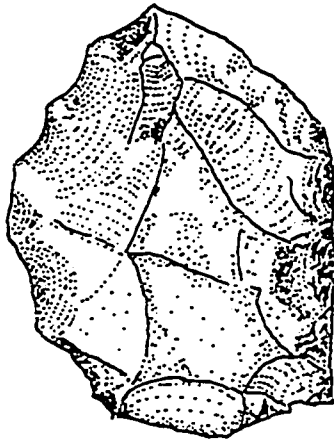
FIGURE 8



A



B



C



D

## Figure 9

## Domed scraper--Type 3

- D. Felsite, actual size; 43 mm. x 38 mm. x 17 mm.--  
SD1 789

## Keeled scrapers

- A. Basalt, actual size; 48 mm. x 32 mm. x 47 mm.--  
SD1 308

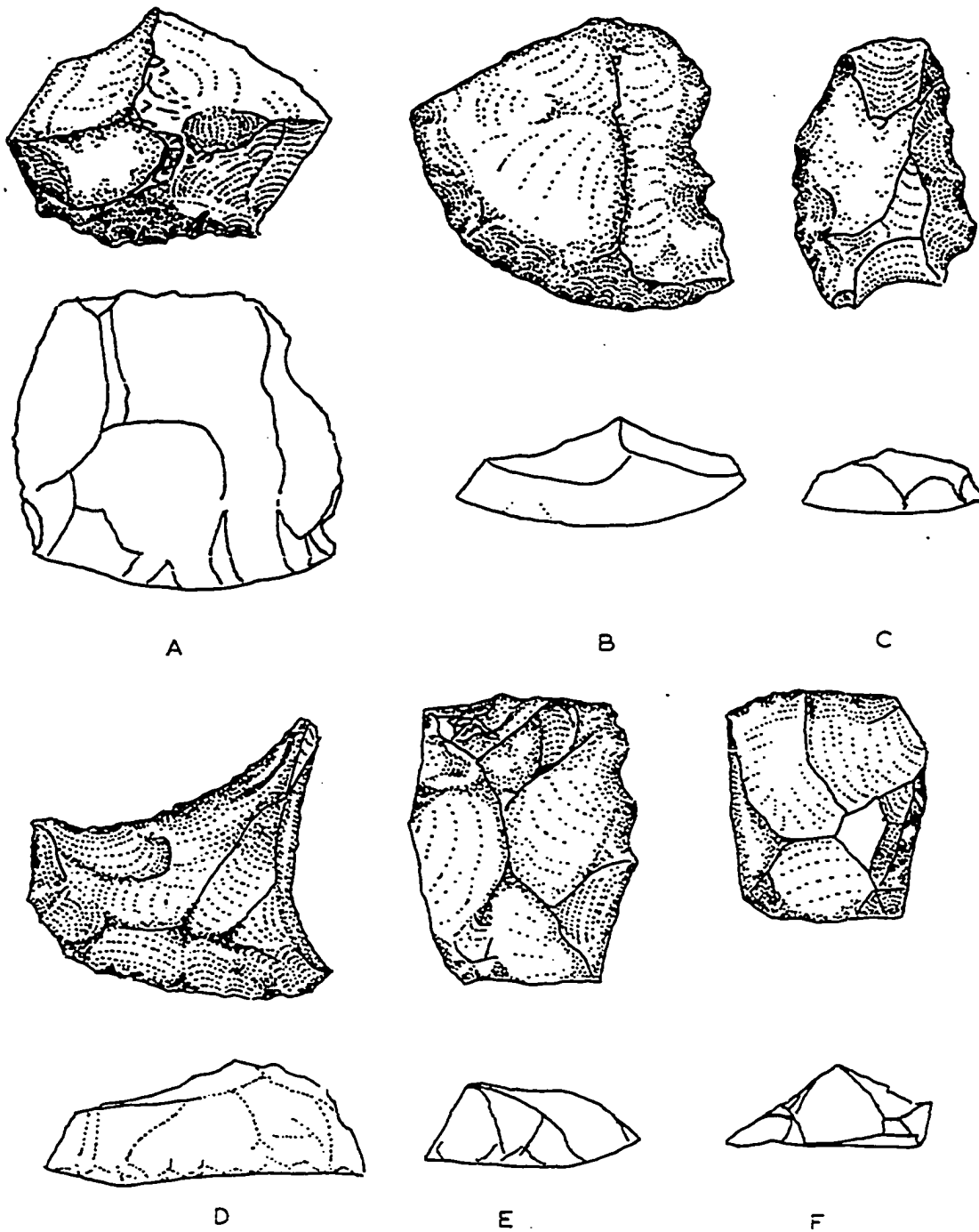
## Flake scrapers--Type 1

- B. Basalt, actual size; 45 mm. x 42 mm. x 16 mm.--  
SD1 860
- C. Basalt, actual size; 39 mm. x 26 mm. x 9 mm.--  
SD1 860

## Flake scrapers--Type 2

- E. Felsite, actual size; 42 mm. x 33 mm. x 15 mm.--  
SD1 860
- F. Felsitic, actual size; 34 mm. x 29 mm. x 13 mm.--  
SD1 853

FIGURE 9



## Figure 10

## Flake scrapers--Type 3

- A. Basalt, actual size; 60 mm. x 25 mm. x 12 mm.--  
SD1 860
- B. Basalt, actual size; 38 mm. x 28 mm. x 9 mm.--  
SD1 860

## Flake scrapers--Type 4

- C. Chert, actual size; 23 mm. x 19 mm. x 4 mm.--  
SD1 682
- D. Basalt, actual size; 26 mm. x 20 mm. x 6 mm.--  
SD1 860

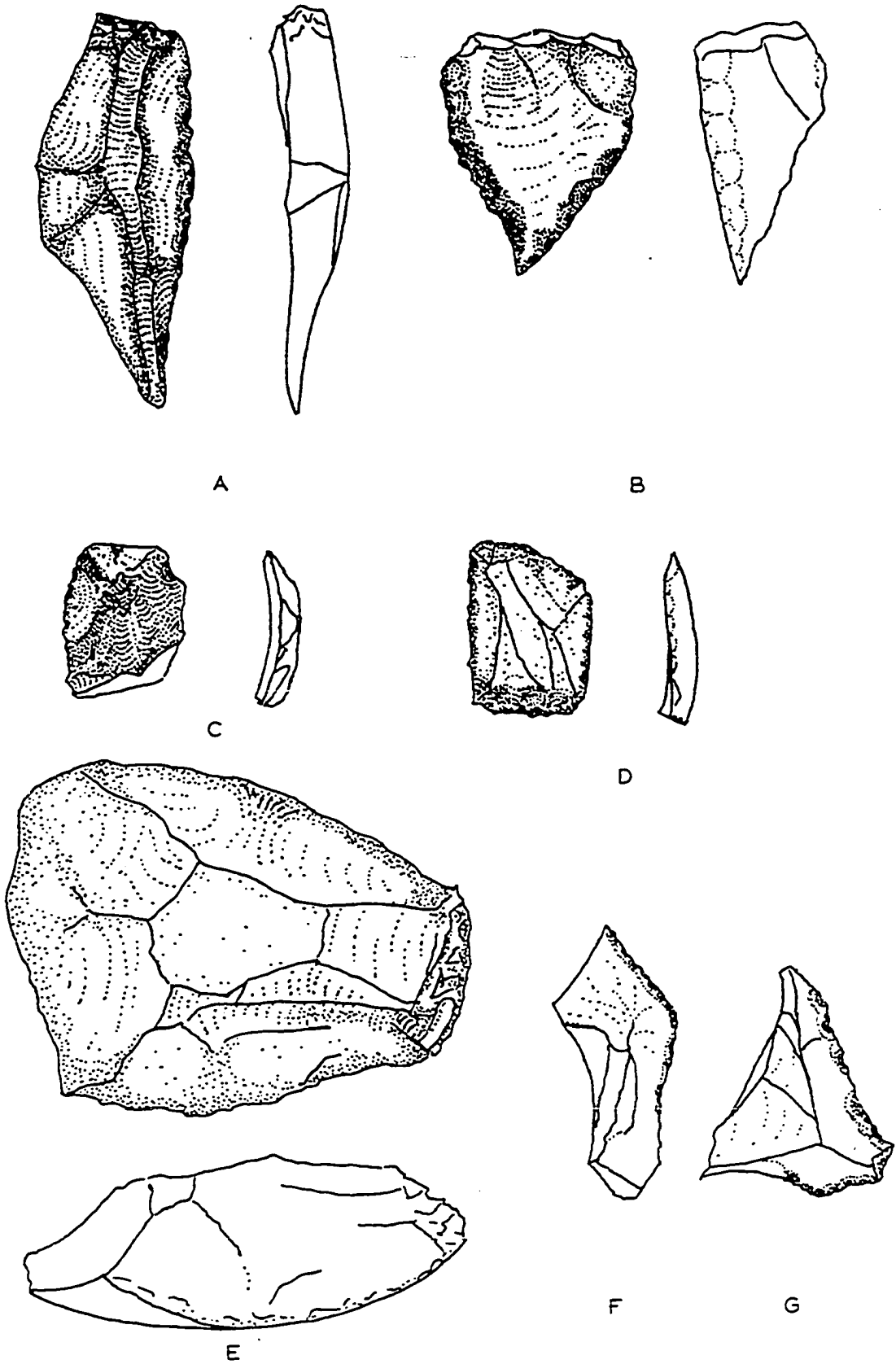
## Cortex based scrapers

- E. Basalt, actual size; 75 mm. x 53 mm. x 30 mm.--  
SD1 616

## Utilized flakes--Type 1

- F. Basaltic, actual size; 41 mm. x 19 mm. x 9 mm.
- G. Felsitic, actual size; 33 mm. x 31 mm. x 7 mm.

FIGURE 10



**Figure 11****Scraper plane--Type 1**

- A. Quartzite: illustration reduced in size; actual artifact measures 101 mm. x 76 mm. x 31 mm.
- B. Basalt: illustration reduced in size; actual artifact measures 75 mm. x 73 mm. x 50 mm.

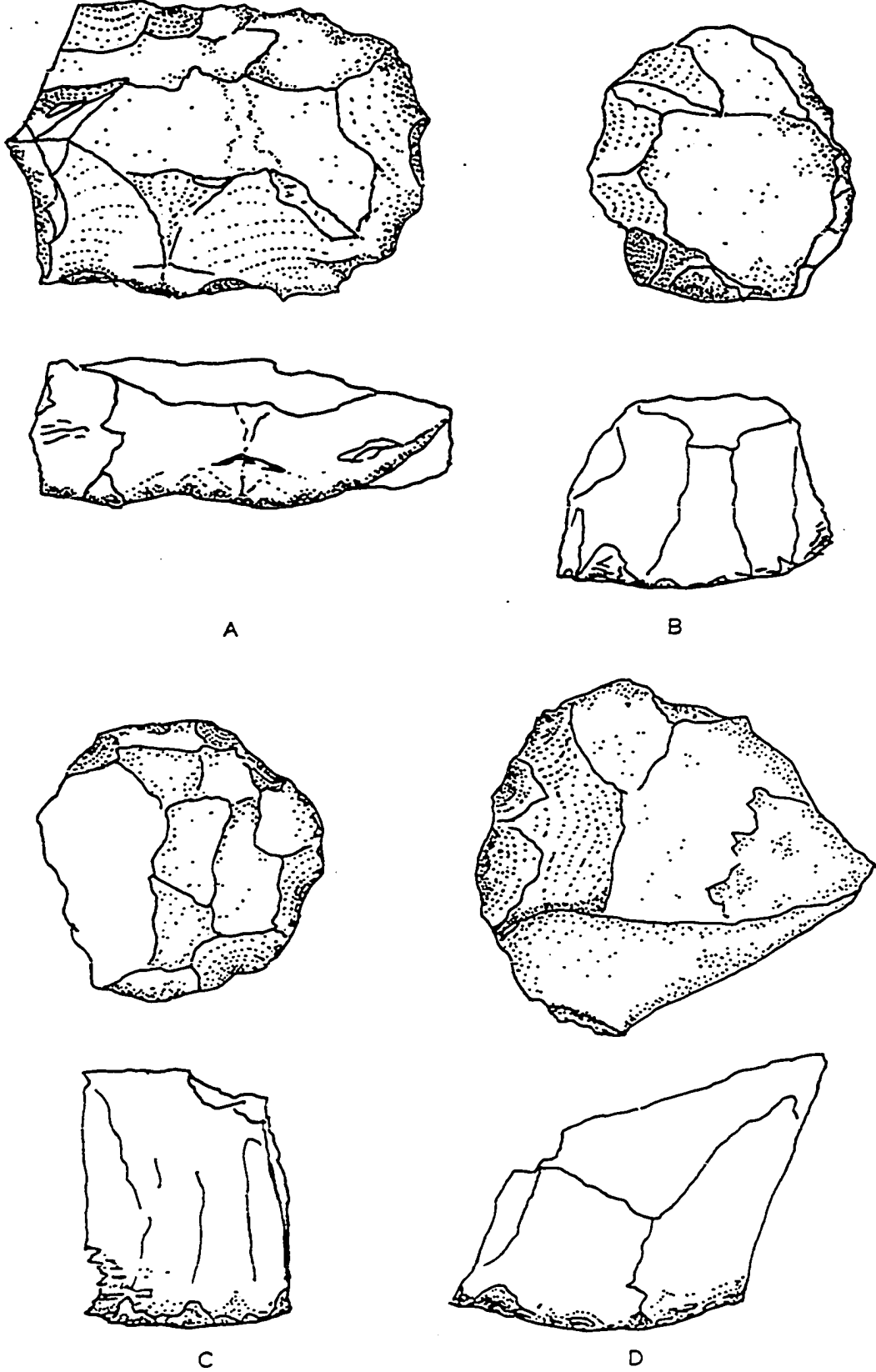
**Scraper plane--Type 5**

- C. Basalt: illustration reduced 50 percent

**Scraper plane--Type 7**

- D. Quartzite: illustration reduced in size; actual artifact measures 110 mm. x 87 mm. x 68 mm.

FIGURE 11





## Figure 12

## Choppers--Type 1

- A. Quartzite: illustration reduced in size;  
actual artifact measures 122 mm. x 125 mm. x 80 mm.  
Recovered from SD1 Rim 110

## Choppers--Type 3

- B. Quartzite: illustration reduced in size;  
actual artifact measures 111 mm. x 92 mm. x 54 mm.  
Recovered from SD1 682

## Hammerstones--Type 1

- C. Quartzite: illustration reduced in size;  
actual artifact measures 74 mm. x 69 mm. x 52 mm.  
Recovered from SD1 800

## Hammerstones--Type 2A

- D. Andesite (?): illustration reduced in size;  
actual artifact measures 68 mm. x 47 mm. x 39 mm.  
Recovered from SD1 860

## Hammerstone--Type 2B

- E. Basaltic: illustration reduced in size;  
actual artifact measures 62 mm. x 60 mm. x 34 mm.  
Recovered from SD1 Rim 42

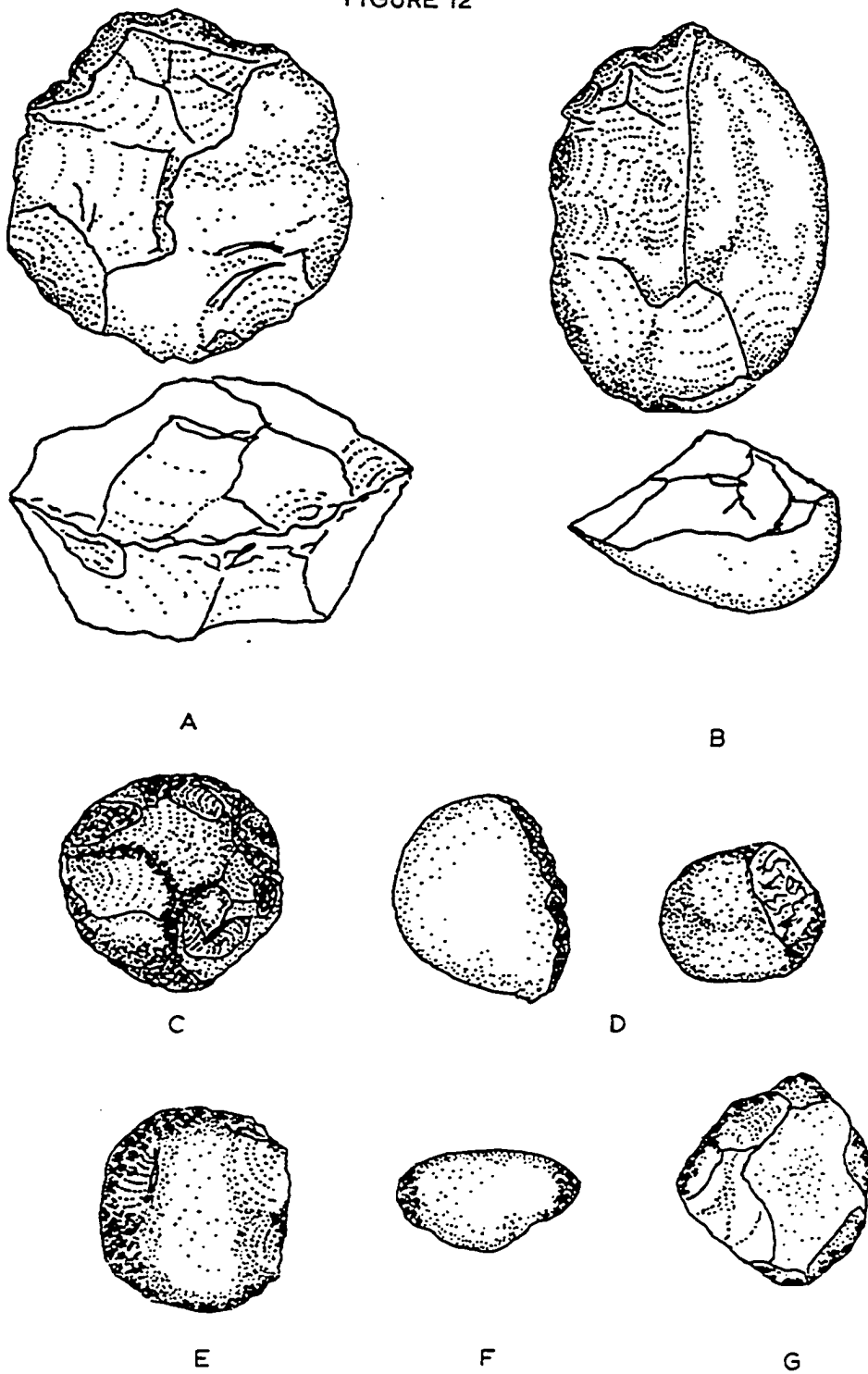
## Hammerstone--Type 2C

- F. Granitic: illustration reduced in size;  
actual artifact measures 59 mm. x 45 mm. x 38 mm.  
Recovered from SD1 Rim 128

## Hammerstone--Type 3

- G. Quartzite: illustration reduced in size;  
actual artifact measures 83 mm. x 73 mm. x 40 mm.  
Recovered from SD1 1081

FIGURE 12



## Figure 13

**Hammerstone--Type 6**

- A. Quartzite (sandstone?): illustration reduced in size; actual artifact measures 82 mm. x 50 mm. x 31 mm.

Recovered from SD1 800

**Hammer scrapers**

- B. Basaltic: illustration reduced in size; actual specimen measures 65 mm. x 48 mm. x 37 mm.

Recovered from SD1 682

**Hammer grinders**

- C. Quartzite: illustration reduced; actual size of artifact is 92 mm. x 57 mm. x 63 mm.

Recovered from SD1 1081

**Pestles--Type 1**

- D. Granitic. Specimen is illustrative of typical forms found in both areas. Illustration reduced. Actual artifact used measures 12 inches by 6 inches by 3 inches and weighs 15 pounds.

**Pestles--Type 2**

- E. Illustration indicates typical form. Not taken from an actual specimen. Such artifacts typically are from 12 to 22 inches in length and have a diameter of 2 to 3 inches.

**Pestles--Type 3**

- G. Granitic: illustration reduced; actual artifact 87 mm. long with a diameter of 55 mm.

Recovered from SD1 308

- H. Quartzite: illustration reduced; actual specimen 88 mm. x 70 mm. x 58 mm.

Recovered from SD1 308

**Pestles--Type 4**

- F. Illustration indicates typical form. Actual size of specimen used as example is 9 inches long with a diameter of about 3 inches. The weight varies but probably averages about 8 pounds.

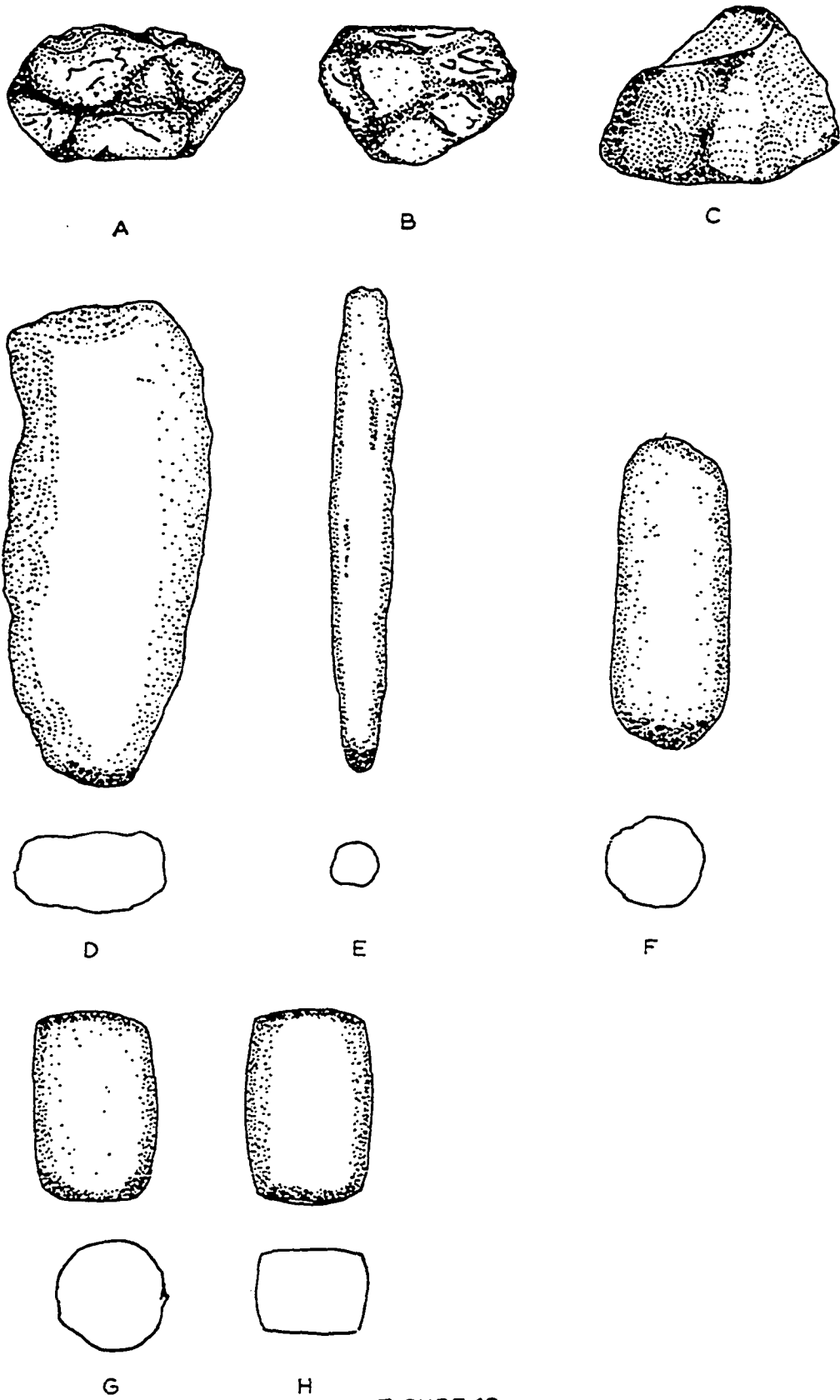


FIGURE 13

## Figure 14

## Arrowshaft straighteners--Type 1

- A. Steatite: illustration reduced; actual artifact  
is 93 mm. x 54 mm. x 44 mm. SD1 860

## Arrowshaft straighteners--Type 2A

- B. Steatite: illustration reduced; actual artifact  
is 81 mm. x 43 mm. x 22 mm. SD1 860

## Arrowshaft straighteners--Type 2B

- C. Steatite: illustration reduced; actual size is  
is 110 mm. x 72 mm. x 26 mm. SD1 245

## Stone pipes--Type 1

- D. Illustration reduced; actual artifact is 130 mm.  
x 55 mm. diameter. Steatite Poway 2

## Stone pipes--Type 2

- E. Illustration reduced; actual size is 70 mm. x 42 mm.  
in diameter. Material unknown (crude steatite?)  
SD1 799

## Stone pipes--Type 3

- F. Steatite: illustration reduced; actual size is  
115 mm. x 37 mm. in diameter. Recovered  
from Escondido Creek no. 133

Beads

## Shell--Type 1

- G. Actual size 6 mm. in diameter, 1 mm. thick

## Shell--Type 3

- H. Actual size 10 mm. in diameter, 2 mm. thick

## Shell--Type 4

- I. Actual size 14 mm. long, 8 mm. in diameter.

## Shell--Type 5

- J. Actual size 8 mm. long, 6 mm. in diameter.

## Bone--Type 7

- K. Actual size 6 mm. in diameter, 2 mm. thick.

## Bone--Type 8

- L. Actual size 9 mm. long, 4 mm. in diameter.

## Stone--Type 9

- M. Actual size 11 mm. diameter, 3 mm. thick.

## Glass--Type 10

- N. Actual size 3 mm. in diameter. Blue opaque glass.

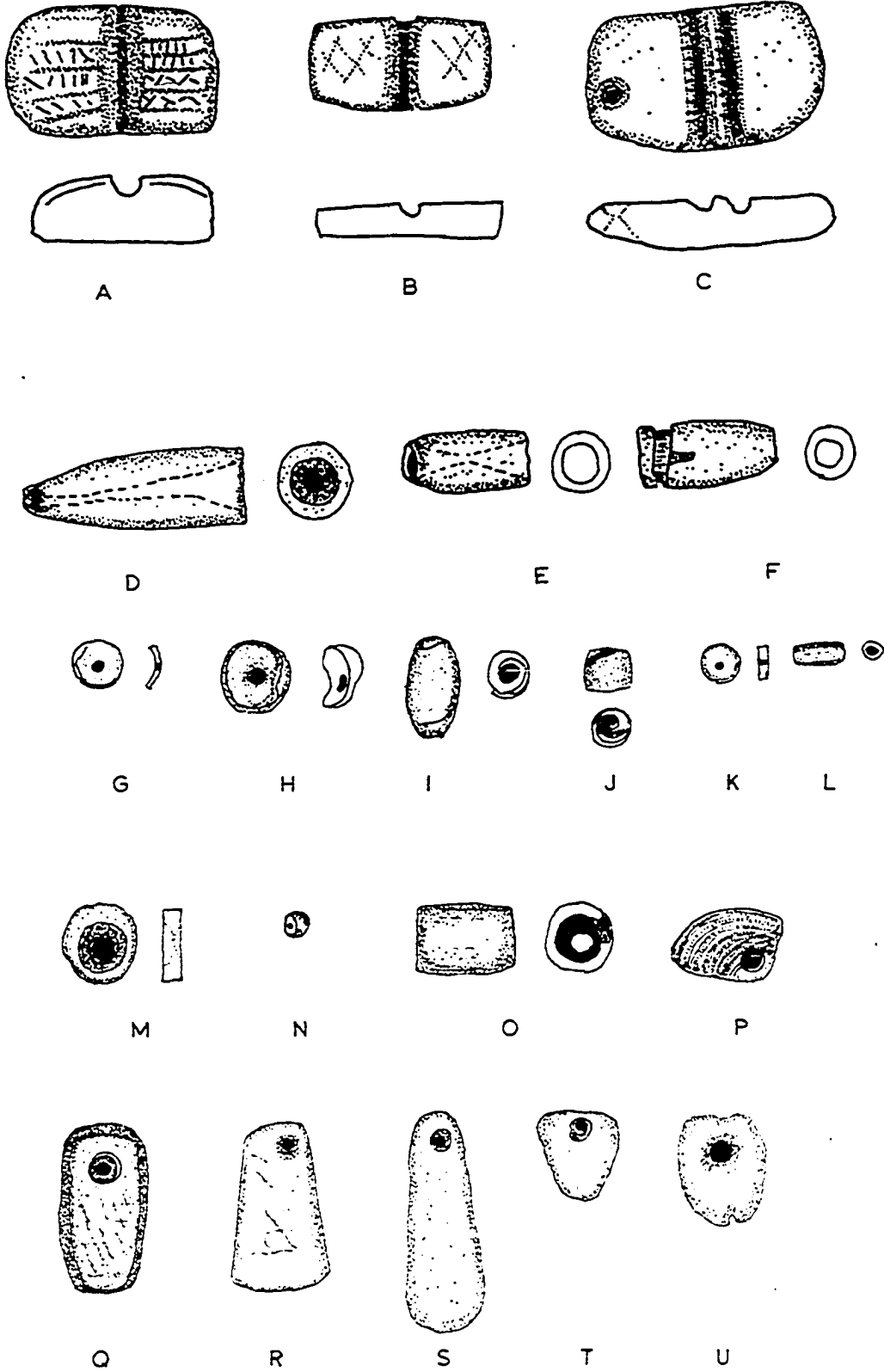
## Fired clay--Type 12

- O. Actual size, 15 mm. long, 11 mm. diameter.

## Pendants

- Q-U. Size range here is from 13 mm. x 15 mm. to 52 mm.  
x 20 mm. Illustration is approximately actual  
size.

FIGURE 14



## Figure 15

## Shell pendant

A. 16 mm. x 15 mm. Recovered from SD1 860

## Steatite effigies

B. 29 mm. long x 9 mm. diameter SD1 853

C. 25 mm. long x 7 mm. diameter SD1 913

D. 19 mm. long (incomplete) x 7 mm. x 5 mm. SD1 913

## Fired clay effigies

E. 17 mm. x 11 mm. (fragment) SD1 913

F. 36 mm. long x 11 mm. wide x 6 mm. thick SD1 913

G. 36 mm. long x 16 mm. wide x 7 mm. thick SD1 913

## Ceramic vessels

Luisiño

H-L. H. 66 cm. tall x 50 cm. diameter at widest point

J. 31 cm. diameter x 26 cm. tall

Diegueño

M-T. M. 53 cm. tall x 50 cm. diameter

S. 15 cm. diameter

All ceramic vessels here taken from Rogers, 1936, page 52.

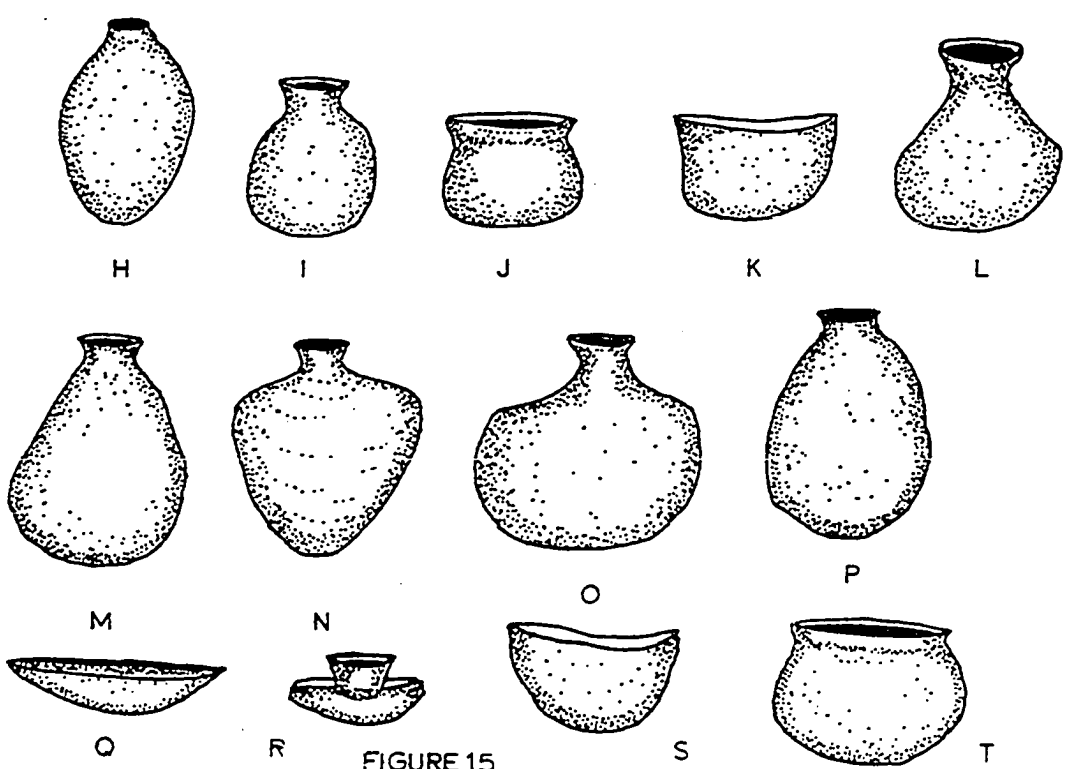
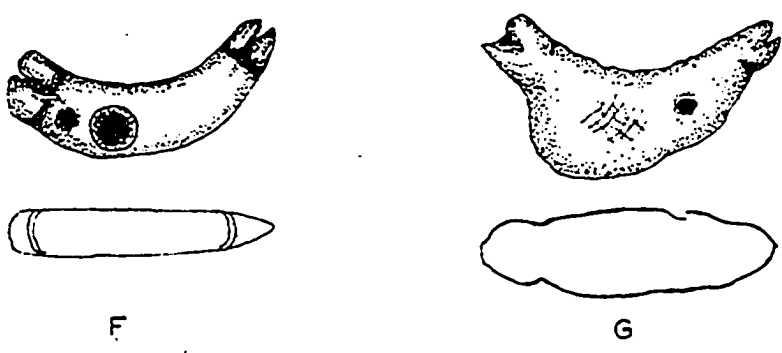
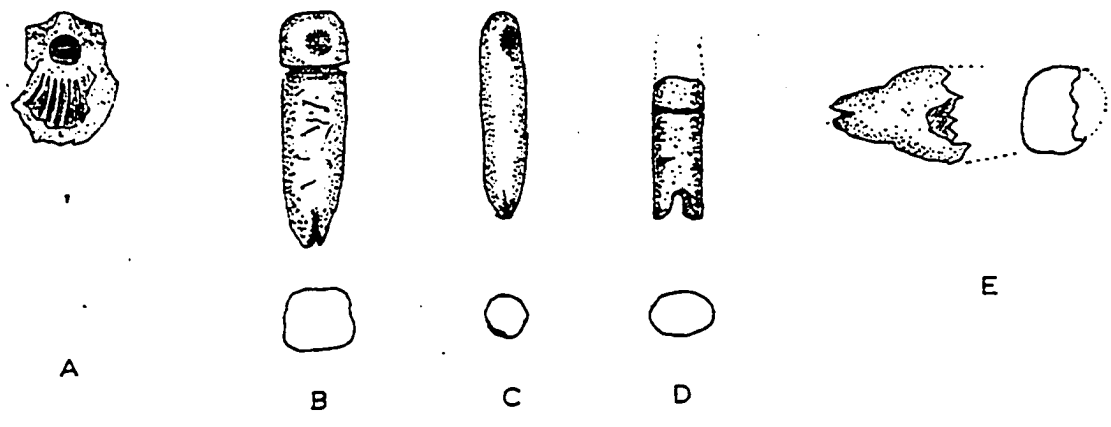


FIGURE 15



## Figure 16

## Ceramic vessels

A-E. Diegueño vessels after Rogers, 1936, page 52

## Fired clay pipes--Type 1

G. Reconstructed length is 95 mm.

## Fired clay pipes--Type 2

L. Reconstructed length is 100 mm.

## Fired clay pipes--Type 3

H. 63 mm. long; reconstructed bell diameter 44 mm.

## Modified potsherds

J-N. Diameter of J is 44 mm. x 6 mm. thick. Tizon  
Ware  
M is 21 mm. x 12 mm. x 4 mm. Desert Ware

## Fired clay rattles

F. Specimen from Rogers (1936:5); size is 3-1/2 inches high.

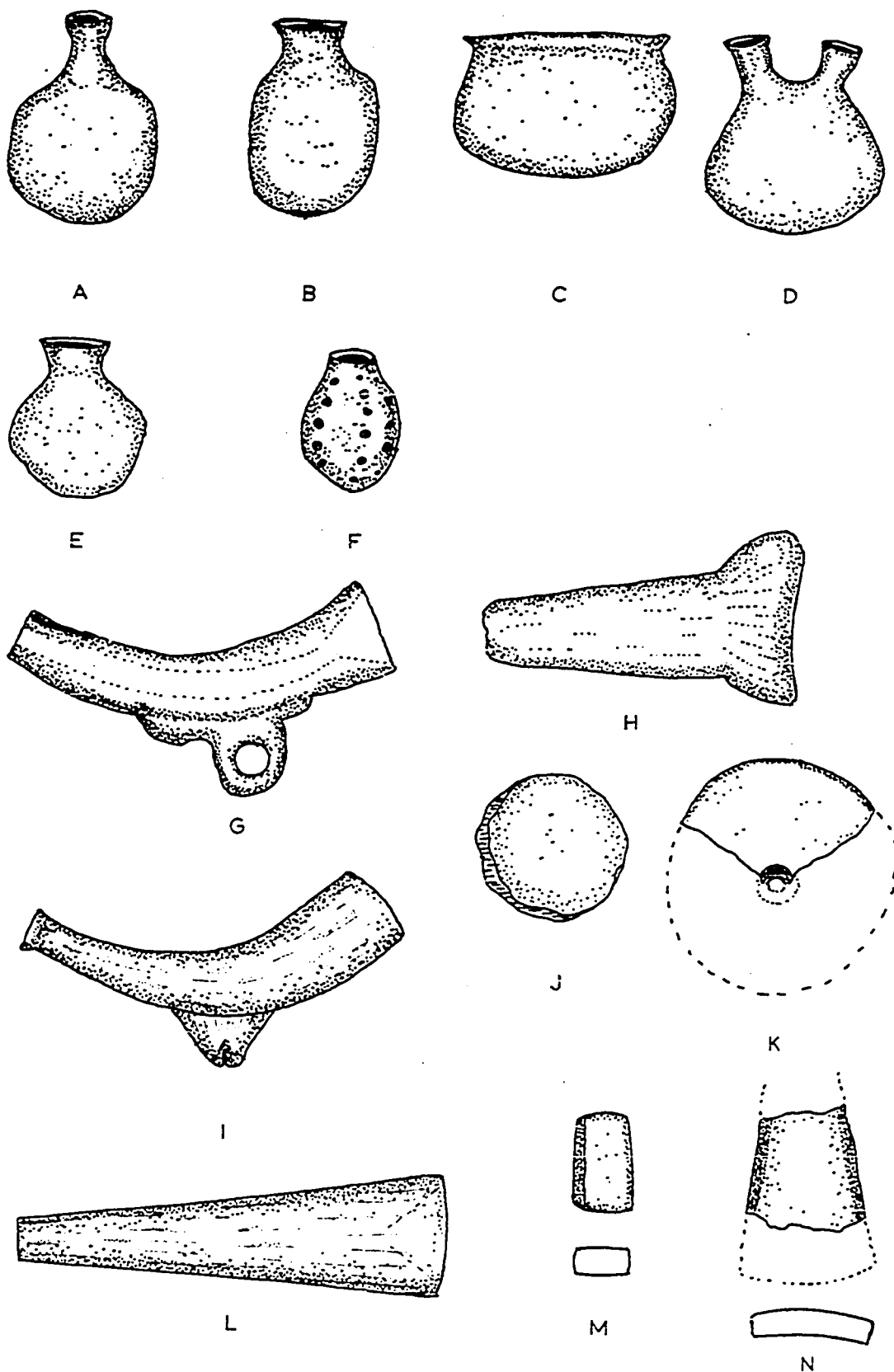


FIGURE 16

**Figure 17****Fired clay figurines**

A-F. Specimens illustrated after True, 1957.  
A is 4 inches tall.

**Miniature vessels**

G-L. Size range from 22 mm. in diameter to 50 mm.  
in diameter. Figure illustrates range of  
types.

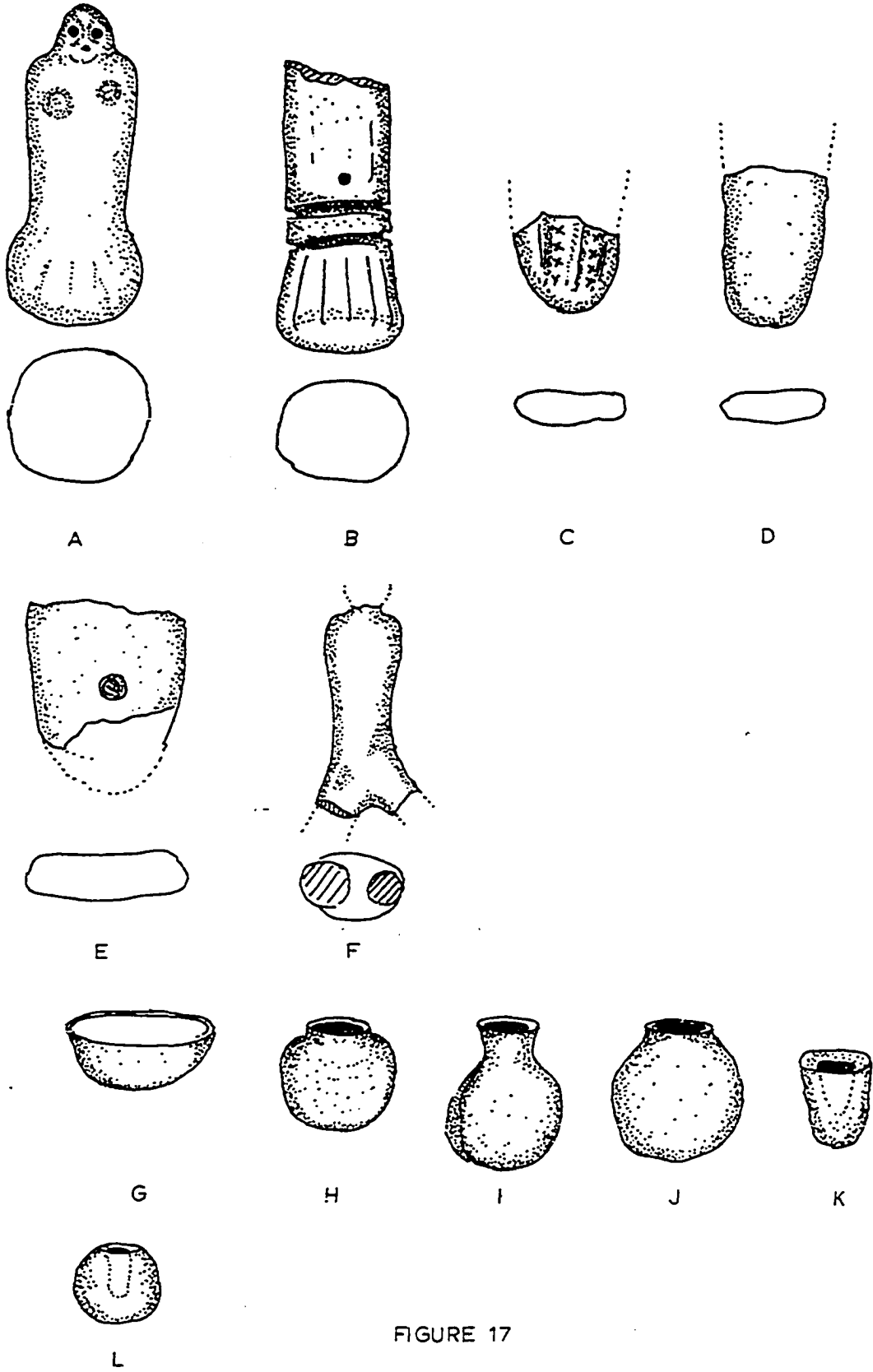


FIGURE 17

Table 7  
Artifact Frequencies from Core Area Sites

	<u>Temecu</u>	<u>SD1 682</u>	<u>SD1 308</u>	<u>SD1 860</u>	<u>SD1 913</u>
<b><u>Projectile Points</u></b>					
Type 1	215	95	185	88	514
Type 2	98	13	64	26	205
Type 3	4	6	26	11	32
Type 4	0	1	1	8	106
Type 5	6	1	9	73	366
Type 6	0	0	0	6	18
Type 7	0	1	0	2	0
Type 8	0	0	0	12	36
Type 9	0	0	0	5	7
Type 10	0	0	0	1	21
Type 11	0	0	4	4	2
Type 12	0	2	5	0	22
Type 13	11	2	1	1	2
Nondiagnostic	<u>369</u>	<u>54</u>	<u>133</u>	<u>111</u>	<u>516</u>
Total all types	692	175	427	348	1,965
Total Projectile Points--all excavated sites					3,607
<b><u>Knives</u></b>					
Type 1	8	5	9	8	a
Type 1A	14	5	7	11	a
Type 2	0	3	10	2	a
Type 2A	0	0	0	2	a
Type 3	0	3	4	4	a
Type 3A	0	0	0	0	a
Type 4	19	4	12	0	a
Type 4A	0	0	0	4	a
Type 5	0	1	1	0	a
Type 6	0	1	1	1	a
Bifacial Irregular	0	0	0	0	a

Table 7 (continued)

	<u>Temecu</u>	<u>SD1 682</u>	<u>SD1 308</u>	<u>SD1 860</u>	<u>SD1 913</u>	
<b><u>Knives</u> (continued)</b>						
Irregular Flake	0	7	2	7	a	
Nondiagnostic	0	5	21	43	a	
Total all types	51	34	67	82	a	
Total Knives--all excavated sites						234
<b><u>Scrapers</u></b>						
<b>Domed</b>						
Type 1	b	9	2	42	a	
Type 1A	b	0	1	2	a	
Type 2	b	1	0	15	a	
Type 3	b	0	0	0	a	
Nondiagnostic	b	1	0	25	a	
<b>Flake</b>						
Type 1	b	14	5	38	a	
Type 2	b	3	0	6	a	
Type 3	b	0	0	2	a	
Type 4	b	1	0	1	a	
Nondiagnostic	b	9	0	25	a	
Keeled	b	2	1	0	a	
Cortex Based	b	7	3	0	a	
Total all types	66	47	12	159	a	
Total Scrapers--all excavated sites						284
<b><u>Scraper Planes</u></b>						
Type 1	0	1	0	10	a	
Type 5	0	0	0	5	a	
Type 7	0	1	0	3	a	
Nondiagnostic	0	5	0	13	a	
Total all types	0	7	0	31	a	
Total Scraper Planes--all excavated sites						38

Table 7 (continued)

	<u>Temecu</u>	<u>SD1 682</u>	<u>SD1 308</u>	<u>SD1 360</u>	<u>SD1 913</u>	
<b><u>Drills</u></b>						
Type 1	b	2	0	2	a	
Type 2	b	3	0	0	a	
Type 3	b	3	3	0	a	
Type 4	b	0	0	2	a	
Type 5	b	0	0	0	a	
Type 6	b	1	0	2	a	
Nondiagnostic	b	0	2	0	a	
Total all types	12	9	5	6	a	
Total Drills--all excavated sites						32
<b><u>Gravers</u></b>						
All types	0	0	0	2	a	2
<b><u>Worked Flakes</u></b>						
All types	n.d.	12	43	120	n.d.	
<b><u>Used Flakes</u></b>						
Type 1	n.d.	12	4	247	n.d.	
Type 2	n.d.	12	1	120	n.d.	
Type 3	n.d.	0	0	10	n.d.	
<b><u>Hammer-Chopper Tools</u></b>						
<b>Hammers</b>						
Type 1	b	5	1	11	a	
Type 2A	b	1	1	2	a	
Type 2B	b	0	0	1	a	
Type 2C	b	1	1	0	a	
Type 3	b	1	0	12	a	
Type 6	b	2	0	50	a	
Nondiagnostic	b	1	4	31	a	
Total all types	18	11	7	107	a	

Table 7 (continued)

	<u>Temecu</u>	<u>SD1</u> <u>682</u>	<u>SD1</u> <u>308</u>	<u>SD1</u> <u>360</u>	<u>SD1</u> <u>913</u>	
<u>Hammer-Chopper Tools (continued)</u>						
Hammer-Grinders	0	1	2	12	a	
Hammer-Scrapers	0	3	0	7	a	
<u>Choppers</u>						
Type 1	0	0	0	4	a	
Type 2	0	0	0	0	a	
Type 3	0	1	1	0	a	
<u>Milling Stones</u>						
Portable	P	4	13	64	P	
Bedrock	P	P	P	P	P	
<u>Mortars</u>						
Portable	P	3	2	0	a	
Bedrock	P	P	P	P	P	
<u>Pestles</u>						
Type 1	P	P	4	P	P	
Type 2	n.d.	0	0	0	a	
Type 3	n.d.	0	3	0	a	
Type 4	P	0	0	0	a	
Total all types	P	P	7	P	P	c
<u>Manos</u>						
All types	49	28	56	212	a	
Total Manos--all excavated sites						345
<u>Miscellaneous Ground Stone</u>						
Heating Stones	2	0	0	8	a	
Shaft Straighteners	0	0	1	7	a	
Worked Steatite	P	0	0	14	P	
Stone Pipes	0	0	0	0	a	
<u>Bone Tools</u>						
All Types	P	65	44	39	a	



Table 7 (continued)

	<u>Temecu</u>	<u>SD1 682</u>	<u>SD1 308</u>	<u>SD1 360</u>	<u>SD1 913</u>	
<u>Decoration</u>						
<u>Beads</u>						
Shell--all types	36	20	12	41	a	
Stone	3	2	0	2	a	
Fired clay	1	0	0	1	a	
Glass	14	1	3	3	a	
<u>Pendants</u>						
Stone	1	1	1	2	a	
Steatite	0	1	0	7	P	
Shell	5	3	2	3	a	
<u>Historic Material</u>	P	R	P	P	a	
<u>Ceramic Materials</u>						
<u>Sherds</u>						
Tizon	6,319	1,235	2,707	31,935	P	
Desert	294	8	21	765	P	
<u>Pipes</u>						
Type 1	P	1	2	13	P	
Type 2	?	0	1	2	a	
Type 3	0	0	0	0	a	
Nondiagnostic	<u>n.d.</u>	<u>11</u>	<u>4</u>	<u>46</u>	<u>P</u>	
Total	--	12	7	61	P	80
<u>Figurines</u>						
All Types	P	2	1	22	P	25
Worked Sherds	P	1	0	32	P	
Drilled Sherds	0	2	0	9	a	
Basket Impressed	1	0	0	17	a	
Rattle Fragments	0	0	0	1	a	
Coils	0	0	0	17	a	
Vegetation Impressed	0	0	0	3	a	
Effigies	0	0	0	0	4	

Table 7 (continued)

	<u>Temecu</u>	<u>SD1</u> <u>682</u>	<u>SD1</u> <u>308</u>	<u>SD1</u> <u>360</u>	<u>SD1</u> <u>913</u>
<u>Ceramic Materials (continued)</u>					
Miniature Vessels	0	0	0	41 <sup>d</sup>	93 <sup>e</sup>
Miniature Pipes	0	0	1	0	0
<u>Special Steatite</u>					
Miniature Shaft Straightener	0	0	0	0	2
Effigies	0	0	0	0	3

P = Present in sample; frequency unknown.

n.d. = No data for this category.

<sup>a</sup>Data from this site confined to projectile points, special ceramic artifacts, and worked steatite.

<sup>b</sup>Only totals available for this class of artifact; no breakdown into types.

<sup>c</sup>Pestles are actually quite common in sample but are seldom collected systematically since they usually are non-diagnostic.

<sup>d</sup>Indicates sherd count; not less than twenty-five vessels represented.

<sup>e</sup>Indicates sherd count; represents more than fifty vessels.

Table 8

## General Information on Excavated Sites

<u>Total</u>	<u>Temecuc</u>	<u>SD1</u> <u>682</u>	<u>SD1</u> <u>308</u>	<u>SD1</u> <u>360</u>	<u>SD1</u> <u>913</u>
Cubic yards excavated	500+	25	34.1	40	?
Artifact Sample--exclusive of historic material and potsherds	936	447	704	1,859	?
-----					<u>Total</u>
Artifact count used in comparisons--all excavated core area sites					5,970
Projectile points for all excavated sites					3,607
Knives for all excavated sites					234
Scrapers for all excavated sites					284
Drills for all excavated sites					32
Gravers for all excavated sites					2
Worked Flakes--all excavated sites					175
Used Flakes--all excavated sites					406
Hammer-Chopper Tools--all excavated sites					174
Milling Stones--all excavated sites					81
Mortars--all excavated sites					5
Pestles--all excavated sites					7
Manos--all excavated sites					345
Miscellaneous Ground Stone--all excavated sites					32
Bone Tools--all excavated sites					148
Beads and Pendants--all excavated sites					144
Fired Clay Pipes--all excavated sites					80
Figurines--all excavated sites					25
Worked Sherds--all excavated sites					44
Rattle Fragments--all excavated sites					1
Miniature Vessels--all excavated sites					134 <sup>a</sup>
Special Miniatures and Effigies--all excavated sites					10

<sup>a</sup>Fragments.

4

Table 9  
Artifact Frequencies from Surface Survey Sites

<u>Luiseno</u>	<u>SD1</u> <u>616</u>	<u>SD1</u> <u>721</u>	<u>SD1</u> <u>789</u>	<u>SD1</u> <u>245</u>	<u>SD1</u> <u>243</u>	<u>SD1</u> <u>515</u>	<u>SD1</u> <u>520</u>	<u>SD1</u> <u>248</u>	<u>SD1</u> <u>R-10</u>	<u>SD1</u> <u>683</u>
<b>Projectile Points</b>										
Type 1	78	16	13	9	5	4	2	7	2	4
Type 2	16	1	2	1	1	1	1	-	3	1
Type 3	7	1	2	-	2	-	-	2	-	-
Type 4	-	-	1	-	-	-	-	-	-	-
Type 5	-	-	1	-	-	-	-	-	-	-
Type 6	1	-	-	-	-	-	-	-	-	-
Type 7	-	-	-	-	-	-	-	-	-	-
Type 8	-	-	-	-	-	-	-	-	-	-
Type 9	-	-	-	-	-	-	-	-	-	-
Type 10	-	-	-	-	-	-	-	-	-	-
Type 11	1	-	-	-	-	-	-	-	-	-
Type 12	-	-	1	-	1	-	-	1	-	-
Type 13	-	-	-	-	-	-	-	-	-	-
<b>Nondiagnostic</b>	28	2	7	2	7	2	4	1	-	-
<b>Total--all types</b>	131	18	27	12	15	7	7	11	5	5

Table 9 (continued)

	SD1 616	SD1 721	SD1 789	SD1 245	SD1 243	SD1 515	SD1 520	SD1 248	SD1 R-10	SD1 683
<u>Luisefo (continued)</u>										
<u>Knives</u>										
Type 1	1	2	-	-	-	-	-	-	2	-
Type 1A	3	1	2	-	1	-	-	-	-	-
Type 2	5	-	-	-	-	-	-	4	-	-
Type 2A	3	-	-	-	-	-	-	2	-	-
Type 3	4	-	-	-	-	-	-	-	-	-
Type 3A	-	-	-	-	-	-	-	-	-	-
Type 4	1	-	-	-	-	-	-	-	-	-
Type 4A	-	-	-	-	1	-	-	-	-	-
Type 5	3	-	-	-	-	-	-	-	-	-
Type 6	1	1	-	-	-	-	-	-	-	-
Bifacial Irregular	1	-	-	-	-	-	-	-	-	-
Irregular Flake	6	-	-	-	-	-	-	-	-	-
Nondiagnostic	8	3	2	2	1	-	1	2	-	2
Total--all types	31	7	4	2	2	1	1	4	2	2
<u>Scrapers</u>										
Domed										
Type 1	2	1	-	-	-	-	-	-	-	-
Type 1A	-	-	-	-	-	-	-	-	-	-

Table 9 (continued)

	SD1 <u>616</u>	SD1 <u>721</u>	SD1 <u>789</u>	SD1 <u>245</u>	SD1 <u>243</u>	SD1 <u>515</u>	SD1 <u>520</u>	SD1 <u>248</u>	SD1 <u>R-10</u>	SD1 <u>783</u>
<u>Luiseno</u> (continued)										
Scrapers (continued)										
Domed										
Type 2	-	-	-	-	-	-	-	-	-	-
Type 3	-	-	1	-	-	-	-	-	-	-
Nondiagnostic	-	-	-	1	-	-	-	-	-	-
Flake										
Type 1	3	1	4	-	-	-	-	-	-	-
Type 2	-	-	-	-	-	-	-	-	-	-
Type 3	-	-	-	-	-	-	-	-	-	-
Type 4	-	-	-	-	-	-	-	-	-	-
Nondiagnostic	-	-	1	-	-	-	-	-	-	-
Keeled	-	-	-	-	-	-	-	-	-	-
Cortex Based	1	-	-	-	-	-	-	1	-	-
Total--all types	6	2	6	1	0	0	0	1	0	0
Scrapers Planes										
Type 1	-	-	-	-	-	-	-	-	-	-
Type 5	-	-	-	-	-	-	-	-	-	-
Type 7	-	-	-	-	-	-	-	-	-	-
Nondiagnostic	-	-	-	-	-	-	-	-	-	-
Total--all types	0	0	0	0	0	0	0	0	0	0

Table 9 (continued)

	<u>SD1</u> <u>616</u>	<u>SD1</u> <u>721</u>	<u>SD1</u> <u>789</u>	<u>SD1</u> <u>245</u>	<u>SD1</u> <u>243</u>	<u>SD1</u> <u>515</u>	<u>SD1</u> <u>520</u>	<u>SD1</u> <u>248</u>	<u>SD1</u> <u>R-10</u>	<u>SD1</u> <u>683</u>
<b><u>Luiseno</u> (continued)</b>										
<b>Drills</b>										
Type 1	1	-	-	-	-	-	-	-	-	-
Type 2	..	-	-	-	-	-	-	-	-	-
Type 3	2	-	2	-	-	-	-	-	-	-
Type 4	2	-	-	-	-	-	-	-	-	-
Type 5	..	-	-	-	-	-	-	-	-	-
Type 6	3	1	-	-	-	-	-	-	1	-
Nondiagnostic	-	-	-	-	-	-	-	-	-	-
<b>Total--all types</b>	<b>8</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
<b>Gravers--all types</b>	-	-	-	-	-	-	-	-	-	-
<b>Hammer-Chopper Tools</b>										
<b>Hammers</b>										
Type 1	-	-	1	-	-	-	-	-	-	-
Type 2A	-	1	-	-	-	-	-	-	-	-
Type 2B	-	-	-	-	-	-	-	-	-	-
Type 2C	-	-	-	-	-	-	-	-	-	-
Type 3	-	-	-	-	-	-	-	-	-	-
Type 6	-	-	-	-	-	-	-	-	-	-
Nondiagnostic	-	-	-	-	-	-	-	-	-	-
<b>Total--all types</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 9 (continued)

	<u>SD1</u> <u>616</u>	<u>SD1</u> <u>721</u>	<u>SD1</u> <u>789</u>	<u>SD1</u> <u>245</u>	<u>SD1</u> <u>243</u>	<u>SD1</u> <u>515</u>	<u>SD1</u> <u>520</u>	<u>SD1</u> <u>248</u>	<u>SD1</u> <u>R-10</u>	<u>SD1</u> <u>683</u>
<b>Luiseno (continued)</b>										
<b>Hammer-Chopper Tools (continued)</b>										
Hammer-Grinders	-	-	-	-	-	-	-	-	-	-
Hammer-Scrapers	-	-	-	-	-	-	-	-	-	-
<b>Choppers</b>										
Type 1	-	-	-	-	-	-	-	-	-	-
Type 2	-	-	-	-	-	-	-	-	-	-
Type 3	-	-	-	-	-	-	-	-	-	-
<b>Milling Stones</b>										
Portable	P	?	-	-	-	P	-	?	-	-
Bedrock	-	P	-	-	?	-	-	?	-	P
<b>Mortars</b>										
Portable	P	P	-	?	-	-	-	-	-	-
Bedrock	-	P	P	-	?	?	-	P	-	P
Manos--all types	5	P	P	?	?	P	-	?	-	-
Heating Stones	-	1	-	-	-	-	-	-	-	-
Shaft Straighteners	1	1	-	1	-	-	-	-	-	-
Worked Steatite	-	-	-	-	-	-	-	-	-	-
Stone Pipes	-	-	-	-	-	-	-	-	-	-



Table 9 (continued)

	<u>SD1</u> <u>616</u>	<u>SD1</u> <u>721</u>	<u>SD1</u> <u>789</u>	<u>SD1</u> <u>245</u>	<u>SD1</u> <u>243</u>	<u>SD1</u> <u>515</u>	<u>SD1</u> <u>520</u>	<u>SD1</u> <u>248</u>	<u>SD1</u> <u>R-10</u>	<u>SD1</u> <u>683</u>
<u>Luiseno</u> (continued)										
Bone Tools	P	P	P	-	-	-	-	-	-	-
Shell Beads	P	P	P	-	-	P	-	-	-	-
Stone Beads	-	-	-	-	-	-	-	-	-	-
Fired Clay Beads	1	-	-	-	-	-	-	-	-	-
Stone Pendants	-	?	1	-	-	-	-	-	-	1
Steatite Pendants	-	-	-	-	-	-	-	-	-	-
Historic Artifacts	p	-	-	-	-	-	?	-	-	-
Potsherds	P	P	P	P	P	P	P	P	P	P
Fired Clay Pipes										
Type 1	2	3*	3*	-	-	-	-	-	-	-
Type 2	3	-	-	-	-	-	-	-	-	-
Type 3	-	-	-	-	-	-	-	-	1	-
Fired Clay Figurines										
All types	6	-	1	-	-	-	-	-	-	-
Worked Sherds	-	-	-	-	-	-	-	-	-	-
Drilled Sherds	-	-	-	-	-	-	-	-	-	-

Table 9 (continued)

	<u>SD1</u> <u>616</u>	<u>SD1</u> <u>721</u>	<u>SD1</u> <u>789</u>	<u>SD1</u> <u>245</u>	<u>SD1</u> <u>243</u>	<u>SD1</u> <u>515</u>	<u>SD1</u> <u>520</u>	<u>SD1</u> <u>248</u>	<u>SD1</u> <u>R-10</u>	<u>SD1</u> <u>683</u>
<u>Luiseno</u> (continued)										
Basket Impressed Sherds	..	-	-	-	-	-	-	-	-	-
Rattle Fragments	..	-	-	-	-	-	-	-	-	-
Clay Effigies	..	-	-	-	-	-	-	-	-	-
Steatite Effigies	..	-	-	-	-	-	-	-	-	-
Miniature Vessels	..	-	-	-	-	-	-	-	-	-
Miniature Pipes	..	-	-	-	-	-	-	-	-	-
Miniature Shaft Straighteners	..	-	-	-	-	-	-	-	-	-

Total artifact sample from surface collected Luiseno sites, exclusive of historic material and potsherds, 357.

Table 10  
Artifact Frequencies from Surface Survey Sites

<u>Diegueno</u>	<u>SD1</u> <u>853</u>	<u>SD1</u> <u>862</u>	<u>SD1</u> <u>863</u>	<u>SD1</u> <u>903</u>	<u>SD1</u> <u>858</u>	<u>SD1</u> <u>857</u>	<u>SD1</u> <u>1027</u>	<u>SD1</u> <u>901</u>	<u>SD1</u> <u>G.P.</u>
<b>Projectile Points</b>									
Type 1	13	3	-	8	1	-	-	10	32
Type 2	2	-	-	1	-	-	-	4	7
Type 3	-	-	-	-	-	-	-	3	3
Type 4	2	-	-	-	-	-	-	-	2
Type 5	10	2	6	4	1	-	-	7	16
Type 6	1	-	-	1	-	-	-	1	-
Type 7	1	-	-	-	-	-	-	-	1
Type 8	-	-	1	-	-	-	-	-	-
Type 9	-	-	-	-	-	-	-	-	-
Type 10	1	-	-	-	-	-	-	2	-
Type 11	1	-	-	-	-	-	-	1	2
Type 12	1	-	-	-	-	-	-	-	1
Type 13	-	-	-	-	-	-	-	-	1
Nondiagnostic	7	1	2	6	-	-	-	8	12
Total--all types	39	6	9	20	2	0	0	36	77

Table 10 (continued)

	SD1 853	SD1 862	SD1 863	SD1 903	SD1 858	SD1 857	SD1 1027	SD1 901	SD1 G.P.
<u>Diegueno (continued)</u>									
<b>Knives</b>									
Type 1	-	1	-	-	-	-	-	-	2
Type 1A	-	1	-	-	-	-	-	-	-
Type 2	-	-	-	-	-	-	-	-	-
Type 2A	-	-	-	-	-	-	-	-	-
Type 3	1	1	-	-	-	-	-	-	1
Type 3A	-	-	-	-	-	-	-	-	-
Type 4	-	-	-	-	-	-	-	1	1
Type 5	3	1	1	1	-	-	-	-	-
Type 6	-	-	-	-	-	-	-	-	-
Bifacial Irregular	-	-	-	1	-	-	-	-	-
Irregular Flake	-	-	-	-	-	-	-	1	1
Nondiagnostic	6	-	2	2	-	-	-	6	-
<b>Total--all types</b>	11	4	3	4	0	0	0	8	5
<b>Scrapers</b>									
<b>Domed</b>									
Type 1	12	3	2	3	-	-	1	2	-
Type 1A	2	1	-	-	-	-	-	-	-
Type 2	3	-	-	-	-	-	-	-	-
Type 3	-	-	-	-	-	-	1	-	-

Table 10 (continued)

	<u>SD1</u> <u>853</u>	<u>SD1</u> <u>862</u>	<u>SD1</u> <u>863</u>	<u>SD1</u> <u>903</u>	<u>SD1</u> <u>858</u>	<u>SD1</u> <u>857</u>	<u>SD1</u> <u>1027</u>	<u>SD1</u> <u>901</u>	<u>SD1</u> <u>G.P.</u>
<b><u>Diegueno</u> (continued)</b>									
<b>Scrapers (continued)</b>									
<b>Domed</b>									
Nondiagnostic	1	-	-	1	1	-	-	-	-
<b>Flake</b>									
Type 1	8	5	-	-	-	1	-	1	-
Type 2	2	-	-	-	-	-	-	-	-
Type 3	-	-	-	-	-	-	-	-	-
Type 4	2	3	-	-	-	-	-	-	-
Nondiagnostic	5	6	4	1	2	2	-	1	-
Keeled	1	-	-	-	-	-	-	-	-
Cortex Based	-	-	-	-	-	-	-	-	-
<b>Total--all types</b>	<b>36</b>	<b>18</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>0</b>
<b>Scraper Planes</b>									
Type 1	3	-	-	-	-	-	-	-	-
Type 5	-	-	-	-	-	-	-	-	-
Type 7	-	-	-	-	-	-	-	-	-
Nondiagnostic	4	3	-	1	1	4	3	-	-
<b>Total--all types</b>	<b>7</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>

Table 10 (continued)

	SD1 853	SD1 862	SD1 863	SD1 903	SD1 858	SD1 857	SD1 1027	SD1 901	SD1 G.P.
<u>Diegueno (continued)</u>									
Drills									
Type 1	2	-	-	-	-	-	-	-	-
Type 2	-	-	-	-	-	-	-	-	-
Type 3	2	-	-	-	-	-	-	-	-
Type 4	-	-	-	-	-	-	-	-	1
Type 5	-	-	-	1	-	-	-	-	-
Type 6	-	-	-	-	-	-	-	-	-
Nondiagnostic	1	-	-	-	-	-	-	-	-
Total--all types	5	0	0	1	0	0	0	0	1
Gravers--all types	-	-	-	-	-	-	-	1	-
Hammer-Chopper Tools									
Hammers									
Type 1	1	1	-	-	-	-	-	-	-
Type 2	-	-	-	-	-	-	-	-	-
Type 2A	-	-	-	-	-	-	-	-	-
Type 2B	-	-	-	-	-	-	-	-	-
Type 2C	-	2	-	-	-	-	-	-	-
Type 3	-	-	-	-	-	-	-	-	-
Type 6	1	3	-	-	-	-	-	-	-

Table 10 (continued)

	<u>SD1</u> <u>853</u>	<u>SD1</u> <u>862</u>	<u>SD1</u> <u>863</u>	<u>SD1</u> <u>903</u>	<u>SD1</u> <u>858</u>	<u>SD1</u> <u>857</u>	<u>SD1</u> <u>1027</u>	<u>SD1</u> <u>901</u>	<u>SD1</u> <u>G.P.</u>
<b>Diegueno (continued)</b>									
<b>Hammer-Chopper Tools (continued)</b>									
<b>Hammers</b>									
Nondiagnostic	11	6	10	4	1	5	7	1	-
Total--all types	12	11	10	4	1	5	7	1	0
Hammer-Grinders	1	2	-	-	-	-	1	-	-
Hammer-Scrapers	1	2	2	-	1	4	4	-	-
<b>Choppers</b>									
Type 1	2	-	-	-	1	1	-	-	-
Type 2	-	-	-	-	-	-	-	-	-
Type 3	-	-	-	-	-	-	-	-	-
<b>Milling Stones</b>									
Portable	-	-	-	-	-	-	-	P	-
Bedrock	30	38	110	50	57	56	68	22	-
<b>Mortars</b>									
Portable	-	-	3	-	-	-	-	-	-
Bedrock	73	10	23	29	8	20	3	90	-
Manos--all types	4	17	5	1	-	2	-	1	-
Heating Stones	8	4	-	-	-	-	-	-	-

Table 10 (continued)

	<u>SD1</u> <u>853</u>	<u>SD1</u> <u>862</u>	<u>SD1</u> <u>863</u>	<u>SD1</u> <u>903</u>	<u>SD1</u> <u>858</u>	<u>SD1</u> <u>857</u>	<u>SD1</u> <u>1027</u>	<u>SD1</u> <u>901</u>	<u>SD1</u> <u>G.P.</u>
<b><u>Diegueño</u> (continued)</b>									
Arrowshaft Straighteners	3	1	-	-	-	-	-	-	1
Worked Steatite	25	2	-	2	-	-	-	-	-
Stone Pipes	-	-	-	-	-	-	-	-	-
Bone Tools	?	?	?	?	?	?	?	?	-
<b>Beads</b>									
Shell	P	P	P	?	?	?	?	P	P
Stone	P	?	?	?	?	?	?	?	P
Clay	-	-	-	-	-	-	-	-	-
<b>Pendants</b>									
Stone	-	-	-	-	-	-	-	-	-
Steatite	12	-	-	-	-	-	-	1	1
Historic Artifacts	P	-	-	-	-	-	-	?	P
Potsherds	C	C	C	C	C	C	C	C	-
Clay pipes	10	1	-	1	-	1	-	1	1 frags.
Type 1									
Type 2									
Type 3									



Table 10 (continued)

	SD1 853	SD1 862	SD1 863	SD1 903	SD1 858	SD1 857	SD1 1027	SD1 901	SD1 G.P.
<u>Diegueno</u> (continued)									
Figurines	?	?	?	-	-	-	-	?	-
Worked Sherds	9	2	4	-	-	2	-	3	-
Drilled Sherds	3	1	1	-	-	-	-	-	-
Basket Impressed Sherds	2	1	-	-	-	-	-	-	-
Rattle Fragments	-	-	-	-	-	-	-	-	-
Clay Effigies	-	-	-	-	-	-	-	-	-
Steatite Effigies	2	-	-	-	-	-	-	-	1
Miniature Vessels	4	-	-	1	-	-	-	3	1

Table 11

## Artifact Frequencies: Desert and Noncore Area Sites

	<u>C-144</u>	<u>Piñon Basin</u>	<u>W-202</u>	<u>W-131</u>	<u>W-256</u>
<b>Projectile Points</b>					
Side-notched	44	27	21	70	?
Nonside-notched	60	32	25	183	?
<b>Miniature Vessels</b>	6	1	1	--	1
<b>Pendants</b>	6	2	P	--	5
<b>Arrowshaft Straighteners</b>	12	--	1	--	2
<b>Beads--shell</b>	C	P	P	--	P
<b>Clay Pipes</b>	2	--	1	--	10
<b>Steatite Effigies</b>	1	--	--	--	--
<b>Clay Rattle fragments</b>	--	1	--	--	--

---

P = Present

C = Common

## SECTION VIII

### COMPARISONS AND EVALUATION OF THE DIAGNOSTIC ARTIFACTS

The purpose of this thesis is to test the possibility of identifying and isolating cultural traits which can be used to differentiate two ethnic and cultural units on the basis of archaeological data. These differences can be manifest directly in terms of artifact attributes or in the characteristic ways that activities are performed. Kinds of associations typically part of certain activities can, under certain optimum circumstances, be recovered from the archaeological record. However, since such optimum conditions are seldom attained, most archaeological interpretation must be derived directly from the formal attributes of the more durable artifacts.

The ephemeral nature of most activities and the associated artifacts identified with them are such that, once these activities are consigned to the debris of the past, they lose whatever significant identity they might once have possessed. This is particularly true in situations where architectural features are lacking and where the technology is simple and multi-purpose.

The foregoing artifact descriptions, although far from complete and lacking in many respects, probably represent the most detailed inventory so far assembled for this area. This

sample should provide a reasonably adequate base for the comparative analysis proposed herein. If it be assumed that the described artifacts represent an adequate sample of the durable cultural inventory for the areas of concern, it remains then to look for associations or relationships that are significant (in terms of the present problem) on the basis of their context, rather than on the basis of formal attributes.

Although much remains to be done in the archaeology of this area with reference to the recovery of associational data, it seems safe to suggest that very few of the ephemeral activities and their related artifacts will be recognizable within the archaeological record on the basis of associations or characteristic patterns of usage.

The general low level of complexity, lack of specialization in craft manufactures and a lack of diagnostic architectural features all combine here to limit the potential for reconstructions of social and religious patterns on the basis of archaeological data. On the basis of the data available for the area at the present time, it can be stated with some assurance that most patterns of behavior can be isolated and identified in an archaeological situation only on the basis of direct ethnographic confirmation and not on the basis of the association itself. For the purposes of this paper, then, it should suffice to suggest that the recovery of few significant and definitive data may be expected which are not in some way reflected directly in the formal attributes of the artifacts themselves.

On the basis of a reasonably careful survey of the ethnographic literature relating to this area; on first-hand ethnographic enquiries carried on among the Luisño for some fifteen years; and upon the preliminary analysis of the artifacts described above, it is possible to isolate those artifacts and activities which seem to be diagnostic of one or the other of the two areas of concern during early historic and protohistoric times.

These diagnostic elements, both artifactual and associational, can be categorized as follows:

1. Artifacts included as part of a trait complex or activity sharing many basic similarities in both the Luisño and Dieguño areas, but with some differences in style or function in terms of relative frequency of occurrence. Included in this category are projectile points, scrapers, milling stones, scraper planes, hammerstones, pottery, and the use of steatite.
2. Artifacts characteristic of one or the other area, but not both. Included here are such specialized items as basket impressed sherds, cortex based scrapers, fired clay rattles, miniature vessels, and unique effigy forms.
3. Artifacts which, on the basis of the present sample, cannot be clearly aligned with one or the other ethnic or cultural grouping, but where the

probability that some distinctive differences will develop as the sample is increased is considered good. Included here are such items as figurines, pipe styles, arrowshaft straighteners, and possibly artifacts associated with the Toloache ritual.

4. Traits or activities sharing some general characteristics in both areas, but with certain distinct patterns present in one area and not the other. Such patterns may be accompanied by distinctive artifacts but need not be identified solely on this basis. Based upon the presently available data, only cremation practices are clearly in this category. It is possible, however, that other activities might be isolated with additional work.

Category 1: Artifacts Sharing Many Basic Similarities in Both Areas

Projectile points.--Artifacts designated as projectile points represent the most numerous category in the sample with the exception of potsherds. A total of over 4,000 projectile points was examined in detail from some thirty sites. This sample has been sorted into thirteen typological categories. Based upon historically documented distributions, intuitive sorting and, for some forms on statistical analysis (e.g., Desert Side Notched types as defined by Baumhoff and Byrne, 1959), it can be assumed with considerable confidence that most of the types so isolated represent

stylistic or functional variations with some cultural significance. Some variant forms found within these tentative "type" designations may prove to represent distinctive subtypes or typological categories as the future expansion of this study into adjacent regions develops. The continued study of the sample with this end in mind is a necessary part of the planned long-range program.

For the present, however, the existing typology should suffice to resolve the problem at hand. Tables 7, 8, 9, 10, and 11 present the frequency distributions of all the artifacts in the present sample by type and site for both areas of concern. Table 12 presents the percentage frequencies of projectile points from the core-area excavated sites.

Although continued study and refinement of the projectile point typology along with an increased sample from areas adjacent to the Luisseño-Diegueño territories will no doubt produce some refined distinctions in this typology, it seems feasible for the present to reduce the thirteen typological categories to three general groupings: (1) side-notched points; (2) nonside-notched points; and (3) intrusive points. Concern here is with the first two categories. Table 13 presents the distributions of projectile points from the core area excavated sites on the basis of the presence or absence of side notching.

To test the validity of this distribution under a wider range of conditions, collections from eighteen surface sites

in the two core areas were examined. The distribution of projectile points on a side-notched versus nonside-notched basis from these sites is presented in Table 13, as are the combined samples from all protohistoric and historic sites studied from both core areas.

Because the Diegueño territory extends out of the interior mountain geographic and ecological zones and has a desert-to-mountain subsistence round as well as the more characteristic intermediate valley to mountain top round, collections from several village sites within the desert province were examined. Differences in subsistence in this area are reflected in some aspects of the economy but these differences are not apparent in the projectile point distributions (Table 14).

On the basis of the analysis of these collections, including surface survey as well as excavated samples, and desert sites as well as the more typical mountain or upland sites, it is possible to state that the Luiseno did not prefer side-notched points. In contrast, side-notched forms enjoyed a reasonable popularity among the Diegueño.

While it is dangerous to develop broad generalizations based upon these kinds of data, it seems safe to suggest that for this general area--the interior mountain and desert regions of San Diego County, California--sites or groups of sites consistently producing less than 10 percent side-notched points were occupied by the Luiseno. Sites or



groups of sites exceeding these percentages were probably occupied by the Diegueño. (Map 11 indicates the distribution of side-notched and nonside-notched projectile points.)

These conclusions--in a general sense if not in terms of these particular percentages--are supported to some degree by the ethnography of the area at large. Sparkman (1908:206), in reference to the Luiseno, states:

The stone points or arrowheads always had a concaved base. Further north tanged arrowheads were sometimes used, but the Luiseno did not employ them.

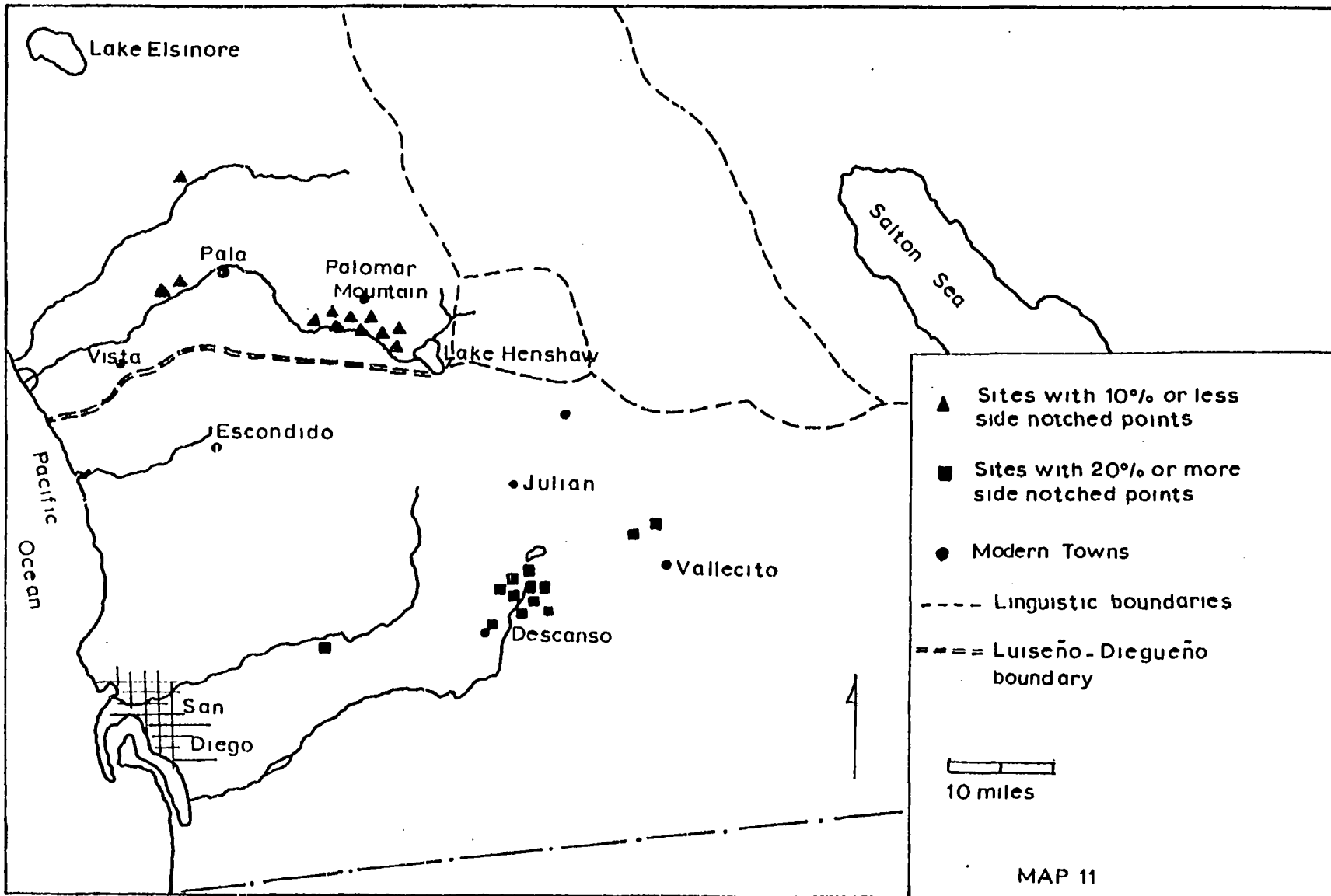
. . .

No mention is made of side notching in this account.

Drucker (1937:16) reports no Luiseno informants claiming side-notched forms per se, but does have one informant who indicated that the Luiseno made what he called spurred forms. There is no other evidence relating to projectile points known in the available literature for the Luiseno. For the Diegueño, Drucker reports the definite use of side-notched forms (1937:16). Likewise, Spier (1923:352) states:

Stone arrowheads were used against big game only. These are 2.5 cm. long, or smaller, triangular, sometimes with notches in the base, but preferably notched in the sides.

Scraping tools.--The generalized nature of many artifacts in this class tends to produce considerable overlap between the designated categories and not all archaeologists will agree with the placement of some specimens in this classification. Eventually as the sample increases for this and adjacent regions, the presently suggested framework



will have to be refined and adjusted accordingly. However, these adjustments will have little effect upon the outcome of the present analysis and concern here is with the relative frequency of artifacts in the gross categories and not with the suggested typological variations. Table 15 presents the relative percentages of scraping tools recovered from the excavated core area sites.

On the basis of the frequency distributions presented in Table 15, the distribution of scraping tools would appear to be inconclusive elements for the separation of the Luiseno and Diegueno culture areas. Actually, however, a more careful examination of the available data reveals that the separation of the two areas on the basis of scraper distributions is quite clear. It is probable that there was a well developed (although not elaborate) scraping tool complex among the Diegueno. Conversely, there was seemingly little use of scrapers among the Luiseno.

The artifact percentages believed to most nearly reflect the true situation are seen in the relative frequency of scrapers recovered from the two primary core area excavations (SD1 308 and SD1 860). Here the gross frequency of scrapers of all types in relation to the total chipped stone inventory is less than 3 percent for SD1 308 (Luiseno) and more than 20 percent for SD1 860 (Diegueno). Unfortunately, documented quantitative data are not available for scrapers from SD1 913 (Diegueno). This site was excavated

by the San Diego Museum of Man at an earlier date, and only the projectile points, special ceramic items, and steatite artifacts are available for study. However, surface surveys in the area tend to support this evaluation and have produced higher scraper frequencies for Diegueño sites.

The 8 percent scraper to chipped stone percentages from the Luiseno village at Temecu, although higher than those from SDi 308, are significantly lower than the averages from the Diegueño villages. This percentage from Temecu is, in addition, probably skewed toward the high side, since the figure includes utilized flakes. This artifact is not included in the frequency or percentage calculations for the other core area excavated sites. (The frequency figures for the site at Temecu are those published by McCown, 1955.)

The scraper to chipped stone percentages for SDi 682 attained 18.5 percent, and this is extremely high for a Luiseno village. This figure would appear to invalidate the conclusions reached above. However, this deviation can be explained in a reasonably satisfactory manner.

The low frequency of occurrence of scraping tools suggested as a diagnostic characteristic of the Luiseno territory is confined to the San Luis Rey components (recent prehistoric and protohistoric sites) and does not apply to the earlier Pauma complex components. Pauma complex sites are characterized by a substantial range of scraping

implements. The Luisiño village designated SD1 682 is situated on a site previously occupied by Pauma complex peoples, and as such is a multi-component site (True, n.d.: manuscript in preparation). The stratigraphic and typological break between the two components is quite clear. However, the Pauma occupation stratum is exposed on portions of the site and many Pauma type artifacts have been recovered from these exposures. The fact that these implements were exposed and available for use by the later occupants of the site, plus the fact that the percentage calculations used here include both excavated and surface collected artifacts, could easily account for the high percentage of scrapers reflected in this sample.

The general contention that scrapers were poorly developed and numerically scarce on Luisiño (San Luis Rey) sites is supported by surface collections from other Luisiño village sites where there is no exposed Pauma component in the immediate area.

At the Historic Pauma village (SD1 616), for example, where the surface of the site was systematically collected for a period of ten years, the scraper to chipped stone frequencies are negligible. The scraper-chipped stone percentages from this site are presented in Table 16, as are the percentages from other surface collections in the Luisiño territory.

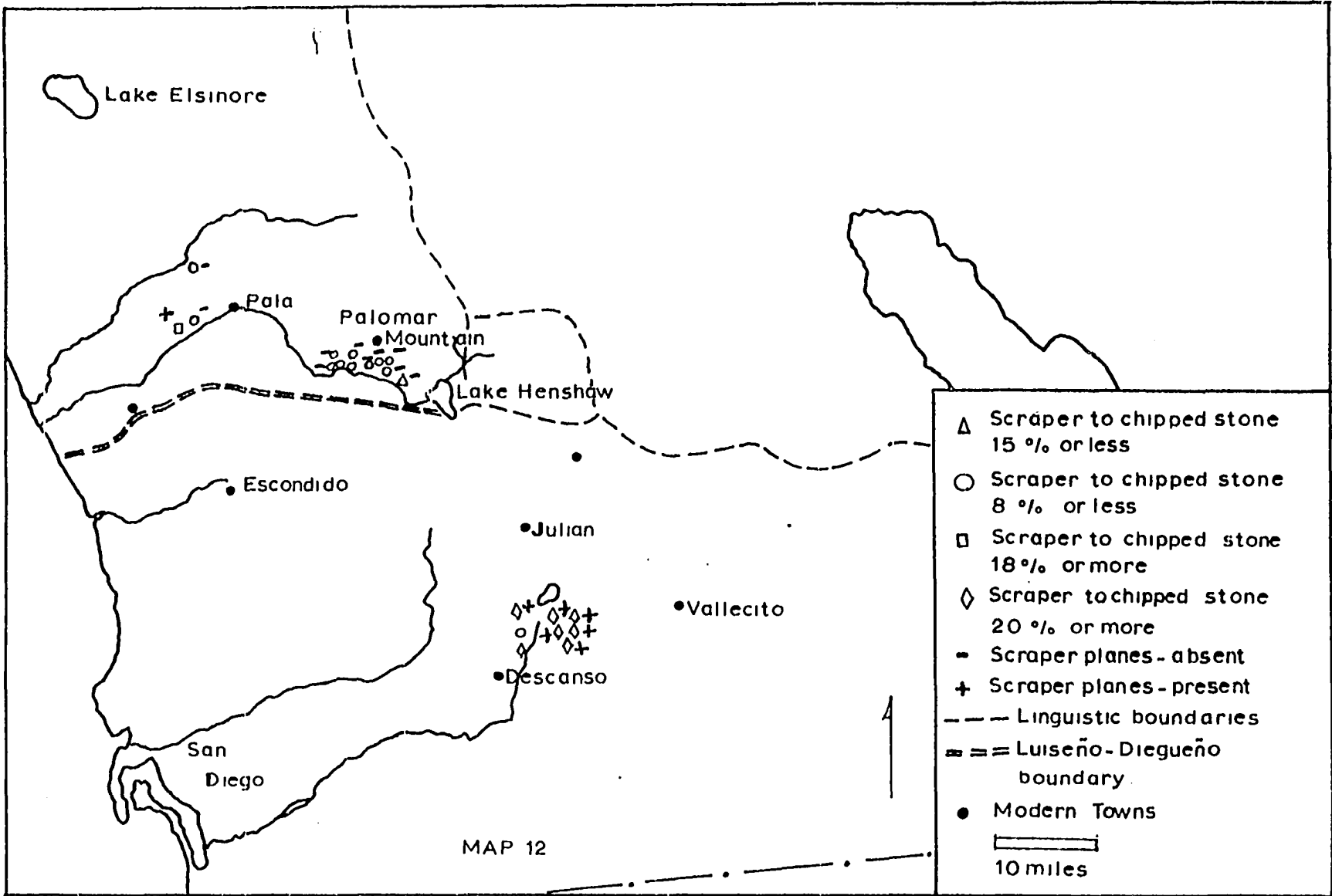
In contrast, surface collections made from proto-

historic and historic sites within the Diegueño territory all exhibit significantly higher scraper to chipped stone percentages. These percentages are given in Table 16. In addition to the differences in scraper percentages in general, two specific differences within the larger scraper category appear to be significant. One factor here is the almost complete lack of scraper planes on late sites in Luiseno territory. In contrast, scraper planes are quite common on nearly all late sites in the Diegueño territory.

This pattern is reversed with the distribution of cortex based scrapers. To date this artifact has been recovered from several Luiseno sites and has yet to be reported from a Diegueño village. Map 12 indicates the scraper to chipped stone percentages.

Milling stones.--No effort has been made to provide a quantitative comparison of milling stone frequencies for the two areas. The sample for most sites in this survey is not really comparable on a site to site basis and a quantitative analysis would be meaningless. However, on the basis of the few data available it is possible to make some evaluation of the relative frequencies of this artifact in the two territories.

Milling stones were used in both areas and some evidence of this use is found on nearly every site. For the Luiseno, however, use of this artifact does not seem to have been as well developed as it was in the Diegueño and



there is some question in the mind of some informants as to whether or not milling stones were really made by the Luiseno, although they did use them. The possibility that milling stones were salvaged from pre-Luiseno sites in the area has been suggested by at least one informant, although there is very little support for this, in general. In any case, milling stones are not really common on many of the sites in Luiseno territory. In contrast, they are quite common on most Diegueno sites. For example, a total of sixty-nine milling stones and manos has been recovered from SDi 308 (Luiseno). In contrast, a total of 276 has been recovered from SDi 860 from a comparable number of cubic yards of midden.

This difference in milling stone frequencies is of interest both because it provides one more bit of evidence for a different cultural pattern in the two areas and because it is an indication of the continuity existing between the earlier milling stone occupations in Diegueno territory, and supports, in part, the lack of this continuity in the Luiseno territory. These relationships are far from clearly defined but there is evidence in support of this continuity in the use of milling stones. For example, the use of milling stones as grave markers or the placement of such artifacts over the body at the time of burial is a widely recognized trait in the milling stone horizon in Southern California. This practice was not continued in the Luiseno



territory after the adoption of cremation. Here no markers of any sort were used to mark the location of cremated remains and so far as is known no clearly established cemetery areas were used. The Diegueño, however, not only gathered the cremated remains, but indicated the location of the ashes and cemeteries with milling stone markers (Heye, 1919:16-17).

Hammerstone complex.--The hammer complex or group of artifacts believed to have served in some pounding or battering capacity includes, in addition to those tools commonly referred to as hammers, the artifacts designated as hammer-grinders, hammer-scrapers, and choppers. This grouping is suggested because there is a great deal of overlap between these tools and probably a great deal of interchangeable usage.

Table 17 presents the percentage of "hammerstone complex" artifacts in relation to the total chipped stone sample (exclusive of used flakes, type 1 and 3), and in relation to the total artifact sample (exclusive of potsherds, historic materials, used flakes, and milling stone fragments). The frequency distribution for hammer-grinders, hammer-scrapers, and choppers is indicated, although these artifacts are treated as a unit in the percentage calculations. Percentages presented on Table 17 refer to core area excavated sites.

Hammerstone frequencies, as presented in Table 17, suggest that there was a substantially greater utilization of hammering implements among the occupants of the Diegueño than among the occupants of the Luiseno territories. This difference is also reflected in the specific forms designated as hammer-grinders and hammer-scrapers. The specific percentages from the core area excavated sites tend to be substantiated by surface collections from late prehistoric and protohistoric sites in both areas.

Table 18 presents the summary data on hammerstone distributions for these surface collections.

Pottery.--Both the Luiseno and the Diegueño made pottery in prehistoric times. However, it appears that the use and manufacture of pottery in Luiseno territory is relatively recent and that its presence there is probably due to influences from the Diegueño.

The actual extent of pottery manufacturing by the Luiseno is unknown. Some sherds can be found on nearly all San Luis Rey II sites, and all informants insist that they did indeed make pottery. The amounts and variety of forms made, however, were measurably different than those of the Diegueño. Further, as one moves away from the Diegueño boundary the pottery seems to decrease in amount.

It is likely that the Diegueño have known or made pottery for at least the past six to seven hundred years and perhaps longer. The Luiseno, who seem to have recognized

Table 12

## Projectile Point Percentages--Excavated Core Area Sites














	Luisño			Diegueño		
	Temecuc	SD1 682	SD1 308	SD1 860	SD1 913	
Type 1	66.0	79.0	63.0	37.1	38.6	
Type 2	30.0	10.8	21.7	10.9	15.4	
Type 3	1.0	5.0	9.0	4.6	2.4	
Type 4	0.0	0.8	0.3	3.4	7.9	
Type 5	1.8	0.0	3.0	30.8	27.4	
Type 6	0.0	0.0	0.0	2.5	1.3	
Type 7	0.0	0.8	0.0	0.8	0.0	
Type 8	0.0	0.0	0.0	5.0	2.7	
Type 9	0.0	0.0	0.0	2.1	0.5	
Type 10	0.0	0.0	0.0	0.4	1.5	
Type 11	0.0	0.0	1.3	1.6	0.1	
Type 12	0.0	1.6	1.7	0.0	1.6	
Type 13	2.0	1.6	0.6	0.0	0.1	
-----						
Total Diagnosed	325	120	294	237	1,331	2,305
Total All	692	175	427	348	1,965	3,607

Table 13

Projectile Point Distribution--Surface Collections  
from Core Area Sites

	S.N.		N.S.N.		Total
	F	%	F	%	
<b>Sites: <u>Luiseno</u></b>					
SD1 616	2	1.8	109	98.2	110
SD1 721	0	0.0	18	100.0	18
SD1 789	2	10.0	18	90.0	20
SD1 245	0	0.0	10	100.0	10
SD1 245	0	0.0	10	100.0	10
SD1 243	0	0.0	9	100.0	9
SD1 515	0	0.0	5	100.0	5
SD1 520	0	0.0	5	100.0	5
SD1 248	0	0.0	10	100.0	10
SD1 683	0	0.0	5	100.0	5
<b>Sites: <u>Diegueno</u></b>					
SD1 853	15	48.3	16	51.7	31
SD1 862	2	33.3	4	66.7	6
SD1 863	7	100.0	0	0.0	7
SD1 903	4	30.7	9	69.3	13
SD1 858	1	100.0	0	0.0	1
SD1 857	0	0.0	0	0.0	0
SD1 1027	0	0.0	0	0.0	0
SD1 901	10	37.0	17	63.0	27
Gen. Park	20	33.3	40	66.7	60
<b>Sites: <u>Luiseno</u></b>					
All excavated core area sites	23	3.1	713	96.9	736
All surveyed core area sites	4	2.0	189	98.0	193
<b>Total <u>Luiseno</u></b>	<b>27</b>	<b>2.9</b>	<b>902</b>	<b>97.1</b>	<b>929</b>

Table 13 (continued)

	S.N.		N.S.N.		Total
	F	%	F	%	
Sites: <u>Diegueno</u>					
All excavated core area sites	645	41.2	920	58.8	1,565
All survey core area sites	59	40.6	86	59.4	145
Total <u>Diegueno</u>	704	41.1	1,006	58.9	1,710
Total--all	731		1,908		2,639

F = Frequency

S.N. = Side-notched

N.S.N. = Nonside-notched

**General**

Park = Surveys from state park area by San Diego Museum of Man (Cuyamaca)

W-263 is San Diego Museum of Man site designation for site SD1 901.

Table 14  
 Projectile Point Distributions for Diegueño Villages

<u>Sites</u>	<u>S.N.</u>		<u>N.S.N.</u>		<u>Total</u>
	<u>F</u>	<u>%</u>	<u>F</u>	<u>%</u>	
<b>Desert Villages</b>					
C-144	44	42.3	60	57.7	104
Piñon Basin	27	45.7	32	54.3	59
<b>Noncore-Area Villages in Upland Zones</b>					
W-202	21	45.6	25	54.4	46
W-131	70	27.6	183	72.4	253

Table 15  
 Percentage Frequencies--Scraping Tools from  
 Excavated Sites

	Temecu	Luiseno		Diegueno	
		SDI	SDI	SDI	SDI
	%	%	%	%	%
<b>Scrapers</b>					
<b>Domed</b>					
Type 1	a	3.0	0.3	4.8	c
Type 1A	a	0.0	0.15	0.2	c
Type 2	a	0.3	0.0	1.7	c
Type 3	a	0.0	0.0	0.0	c
Nondiagnostic	a	0.3	0.0	2.8	c
<b>Flake</b>					
Type 1	a	4.8	1.7	4.3	c
Type 2	a	1.0	0.0	0.7	c
Type 3	a	0.0	0.0	0.2	c
Type 4	a	0.3	0.0	0.1	c
Nondiagnostic	a	3.0	0.0	3.2	c
Keeled	a	0.7	0.15	0.0	c
Cortex Based	a	2.4	0.45	0.0	c
<b>Scraper Planes</b>					
Type 1	0.0	0.3	0.0	1.1	c
Type 5	0.0	0.0	0.0	0.5+	c
Type 7	0.0	0.3	0.0	0.3	c
Nondiagnostic	0.0	2.4	0.0	1.4+	c
Total Chipped Stone <sup>b</sup>	8.0	18.5	0.2	21.8	c
-----					
Total Scrapers (no.)	66	54	12	190	c

<sup>a</sup>Only totals available.

<sup>b</sup>Exclusive of used flakes, types 1, 3.

<sup>c</sup>No scraper data available for this site.

Table 16

**Scraper-Chipped Stone Frequencies and Percentages  
from Surface Survey Sites**

Sites:	Scrapers		Other Chipped Stone		Total
	F	%	F	%	
<u>Luisño</u>					
SD1 616	6	3.3	175	96.7	181
SD1 721	3	8.5	32	91.5	35
SD1 789	6	13.6	38	86.4	44
SD1 245	1	5.8	16	94.2	17
SD1 243	0	0.0	19	100.0	19
SD1 515	0	0.0	13	100.0	13
SD1 520	0	0.0	12	100.0	12
SD1 248	1	3.7	26	96.3	27
SD1 R-10	0	0.0	6	100.0	6
SD1 683	0	0.0	7	100.0	7
	17	4.7	344		361

Luisño Scraper Plane frequency = 0 (0.0%)

Sites:	Scrapers		Other Chipped Stone		Total
<u>Dieguño</u>					
SD1 853	24	32.0	51	68.0	75
SD1 862	18	50.0	18	50.0	36
SD1 863	5	22.7	17	77.3	22
SD1 903	6	18.7	26	81.7	32
SD1 858	4	50.0	4	50.0	8
SD1 857	7	100.0	0	0.0	7
SD1 1027	4	80.0	1	20.0	5
SD1 901	2	4.5	42	95.5	44
Gen. Park	0	0.0	84	100.0	84
	70	22.3	243		313

Dieguño Scraper Plane frequency 14 (4.4%)



Table 17

Percentage Frequency Hammerstone Complex--  
Excavated Core Area Sites

	<u>Temecu</u>	<u>SD1 682</u>	<u>SD1 308</u>	<u>SD1 860</u>	<u>SD1 913</u>
Hammerstone Complex (F)	18	16	10	130	c
Total Chipped Stone <sup>a</sup> (%)	2.1	5.4	1.7	14.9	c
Total Articles <sup>b</sup> (%)	1.7	3.5	1.4	8.4	c
Chipped Stone <sup>a</sup> (F)	821	291	557	868	c
Total Articles (F)	1,011	447	687	1,538	c
Hammerstones (F)	18	11	7	107	c
Hammer-Grinder (F)	0	1	2	12	c
Hammer-Scrapers (F)	0	0	0	7	c
Choppers (F)	0	1	1	4	c

---

F = Frequency (number of specimens)

<sup>a</sup>Chipped stone exclusive of used flakes, 1, 3.

<sup>b</sup>Total sample exclusive of sherds, historic, milling stone fragments, and used flakes.

<sup>c</sup>No hammerstone data available for this site.

Table 18

**Hammerstones to Chipped Stone Frequencies and Percentages  
from Surface Survey Sites**

Sites:	Hammerstones		Other Chipped Stone		Total
	<u>F</u>	<u>%</u>	<u>F</u>	<u>%</u>	
<u>Luisño</u>					
SD1 616	0	0.0	176	100.0	176
SD1 721	1	3.5	27	96.5	28
SD1 789	1	2.3	39	97.7	40
SD1 245	0	0.0	15	100.0	15
SD1 243	0	0.0	17	100.0	17
SD1 515	0	0.0	8	100.0	8
SD1 520	0	0.0	8	100.0	8
SD1 248	0	0.0	16	100.0	16
SD1 R-10	0	0.0	8	100.0	8
SD1 683	0	0.0	7	100.0	7
<u>Dieguño</u>					
SD1 853	16	14.0	88	86.0	114
SD1 862	15	32.6	31	67.4	46
SD1 863	12	40.0	18	60.0	12
SD1 903	4	11.7	31	88.3	35
SD1 858	3	33.3	6	66.7	9
SD1 857	10	40.0	15	60.0	25
SD1 1027	12	70.6	5	29.4	17
SD1 901	1	2.0	49	98.0	50

the potential value of this element, were slow to adopt the full range of ceramic forms and failed to incorporate many of its obvious features into their own pattern of living.

Whether the Luisiño took over the use of pottery very late in time or whether pottery had a more restricted usage over a longer period of time is unknown. The dating of the introduction of pottery into both areas must await the proper application of some absolute dating technique.

In any case, it is obvious that some differences did exist between the two areas with respect to ceramics. These differences are hard to document, but are illustrated primarily in the relative degree of elaboration and the number of forms found in the Diegueño territory as opposed to those found within the Luisiño territory. The Luisiño made no more than six to seven kinds of fired clay items, including some four to five different vessel forms. In contrast, the Diegueño made twice as many vessel forms and at least three times as many specialized ceramic items.

The differences can be seen also in the amount of pottery recovered from the archaeological excavations in the two defined areas. The site at Temecu, where over 500 cubic yards of midden were excavated in the San Luis Rey II component produced 6,613 potsherds, or 11.8 sherds per cubic yard. At SD1 682, 1,243 sherds were recovered from twenty-five cubic yards of excavated midden, or 49.7 sherds per

cubic yard. SDi 308 produced about eighty sherds per cubic yard from the San Luis Rey II component. Although detailed analyses of the ceramic content of the two areas has yet to be made, this level of sherd density represents either a very low use potential for pottery by the Luisẽño, or suggests that the patterns of utilization for the two areas were in some way very different. The total sherd count for the three excavated Luisẽño villages mentioned above, for example, could be translated into not more than seventy-five medium sized direct rim bowls, or some thirty medium sized storage or water ollas. This number of sherds was recovered from 614 cubic yards of excavated midden. In contrast, the one Diegueño village excavated (SDi 860) by the writer produced in excess of 32,000 sherds from about forty cubic yards of excavated midden. These sherds would reconstruct into about 240 medium sized direct rim bowls or 100 medium sized ollas, which is roughly three times as many vessels from approximately one-fifteenth the amount of excavated midden.

Two factors need to be considered in the understanding of these differences. The first is the obvious possibility that the Luisẽño just did not use pottery to the same degree as did the Diegueño, and this is undoubtedly true. The second consideration is that the uses for pottery were in some way different. Thus the Luisẽño may have used pottery vessels primarily for storage and most vessels may not have

been kept on the living sites themselves. This pattern is supported by the relatively large number of pots recovered from cache locations within this territory. Such cache vessels would seldom become part of the village refuse. In the Diegueño territory, however, because of the practice of urn burials of the cremated ashes, a large percentage of all pottery would end up as part of the midden refuse. Some differences between the two areas in both a qualitative and quantitative sense do exist. The final word, however, will have to await completion of a more detailed analysis of the ceramic resources of the area at large. No attempt will be made to provide distributional data for ceramic elements in general. The specialized forms will be treated in a section following.

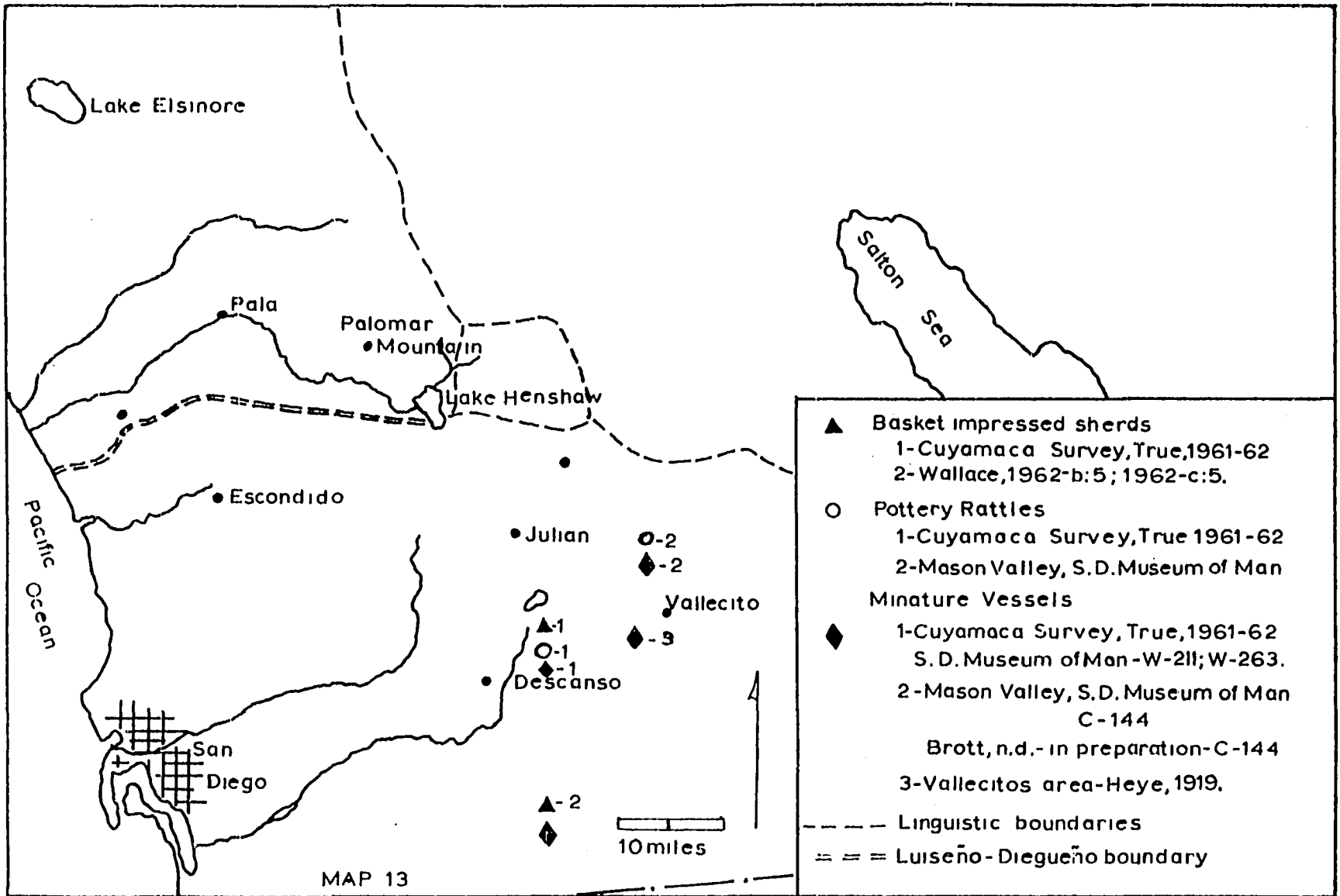
Category 2: Diagnostic Artifacts Exclusive to One Area and Not the Other

Artifacts in this category generally are found in small numbers and the percentage frequencies so far are not important. Because of this, they will be treated more or less on a presence or absence basis. Because in some cases the actual number of items involved is very small it is probable that future work may result in some revised conclusions. However, since the average sample here is of considerable size this possibility is not considered sufficient to invalidate the overall obtained results of this survey.

Basket impressed sherds.--The recovery of potsherds with a distinct basket marked impression on one surface so far has for all practical purposes been confined to the Diegueno territory. Such sherds have been found on both surface survey and excavated sites. On the basis of sherd configuration it is possible to suggest that both bowl and olla forms have this characteristic. The sherds so far examined were from full sized functional vessels and not from miniatures constructed for some special purpose. All are Tizon wares and probably fall into the Palomar Brown subtype as it was defined by Meighan (1959:36-39).

In addition to those impressed sherds examined from the sample collected from this study, others collected at an earlier time by the San Diego Museum of Man have been reported. Wallace (1962b:5; 1962c:5; 1962d:4) reports them from Anza-Borrego State Park. A single sherd was reported from the site at Temecu by McCown (1955:39). This specimen was not examined as part of this study and is the only known specimen from Luiseno territory.

The archaeologically determined distribution of this trait is supported by ethnographic data. Rogers (1936:8), describes the use of a basket mold starting piece among the Southern Diegueno, Kamia, and Havasupai, but not among the Luiseno or Cahuilla. Map 13 indicates the known distribution of this trait.

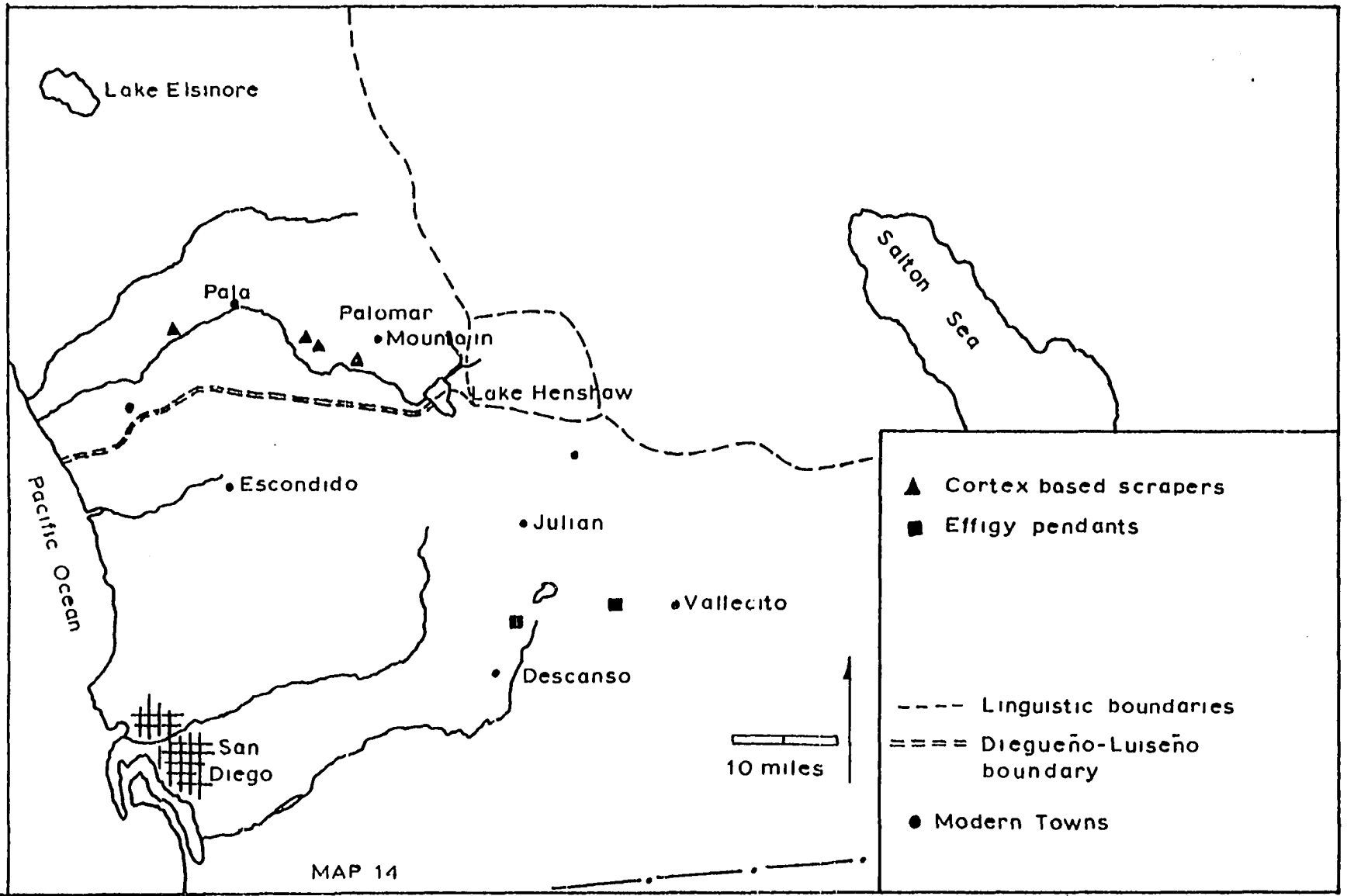


Pottery rattles.--Several fragments of pottery rattles have been recovered from sites in Diegueño territory. To date, such artifacts are not known from Luiseno territory. Ethnographic data support the use of clay rattles by the Diegueño and Kamia, but their use by the Luiseno has been denied by all informants so far queried (M. J. Rogers, 1936; and unpublished field notes of writer). Map 13 indicates the distribution of this element within the areas of concern.

Miniature vessels.--The sample here contained 143 fragments (at least eighty to ninety different specimens) of miniature vessels. In addition to the specimens examined as part of this study, a number of miniature vessels was examined in the San Diego Museum of Man. All artifacts in this class were recovered from sites within the Diegueño territory and, to date, none are known from Luiseno territory. Map 13 indicates the distribution of this artifact.

Small ceramic effigy forms.--Artifacts in this class are not to be confused with some zoomorphic effigy forms sometimes associated with ceramic figurines in this area (True, 1957:294). The artifacts here are small ceramic charms or pendants with the appearance of some stylized effigy form. To date they have been recovered or reported only from a few sites within the Diegueño territory. Map 14 indicates the distribution of this item.





Cortex based scrapers.--For the late prehistoric and protohistoric periods, this artifact has been recovered only from sites within the Luisño territory. It is, however, a rather common element on several earlier La Jollan sites (Crabtree, Warren and True, 1963:352). In light of the distributions so far described the distribution of this artifact is unexplained. Since a continuum of developments from La Jollan times into historic Diegueño seems to be in evidence the presence of this La Jollan type artifact in Luisño but not Diegueño sites is of some interest. In any case, since concern at this point is with the determination of cultural differences and not with the development of hypotheses explaining these differences, this mystery will be left for the future. Map 14 indicates the distribution of cortex based scrapers.

Steatite industry.--This category is not concerned with specific artifacts in a quantitative sense, but is a more general grouping whose distribution adds its weight to the suggested cultural differences between the two areas.

Steatite artifacts or worked fragments are found in both territories. They are not common in the Luisño territory, however, and in contrast to the 120 plus specimens recovered from core area sites in the Diegueño territory, only seven specimens have been recorded from the studied Luisño sites. This does not include several hundred artifacts of steatite in the San Diego Museum of Man, all

of which were recovered from sites within the Diegueno territory. There is no evidence for manufacturing of steatite in the Luiseno site refuse. On the other hand, many partially finished artifacts and much scrap material have been recovered from several Diegueno sites.

The range of kinds of manufactured steatite artifacts also appears to be significant. Artifacts recovered from Luiseno sites include arrowshaft straighteners, heating stone fragments, sherds from at least one pot and an occasional bead. Artifacts recovered from Diegueno sites include several hundred arrowshaft straighteners in several forms, pot fragments, pipes, heating stones, beads, heavy rubbing stones, discs, incised tablets, numerous pendants and a few effigy forms. Much of this elaboration in the latter area can be attributed to the ready availability of raw materials, since quarries are known to have been located near several of the sites in the Diegueno territory. This alone is not the final answer, however, and in other cultural contexts, people are known to have traded raw materials over long distances, or even to have made long trips to get needed materials. The trading of obsidian over wide areas is well documented. The well developed steatite industry within the coastal Chumash and Canaliño depended upon raw materials carried in from the Channel Islands or other sources well removed from the immediate coastal sites. Wedel (1941:53) reports that steatite at the Buena Vista

site was "exceedingly common" and describes a number of artifacts recovered there. Raw material for these artifacts appears to have come from two quarries, one about twenty-five miles from the site and the other over 100 miles from the site (Wedel, 1941:53).

Although at the present time no steatite deposits are known within the bounds of the Luisño territory, deposits are known that are less than thirty miles from the Luisño core area.

The implication here is either that working in steatite was considered relatively unimportant by the Luisño, although they seem to have recognized its potential in many specialized applications, or for some reason the source of raw material was not open to them. Trading between the two areas appears to have been limited with respect to steatite artifacts or raw materials. Detailed petrographic studies of the steatite used in the artifacts themselves could probably determine the source of these raw materials, since it is likely that each of the deposits is in some way distinct.

Category 3: Artifacts found in Both Areas  
Believed to Have Potential Future Diagnostic Value

This category is concerned with artifacts found in both areas but which are believed to have some potential diagnostic value in future studies when the artifact samples are substantially increased.

Figurines.--The present sample of figurines is relatively small. It consists of fifty-seven fragments from some six sites. Many of these fragments are small and non-diagnostic. Figurines known from the Southern California area manifest a considerable range in formal and stylistic characteristics (True, 1957; McCown, 1955; Wallace, 1957; Wallace, 1962). However, because many of the specimens are fragmentary and because the provenience is poor for some artifacts, it is not possible to tell whether the observed differences are: (1) the result of more than one tradition coexisting in the same larger area; (2) the result of two or more basically different traditions from different points of origin; or (3) the result of changes through time.

Within the range of variations found in the total sample, it is possible to see two basically different styles:

1. A flat cross-sectioned figure believed to be most often associated with applique type "coffee bean" eyes; and
2. A round cross-sectioned figure most often seen with punctate features.

It is, however, nowhere clear just how these two patterns are related.

The speculative suggestion that the flat forms may be in some way more typical of the areas occupied by Yuman speaking peoples, or that the round forms more properly

belong within the Luiseno area, is complicated by the fact that fragments of both forms are found in both areas. It is probable, however, that the flat forms are more common in the southern areas (Diegueno). In any case, regardless of the status of present data, the possibilities for some future separation of these two forms appear to be favorable.

Pipe styles.--The possibility that fired clay pipes might prove to be diagnostic elements for one or the other of the two areas is complicated by the assumption that all ceramics used by the Luiseno originated with the Diegueno or their antecedents. Thus while two distinct pipe styles are present and ethnographic data tend to support the notion that the bow pipe is a Yuman trait and the straight tubular form is characteristically Shoshonean, other factors must be considered.

As part of future work concerned with this problem several factors should be considered:

1. Determination of whether or not fired clay pipes were actually manufactured in Luiseno territory;
2. Consideration of the possibility that fired clay pipes were part of the Luiseno inventory prior to the introduction of pottery in the general sense; and
3. The possibility that pipes and, for that matter, other ceramic artifacts might actually have been introduced into the Luiseno territory via the

Cahuilla or Cupeno rather than directly from the Diegueño.

Arrowshaft straighteners.--Although most artifacts in this class tend to be nearly the same, there are some differences which may turn out to have some cultural significance.

The sample is small. This limits the effectiveness of a comparative study, but the possibility of getting a more adequate sample appears to be good. For sites in the Diegueño territory arrowshaft straighteners are relatively common, even though the present sample only includes a few specimens. Over 100 specimens could probably be examined in the San Diego Museum of Man collections. All of these have been collected from sites within the Diegueño core area. In contrast, less than a half dozen are known from Luisseño core area sites.

Factors believed to have some diagnostic value in some future study of these elements include:

1. Body configuration (convex section versus flat top forms);
2. Single grooved forms versus multiple grooved forms;
3. Perforated versus nonperforated types; and
4. Variations in the incised patterns on the upper surface. Some Luisseño informants have indicated

that these lines have some magical significance  
(field notes of writer from Max Calac).

Artifacts associated with Tolache ritual.--The Tolache ritual and some related activities using similar equipment are reported ethnographically from both the Luiseno and Diegueno territories (Dubois, 1908:77-84; Waterman, 1910:293-300). There is some reason to believe that the Diegueno adoption of this practice may have been quite recent. More specifically, there is a possibility that the idea of using tolache was adapted to an existing Diegueno pattern and that in some cases the traditional and "classic" form of the ritual itself was not taken over. In the so-called "classic form," for example, the grinding of the root and the drinking of the concocted drug is done in and from the same vessel. This vessel is the sacred Tamyush and is considered by the Luiseno to be a being and not just an inanimate object. The Tamyush was born of the earth mother as part of the original creation. The Diegueno sometimes drank the concoction from pottery vessels or from baskets (Waterman, 1910:295).

The artifacts associated with this ritual which might be found in an archaeological context are the small mortars themselves and the special little pestles used in the grinding process. Several factors complicate the distribution of these artifacts, however, and they would not necessarily be part of the normal midden debris. Most ritual equipment



was not destroyed in the cremations but was passed on from generation to generation. The Tamyush was buried in a special place between ceremonies. This may have been within the village proper, and recovery of some specimens could be expected under certain fortunate circumstances.

To date, no implements fitting the description of the "classic" Tolache elements have been recovered from the excavated or surveyed sites in Diegueño territory. For the Luiseno territory, several small mortars are known which may be Tamyush. Likewise, several small finished pestles have been recovered from the same area. The total evidence here is inconclusive, however, and further comment must await future increases in available artifacts.

Summary comment on group 3 diagnostic artifacts.--Artifacts in this group do not contribute in any specific sense to the solution of the problem at hand. They do, however, offer some potential for future work in this direction and, in a general sense, tend to support the conclusions reached as a result of the analysis of the more specifically diagnostic artifacts in categories 1 and 2.

Category 4: Cultural and Behavioral Patterns Present in One Area and Not in the Other

These patterns may or may not be associated with characteristic artifact differences.

Cremations.--Both the Luiseno and Diegueno cremated their dead. This fact has been documented by ethnographic sources and the general practices in both areas are known reasonably well.

Because the Luiseno were more directly influenced by the mission developments, cremation practices were abandoned there at an early date. As a result, there is very little direct and detailed ethnographic information available for the Luiseno. DuBois' informants, as early as 1908, for example, could not remember seeing a cremation but recalled that such practices had been described by their grandparents (Dubois, 1908). In any event, the Luiseno did cremate and enough is known to reconstruct the general patterns used. The corpse was placed on a pyre, either directly on the ground or in a shallow pit. The person's belongings were placed in with him at the time of the burning. Following the cremation the residual bone and effects were scattered or buried in the vicinity. No attempt was made to gather or preserve or in any way identify the remains once the body had been burned. In earlier times the practice initiated at the time Wiyot (the Culture hero) was cremated was followed. This called for some of the remaining bones to be gathered and ground in a mortar (perhaps a Tamyush). The powder resulting from this grinding process was mixed with water and the mixture was poured into a hole in the ground. These practices were part of a ritual complex

dedicated to the proper disposal of the dead and included, along with this grinding and disposal in the sacred hole, ritual cannibalism wherein the Not'h or Pa Ha drank some of the mixture thus produced. Remnants of this practice survived until relatively recently. At the present time this aspect of the ritual is taken care of with a token gesture wherein the presiding official drinks some water in which the clothes have been washed (Stong, 1929:299; White, 1953:575). The available archaeological evidence supports these practices, although with negative rather than positive evidence. To date no clear-cut evidence of gathered cremations has been collected within the Luisenó territory. McCown (n.d.: Fallbrook Number 7 site) reports finding a portion of a cremation. No cultural material was associated with these remains and the exact circumstances of the reported find are unknown. For the core area sites in the present study, no recognizable cremations are reported. Indication of cremation practices within these and other sites in the area are seen in the form of occasional bits of burned bone, calcined beads and ornaments, scattered through the midden.

At SD1 682 there is some evidence supporting the described mythological practices. Here an area some eighty feet in diameter probably represents a ceremonial location associated with cremation practices. Here the midden deposit is characterized by a substantially greater number

of artifacts per cubic yard than is the norm for the area at large. There are within this area quite a few burned bone fragments, and many of the artifacts appear to have been burned. The entire area is underlain by an ash-like deposit. Under this ashy material is a continuous and unbroken caliche-like layer. This stratum is believed to be the result of abnormal leaching through a soil containing substantial amounts of lime and/or phosphates. This is a situation which would prevail if cremations had taken place over a period of time in the same general locale. There is no natural lime in the soils anywhere in this region and similar caliche deposits have never been reported. The details relating to the formation of this deposit and a hypothesis explaining its presence here and not on other excavated sites in the area will be published under separate cover and are in themselves of no great concern here. What is believed to be important is the fact that there is no evidence for formalized pit burials of collected cremation remains, or of secondary burial in urns, anywhere in this region.

In contrast, Diegueño cremations seemingly persisted until a much later date and are better known. Ethnographic references to Diegueño practices include mention of both urn burials and the gathering and marking of the remains (Waterman, 1910:305-6; DuBois, 1907:489).

The pattern as it is known from the ethnography is

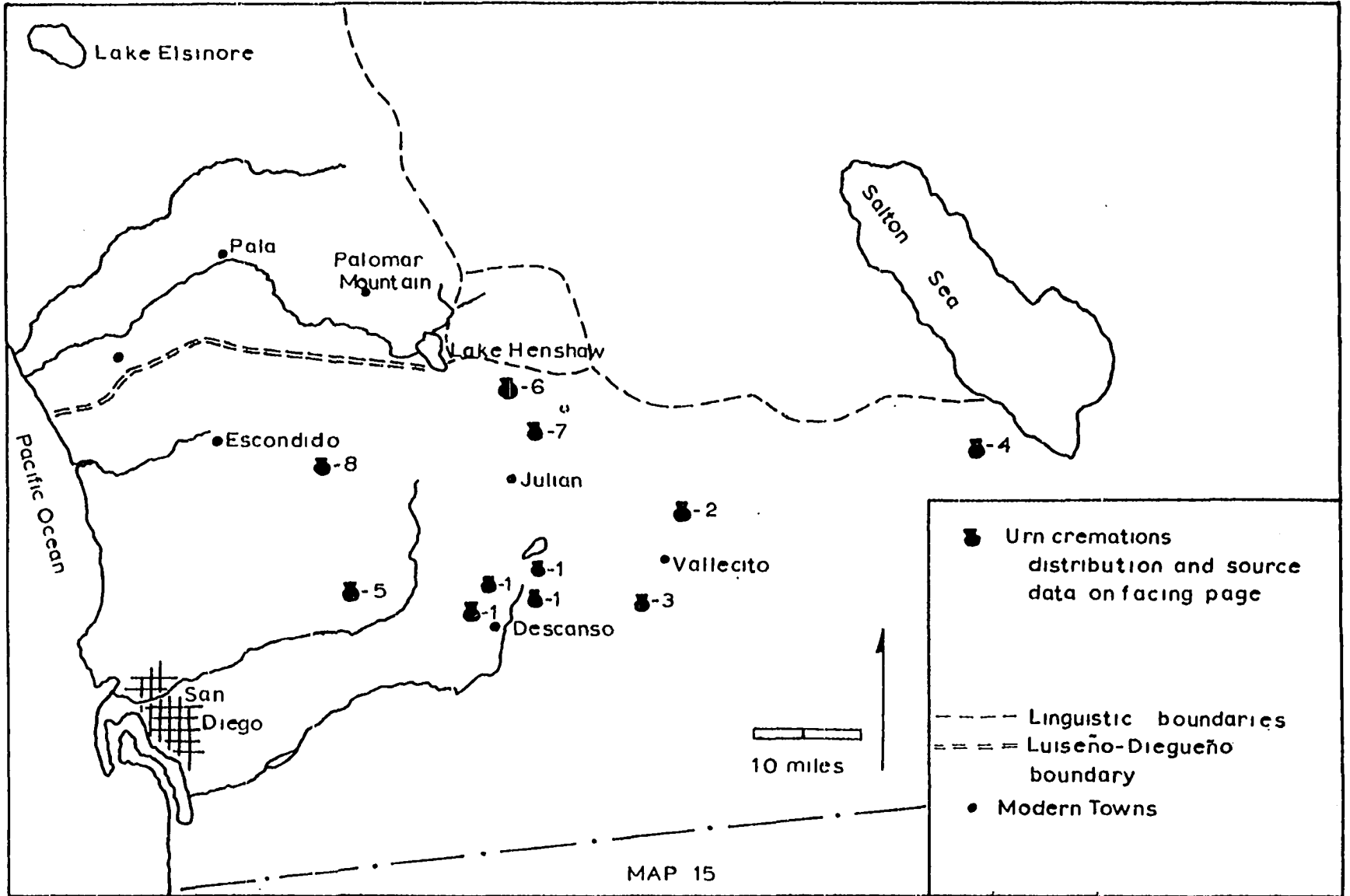
confirmed by the large number of urn cremations recovered from Diegueño territory. Unfortunately, most of these have been recovered by relic hunters. Some documented finds are known, however. McCown (1945:255-264) reports the recovery of urn cremations at San Vicente Lake, and the San Diego Museum of Man has taken out a number of cremations at sites scattered throughout the southern part of San Diego County. No intact urn burials were recovered from the core area excavated site in the Cuyamaca region (SDI 860). However, a cemetery area was opened up and there is no question but what gathered and fragments of urn cremations were present. The cemetery here was characterized by middens generally less than eighteen inches deep, more than average amounts of cultural debris, burned bone and large amounts of pottery. Included with the artifacts here were a number of special items believed to have been made especially for inclusion in mortuary offerings. Long, slender, elaborate projectile points with little apparent functional use, unused and miniature arrowshaft straighteners, and miniature vessels are believed to belong in this category.

The production and use of special grave furniture and offerings were probably made by the Hohokam and the items used there are similar to those recovered here.

Map 15 indicates the distribution of gathered and urn cremations in San Diego and Imperial Counties, California.

## Map 15

1. Cuyamaca Rancho State Park. (SD1 853, SD1 913, SD1 903, SD1 860). Field notes, True, 1963; Museum of Man collections.
2. Mason Valley. Village of Net Nook. (San Diego Museum of Man designation C-144). References: Museum of Man field notes and site records; Clark Brott, personal communication, 1964.
3. Diegueño Cemetery described by Heye (1919).
4. Village location on western edge of Salton Sea near Kane Springs, Imperial County, California. (D. L. True, field notes, 1963).
5. San Vicente Lake Bed (McCown, 1945).
6. Mateguey-San Felipe Creek area (Heye, 1919).
7. San Ysabel-Mesa Grande area (Heye, 1919; True, field notes, 1950-1964).
8. Poway Valley and Ramona Area (Heye, 1919; San Diego Museum of Man Site Records).



### Other Useful Criteria

In addition to the various elements described above believed to be diagnostic of one or the other of the two areas, one other kind of criterion is suggested which may be useful in the definition of cultural boundaries in the San Diego County area.

#### Lithic Material Distribution

The lithic materials used in the manufacture of chipped stone implements in the two defined core areas can be grouped into six generalized categories: (1) quartz (crystalline); (2) basaltic; (3) felsitic; (4) obsidian; (5) chert; and (6) other (miscellaneous).

The quartz group includes all forms of crystalline quartz but does not include the cryptocrystalline varieties. These noncrystalline forms are included in the miscellaneous group.

The basaltic rocks include a number of basalts and similar fine-grained volcanics. Some of the finer-grained specimens are separable from the felsitics only on the basis of a distinctive color. No concern has been directed toward the mineral content of these rocks and several and distinct lithic entities have probably been lumped into these general categories. The material categorized as felsitic here is a fine-grained volcanic with a distinctive green color. This was a favored stone in the earlier San



Dieguito and La Jollan complexes.

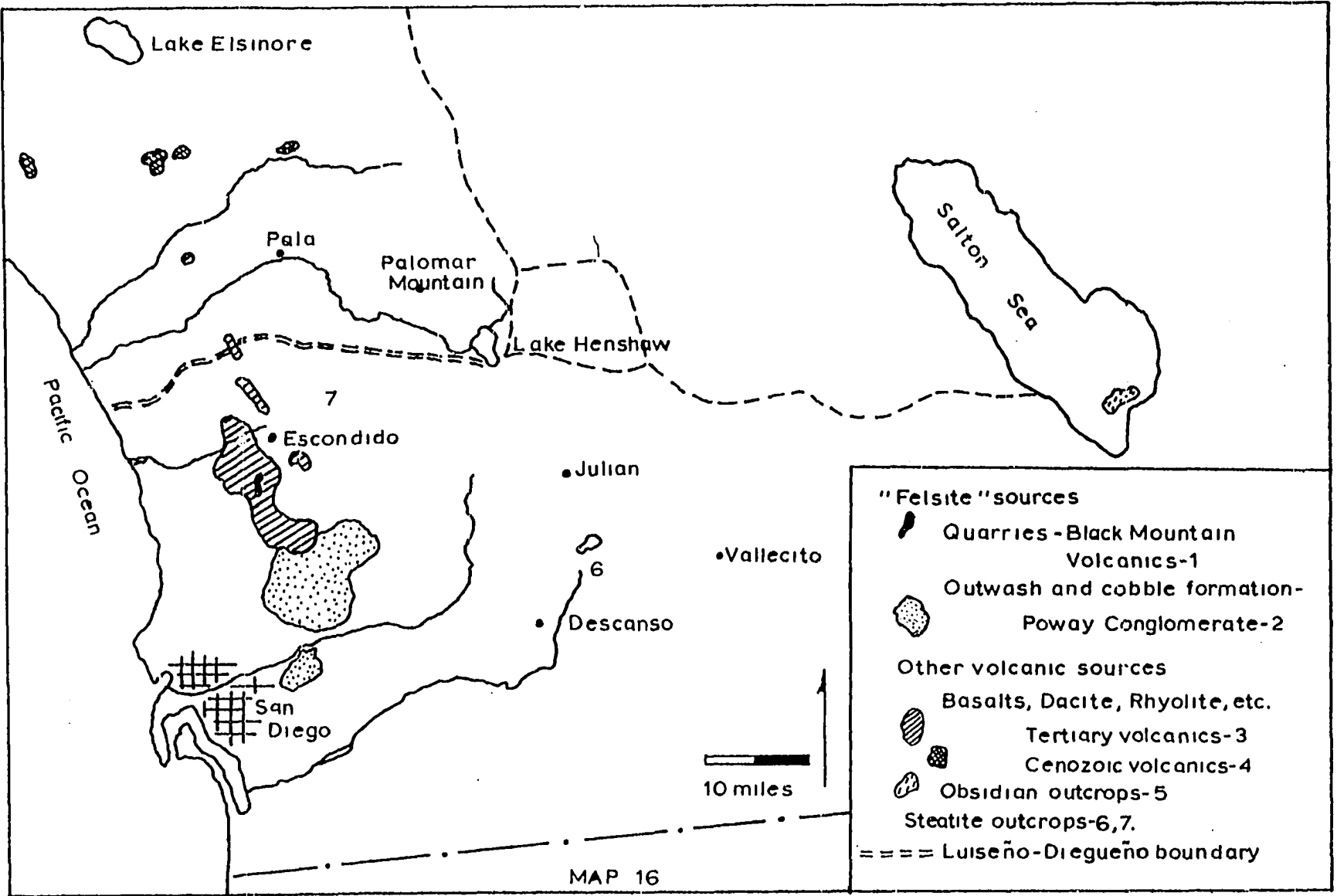
Obsidian here tends to be a rather opaque variety characterized by white mineral inclusions. Most of the obsidian found in this area probably originated in the southern Salton Sea region.

The term chert here refers to a dark colored siliceous material believed to have originated from local deposits scattered at various locales over the area at large.

The miscellaneous category includes chalcedony, agate, jasper, opal, quartzites, and various unidentifiable materials. Most of this group probably were imported from the desert.

Table 19 indicates the distribution of projectile points by lithic materials from the core area excavated sites. Map 16 illustrates the location of known outcrops and sources of lithic raw materials within the two defined linguistic provinces.

The predominance of quartz artifacts in the Luiseno territory and the much more common use of obsidian, felsite, and imported desert materials in the Diegueno are believed to be significant. The difficulties in working crystalline quartz as opposed to the other noncrystalline quartz family materials and the fine-grained volcanics are well known. In many areas considerable effort was expended to obtain suitable materials for chipped stone work. Numerous examples of extensive trade for the purpose of obtaining these



materials can be cited for western North America. The predominance of crystalline quartz chipped stone artifacts within the Luiseno core area suggests either that there was some culturally determined preference for this material or that for various reasons the sources of other more easily worked materials could not be exploited.

Both of these possibilities are believed to have been operative in this instance. This pattern probably represents a further indication of the limitation of movement across the linguistic boundary separating the two areas.

The notion that such limitations do exist is supported by ethnographic data for the Luiseno. Their raw materials within any local territory were the property of that group and could not be exploited by "outsiders" without permission. More specifically, for example, the occupants of the village at Pauma were not permitted to exploit a "black rock" belonging to the village or within the territory of a village to the west. It is stated that these deposits were "guarded" and to get material from there involved considerable risk (field notes of writer from Luiseno informants, and personal communication from R. White, 1957). Comparison of the lithic content of the village at Molpa SDI 308 with that of SDI 682 illustrates the relative use of quartz and fine-grained volcanics and cherts between the two Luiseno villages. If such a separation was actually in effect between two Luiseno villages occupying adjacent territories,

the probability that the same kind of separation existed between the Luisño in general and the other beings living across the linguistic boundary to the south appears to be good.

Basically, the separation of the two linguistic areas on the basis of lithic distributions is seen in the relative frequency that felsite and obsidian were used in the Diegueño territory as compared with the Luisño. The only known felsite outcrops are located within Diegueño territory. Obsidian sources are either within the Diegueño territory or within easy reach for the mobile Yuman speakers. No obsidian deposits are known to be within the Luisño territory. Some obsidian-like materials may have existed in one area but these are not described ethnographically and the material does not seem to be present in the sample with any frequency. Felsite was a favored material for the earlier inhabitants of the area at large. Within the Diegueño territory use of this material continues to some degree right up to historic times. In contrast, felsite is relatively rare in artifact assemblages from the Luisño territory after the end of the Pauma Complex occupation. Most felsite artifacts recovered from late sites in the Luisño territory were probably gleaned from earlier Pauma sites and were not made from materials obtained by them from the primary outcrop sources.

## Summary for Section VII

A detailed examination of a substantial artifact sample and the consideration of those activities believed to have been preserved in the archaeological record has resulted in the conclusion that certain diagnostic elements can be related to specific territorial provinces. In this case, these provinces correspond to the ethnographically defined ethnic and linguistic territories occupied by the Luiseno and the Diegueño in historic and protohistoric times.

These conclusions were reached on the basis of a simple but definitive comparison of artifact percentages and frequencies from a number of excavated sites within the two defined core areas. The results obtained in this case were substantiated by the analysis of surface collected samples from sites within the designated core areas and from sites selected at large from the overall linguistically defined territories.

The correlation existing here between a number of diagnostic trait elements and the linguistically defined areas is believed to be due to cultural isolation resulting from the effects of the linguistic boundary itself and because of a developed ethnocentric attitude maintained by the two groups involved.

This idea will be pursued in the following section.

Table 19  
 Frequency Distribution of Projectile Points  
 by Lithic Materials

	<u>Temecu</u>	<u>SD1 682</u>	<u>SD1 308</u>	<u>SD1 860</u>	<u>SD1 913</u>
Quartz	59.2	57.1	84.0	21.1	11.8
Basaltic	22.8	11.4	6.8	17.9	40.9
Felsitic	2.1	0.6	1.9	16.8	16.3
Chert	8.5	23.4	2.1	5.8	--
Obsidian	2.8	2.8	3.1	28.6	16.5
Other	4.3	5.7	5.1	9.5	14.5

## SECTION IX

### DISCUSSION AND CONCLUSIONS

On the basis of the above comparisons and evaluation it is possible to conclude that there were measurable differences between the archaeologically derived cultural inventories of the occupants of the Diegueño and Luiseno territories in protohistoric times.

For the purposes of this thesis these results must be examined in terms of three separable but related frames of reference:

- A. How can such differences be explained, and to what degree can they be related to the described ethnic-linguistic boundary?
- B. To what degree do these differences exist on a Shoshonean and Yuman level of abstraction, as well as on the local Luiseno and Diegueño levels?
- C. In what way can such data contribute to the culture history of the area at large?

#### A. Explanation of Differences

With regard to the first of these categories it is possible to say that there are definite differences in the cultural traits in the two territories. These differences are

almost certainly the result of cultural factors. The environment and subsistence for both areas are the same. The basic data were recovered from contexts identifiable as the protohistoric component for each of the areas and there is no reason to think that the defined pattern is in any way the result of temporal differences. Thus we have two contemporaneous peoples occupying contiguous and identical environments and exploiting an identical subsistence base, each characterized by a number of distinctive cultural traits.

Consideration of the defined artifact differences and their significance in the present context is summarized in a simplified outline hypothesis:

1. During protohistoric and late prehistoric times the San Diego County area was occupied by two distinct and different linguistic stocks--the Shoshonean speaking Luiseno and the Yuman speaking Diegueño.
2. The cultural patterns of these two groups were in a process of adaptation to a similar environment and as a result many of the subsistence and basic cultural elements were shared by both peoples. There were, however, certain elements not affected by this adaptive process, and some facets of the two cultures were recognizably different.
3. These differences were probably the result of (a)



the partial retention of the original cultural heritage of each group and (b) external influences upon each group from somewhat different sources.

4. There was a minimum of interaction across the linguistic boundary and a significant degree of cultural isolation was maintained between the two areas.
5. This isolation was primarily the result of communication factors, but was supported by the differences in attitude and the world view of each of the two groups.

With regard to this hypothesis, the extant linguistic differences and the linguistic boundaries separating the two groups have been documented beyond any doubt. The homogeneity of the environment is supported by a considerable body of geographic and ecological data. The described historic cultural patterns for the two peoples have been documented in considerable detail. These ethnographic descriptions have been supplemented and refined with archaeological data supporting the contention that the patterns in the two areas included several significantly different elements. These defined differences do coincide with the extant linguistic boundaries. Thus, it is only with respect to some explanation for these differences that this "hypothesis" needs to be further developed.

The sources of the basic differences for the two groups

are, of course, no mystery. There is little question but that the Luisiño or their antecedents were part of the so-called Shoshonean intrusion into this area. As such it seems safe to assume that the intruding groups would have had a cultural background and a way of life that was measurably different from that of the indigenous occupants of the intruded area.

The primary concern here, however, is with the fact that after several centuries and even perhaps several millennia of occupation in this same area, where contact between the two groups was in no way impeded by physical barriers and where subsistence factors were such that there would have been a strong tendency toward similar adaptations, enough of the preexisting pattern was retained in each case to mark the two areas as different on the basis of archaeologically recovered elements.

Most of the differences documented, however, are in traits with little or no functional significance. They are the attributes of elements which have survived the pressure for change primarily because they contributed little, if anything, to the actual solution of day to day problems. In addition to the retention of these traditional ways of life, another factor contributing to these cultural differences must be considered--the introduction of new ideas and influences from without. Thus two almost exactly opposed notions are involved:

1. The cultural differences are in part the surviving nonfunctional elements of each of the two unique historical developments, part of the traditional ways of each group.
2. The differences are due to the introduction of exotic ideas or items from without. Such differences in this case are probably the result of several factors, but the two most important ones are believed to be:
  - a. each of the areas was subject to influences from different sources (e.g., Colorado River and Desert Southwest for the Diegueño; the Great Basin and other "Californian" for the Luiseno); and
  - b. differential adoption rates for such exotic elements resulted because of differences in basic attitude and the relative degree of conservatism maintained by each of the two groups.

The distribution of the artifacts taken from the archaeological sites supports this proposed pattern; the artifacts do consist of those elements and attributes that would not have any great effect upon the functional efficiency of the implements in either direction. Ethnographic data provide little definitive support for this aspect of the hypothesis, but do provide considerable support for the contention that each of the two areas was subject to outside influences

from different sources. This latter part of the problem is well documented and need not be examined in detail here (Kroeber, 1923, 1939; Lowie, 1923; etc.).

If the suggestions explaining these cultural differences are assumed to be essentially correct, the next logical question is: what mechanisms and factors, other than the adaptive neutrality of the elements themselves, have been operative in the maintenance of these differences in the face of the leveling or equalizing adaptive pressures?

Two basic factors have been suggested as prime movers in this regard:

1. Relative isolation due to the linguistic differences between the two groups; and
2. Isolation due to differences in attitude and world view.

With regard to the former factor, the linguistic differences between the two groups are marked and significant. It is assumed that the difficulties in communication across such linguistic boundaries, and other related factors, would be effective agents in the maintenance of a significant degree of cultural isolation.

This isolation, while not absolute in any sense of the word, was sufficient to permit the retention of distinctive traits in both areas. This notion is supported in the archaeology only with respect to the distribution of the

defined diagnostic elements. These distributions, however, are such that it is highly unlikely that the correspondences between them and the linguistic boundaries are coincidental. Both of these proposed factors have some ethnographic support. With respect to these ethnographic data, relationships between settlement patterns and the social organization, and the influences of these patterns upon the attitude of the two peoples, are probably significant.

The settlement pattern of the Luiseno was characterized by a number of autonomous social units occupying localized territories. Each group had a defined territory and at least two permanent village complexes. Although its occupants were relatively mobile within any one prescribed territory, there was little or no mobility across territorial lines. Each group defended its own area against trespass and normally exploited only those resources contained within this territory (White, 1963:122-129; Strong, 1929:279; Sparkman, 1908:190).

The functional social unit is believed to have been a sib or clan and each village complex was probably made up of at least two of such units. The concept of ownership was well developed and important in the lives of these people. The resources within each territory were "owned" (1) by the village at large (community resources available for all members of the village group); (2) by specific sibs or clans; (3) by family groups; or (4) by individuals.

Reciprocal ritual obligations between the various family or sib level units in a village provided the basic social interaction above a nuclear family level. Payment was expected for services rendered in this regard and there was a considerable circulation of "wealth" (food resources) within the defined social pattern. This exchange of goods provided a mechanism for the redistribution of resources in the event of "crop failures" (acorns) in the groves of any individual family.

This pattern of exchange could be extended outside of the defined village territorial bounds when deemed desirable. Under certain circumstances people from adjacent village complexes could be given permission to hunt or gather on "private" property. This was not a common happening, but indicates that there was a mechanism for some limited intercourse across village boundaries. A documented occurrence of this sort is described by White (1973:127-132). Here a series of events is described wherein the people from Pechanga were permitted to gather on Pauma owned territory because of a crop failure in their own area. A misunderstanding developed and the intruders were attacked by a group of Pauma hunters in defense of their territory. This initiated the so-called Pauma-Pechanga "war" and a number of skirmishes followed. Most of the action here appears to have taken place by means of various forms of magic and displays of supernatural power, although several

people were killed. A cessation of hostilities was followed by a special ritual reserved for peace making. Following such a ritual there probably was a brief period of more or less friendly relations between the two villages. This was not a lasting arrangement, however, and in general there was a minimum of intercourse between villages.

The sedentary pattern typical of the region could only be maintained in an area where the resources were relatively rich and where a small area could support a reasonably large population. The significance of this settlement pattern and the activities developing out of it is seen in the tendencies for each of the local village groups to operate as nearly autonomous and endogamous units. The logical outcome of such behavior was the development of a tendency toward inwardly oriented activities and a suspicion of all things foreign. This ethnocentricity was well developed in the Luisño pattern. The plentiful resources available, the lack of any needed mobility, and the developed concern with ownership and property rights all acted to focus attention upon a localized spatial area. There was little need for, and probably less interest in, trade and outside interactions. When these factors are considered in light of the mythological background and the cosmogony of the Luisño, this ethnocentricity and concern for the maintenance of the status quo becomes even more apparent and understandable.

The Luisño universe was well defined and each being

had a place in the system. This place was determined as a result of certain contests, power struggles and knowledge (White, 1963:140-145), and there was no easy to change the established pattern. In fact, the religious system and most of the accompanying ritual activities were dedicated to the maintenance of this defined pattern. In theory at least, it was a complete and functional system, with everything in its place and a place for everything. A number of supernatural forces were present to enforce the rules and much of the ritual was in some way involved with the confirmation of the system and the impression of the importance of it upon each new generation. The result of this finite universe was a cultural attitude which regarded any being or behavior not part of the established order in a negative way.

Innovation as such was not part of this system, since everything had been created "as is," or was situated in the course of the development of the existing pattern following the death of Wiyot, the culture hero.

One exception to this attitude probably existed within the class of pula or religious chiefs. Here one's power and influence depended upon his knowledge and ability to keep things in order. His knowledge was obtained from three different sources: (1) inherited, (2) "native" intelligence, and (3) acquired (R. White, 1957:1-19). Acquired knowledge was that information that a pul could



pick up in the course of a lifetime by means of his powers of observation and mental acuity. This kind of knowledge was available to him because some of Wiyot's power and knowledge had been thrown away in earlier times and was "available" for certain persons, if they had the native ability to recognize those things which were both useful and safe to use. Thus the possibility for some limited innovation and acceptance of new ideas by the religious chiefs did exist. This "loophole" in the system is important in the understanding of the cultural development of the Luiseno. The significant thing here, however, is the fact that there was very little pressure toward innovation and that in general the Luiseno were inwardly directed, conservative, limited in their mobility, and extremely sedentary people.

This tendency toward an autonomous existence, minimum mobility across territorial boundaries, and a generally suspicious attitude toward any outsider was apparently the norm within the Luiseno speaking community. Although there were many local versions of the mythology and traditional ways, each group owned its own songs and sacred knowledge relating to the tradition, all of the local versions were part of the same system and had a common origin.

It is suggested that an inwardly focused attitude within the same linguistic community, and within the same basic cultural tradition, would be even more developed with

regard to beings existing outside the system. Thus there would be little reason or opportunity for much intercourse across the linguistic boundary itself. The resulting isolation would be an effective barrier to the spread of many ideas. This is not to suggest that the barrier was absolute, for there must have been some contact between the two groups. There is, however, little indication of this contact in the literature with regard to the precontact situation. The Diegueño were mentioned as traditional enemies, however, in at least one account (Tac, 1952:7-10). For the most part, the extant literature is concerned with descriptions dealing with the post-contact situation. During this latter period of time there was, of course, considerable contact and exchange of ideas between the two areas. This later contact included the taking over of a number of Luiseno ritual practices by the Diegueño, as well as some intermarriage, and would appear to negate (at least in part) the thesis that isolation was the norm between the two groups. This is not necessarily the case, however, and a number of factors need to be considered with respect to this situation. For one, the early introduction of Spanish as a lingua franca eliminated the basic inability to communicate across the boundary. Both groups were taught Spanish at the missions at an early date, and most adults could speak both their native language and Spanish prior to the time the missions were secularized. Another factor of

importance was the result of large reduction in population following the establishment of the missions. Reduced population and Christian concern with cousin marriage led many of the semiconverted Indians to search for marriage partners outside of their own village and eventually outside of their own linguistic group. Lessening concern with the traditional patterns, elimination of the language barriers and a general "Pan Indian" feeling uniting all Indians against all of the new intruders were possible factors leading to the eventual exchange of many ideas across the previously maintained barriers. Much of this breakdown could have taken place very soon after firm contact was established.

In any case, prior to such contact the documented Luiseno attitude would have been an effective agent in the maintenance of cultural isolation. Although interaction, even within the system, is believed to have been limited, the introduction of any new idea would have a better chance of acceptance (1) if it arrived from within the Luiseno or or Shoshonean speaking community, and (2) if it were an idea falling within the sphere of religious rather than within the secular aspects of Luiseno life.

For the Diegueño, the available ethnographic information is not as well documented, and much of what is known deals with the post-contact period. It is possible, however, to say that certain basic attitudes prevailed there and that these attitudes were different than those of

the Luiseno.

The settlement patterns, although similar to the Luiseno with regard to the seasonal round and the permanence of the villages, differed in several ways. Here the concept of ownership is not well developed. Resources within the territory at large were generally available to most Diegueno regardless of their local affiliation. Some local unit identification was present but there was, in addition, recognition on a tribal level. This pattern was seemingly typical for most of the Yuman speaking tribes in the area.

Because of the liberal attitude toward resources, the lack of strongly developed ownership concepts, the lack of strictly enforced trespass rules, and the recognition of all Diegueno speakers as at least nominal friends, there was a potential for a great deal of mobility within the Diegueno territory at large. This attitude was extended in part to some of the adjacent Yuman speaking areas, and it seems that there was considerable interaction between at least some of the Yuman speaking communities in Southern California. This general notion of a Yuman identity is recognized in several works on Yuman speaking groups within this area. (The proclivity of some Yuman speakers toward mobility and movements outside of their own territory is documented in part by the traditional notion of the "Mohave Trader.")

For the purpose of this thesis, the significance of these Yuman attitudes lies in the increased potential for

trade, both within the area and outside of it, and the consequent contact with new ideas from without.

Because of the prevailing attitudes within each of these larger areas, the movement of ideas within the Diegueño territory would have been easier than within the Luiseno. Because of this, the protohistoric Diegueño pattern was probably the result of a continuing number of influences emanating from the Colorado River area, from the southern deserts of Arizona, and from portions of the Great Basin.

The Luiseno pattern originally received its basic configuration from the north, and was subsequently influenced by other California groups and by ideas from the Great Basin. However, because of a long period of semi-isolation and considerable localized development "in place," the Luiseno pattern at contact did not include several elements which had subsequently become part of the Shoshonean pattern in the Great Basin itself.

So far, the resources studied do support the notion that cultural differences in this area can be recognized in the archaeological record. These archaeological differences coincide with the Luiseno-Diegueño ethnic-linguistic boundary and it is assumed that there is a significant relationship between the two distributions.

Further analysis here raises the question as to whether or not this is a local phenomenon confined only to the Luiseno-Diegueño boundary, or is a local manifestation of a

larger configuration wherein the combined Shoshonean and Yuman components can be separated on the basis of the same or similar attributes.

#### B. Level of Abstraction of Differences

If, as has been suggested above, the linguistic differences have functioned as an effective barrier to communication, it is natural to assume that the Southern Californian Shoshonean speakers as a group would share certain traits in common. Such a traditional pattern would likewise prevail for the Southern California Yuman speakers, and there would be recognizable differences between the two larger aggregates. Thus the extension of the results obtained in the Luiseno-Diegueno analysis to the next level of abstraction is a logical move. Whether or not it is anything more than this remains to be seen. In the evaluation of this situation, several questions need to be examined:

1. How much influence has environment or ecology had on the larger configurations?
2. How much of the Luiseno-Diegueno differences was due to linguistic factors and how much to the Luiseno attitude?
3. How can the resolution of the larger problem be approached within the bounds of presently available data and existing anthropological techniques?

Unfortunately, no definitive or absolute answers can be given to these questions at the present time. However, on

the basis of the results obtained from the Luiseno-Diegueno analysis, some constructive suggestions can be made. For the most part, however, such suggestions involve long range projected future works.

It is assumed that, as one moves eastward out of the upland areas of Southern California into the desert, an increased mobility, expanded territories, and a decreasing concern with territorial boundaries would be in order. Thus some of the factors believed to have been effective agents in the isolation of the Luiseno, for example, would not necessarily be operative under other ecological or environmental circumstances. Because it is important in this kind of study to hold the number of variables to a minimum, the initial effort should be confined to an area where the general environment and ecology are similar.

For the present, then, concern is focused upon the Southern California Shoshoneans who occupied the interior upland valleys and intermediate coastal regions. This would include the Cupeño, Mountain Cahuilla, Pass Cahuilla, most of the so-called Serrano and probably the Gabrieleño.

If the relative isolation created by linguistic differences is significant in cultural developments, and if these differences are factors in the retention of a characteristic cultural pattern for groups with a common heritage, the aggregate Shoshonean groups mentioned above should be more alike than a similar aggregate with differing cultural

heritages and diverse languages. The degree to which the postulated differences could be recognized in the archaeological record is unknown. It is assumed, however, that if differences can be isolated between any two groups, there is no theoretical reason why the same approach could not be applied to the larger aggregate as long as the ecological and temporal aspects are held constant.

However, the possibility that the obtained results in the Luiseno-Diegueno analysis were the result of a unique situation existing only between the Luiseno and the Diegueno must be considered. A cursory examination of the ethnographic literature suggests that the settlement patterns and attitudes among the Cupeño, Cahuilla, and Serrano were at least similar to those of the Luiseno (Strong, 1929:6-65; Kroeber, 1908:39-44, 65-67; Gifford, 1918:177, 209). A general sharing of many traits and activities by all of the above cited groups is recognized and tends to support the potential for a more detailed examination of the total attributes making up this aggregate.

A similar situation prevails for the Yuman speakers, although in this case marked differences in ecology between the upland groups and the Colorado River farmers tend to complicate matters somewhat. In spite of such complications, there are many indications of a Yuman "identity" and a number of traits and attitudes appear to be typical for the community at large (Spier, 1923:298-99; Forde, 1931:



105, 133, 146, 262-64, 272; Gifford, 1931:1-18, 1936:321-323; Waterman, 1910:343).

The differences between Shoshonean and Yuman communities at large are, at the present time, mostly confined to ethnographically obtained data. There is, however, no reason to think that these or similar differences could not be documented archaeologically once adequate samples are available from a number of sites within the two larger areas. The methodological approach suggested for the evaluation of these archaeological data once they become available is simplistic and involves only the continuation of the pattern established for the Luiseno-Diegueno study.

Thus the next step in the planned program would be to do a detailed comparative analysis of artifacts recovered from a series of Cahuilla sites known to have been occupied in historic times. Wherever possible these sites should be in several differing ecological situations within the Cahuilla territory. The recovered artifacts should be classified on the same general basis as were those in the Luiseno-Diegueno analysis. The results of this study would permit the accurate comparison of the Cahuilla-Luiseno cultural patterns. A similar program for the Cupeno and Serrano, as well as the inland Gabrieleño, would eventually provide the information needed to determine the relative homogeneity of the combined Shoshonean groups. The evaluation of each succeeding group should be made with reference

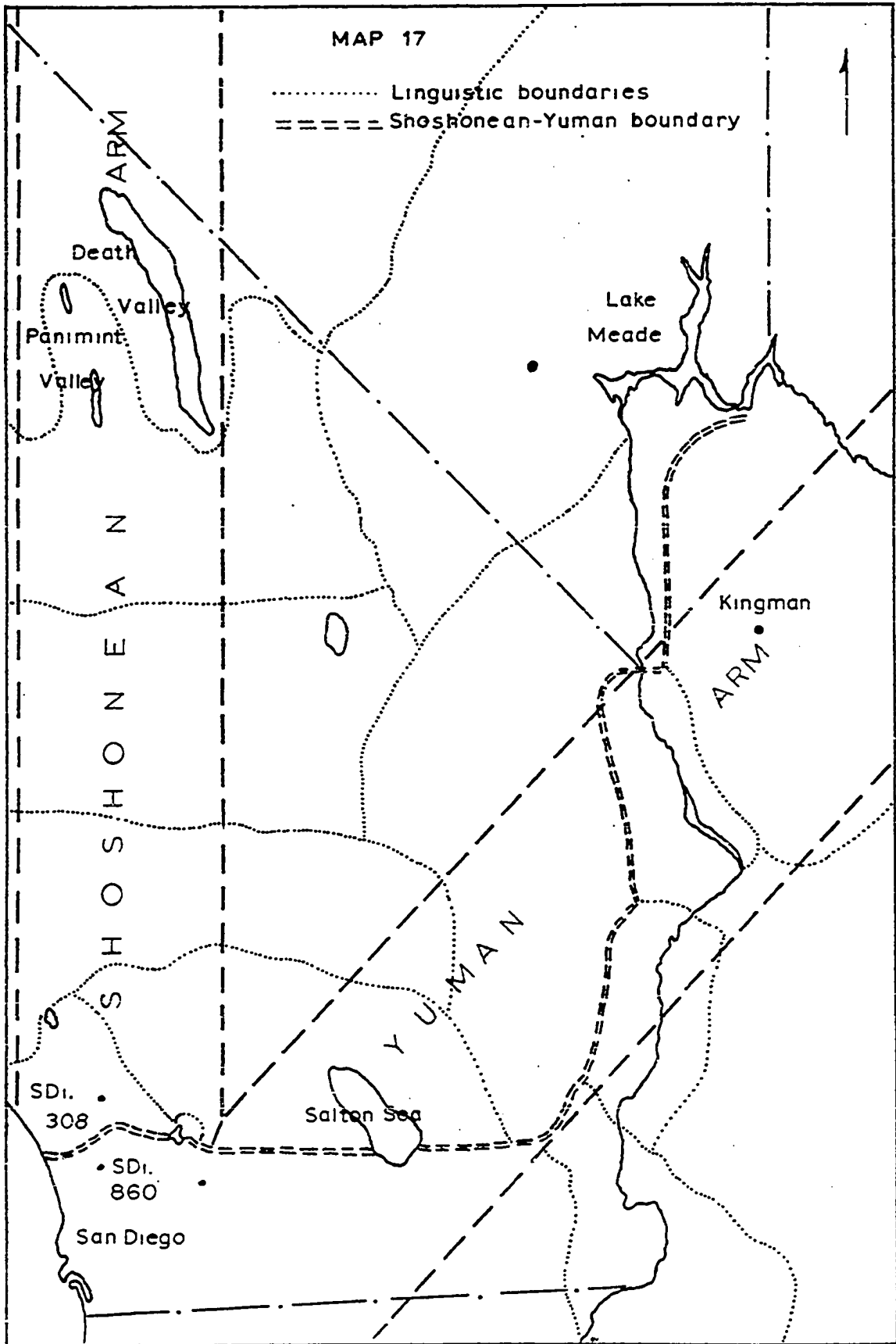
to the established diagnostic elements isolated in the earlier analyses, although new diagnostic elements will probably be recognized as the overall sample increases. Once an adequate sample has been collected and analyzed for each of the local areas they can be compared with the larger area as a whole. Those elements held in common probably can be considered potentially diagnostic for the larger areal pattern. If this aggregate for the total Southern Californian Shoshonean territory proves to be relatively homogeneous and is consistently separable from the previously defined Diegueno assemblage, the next step would be the analysis of the various component groups within the Yuman territory in essentially the same manner.

The extension of this analysis out of the defined coastal, intermediate valley and interior upland physiographic provinces is part of the next step in this proposal. The introduction of environmental and ecological variables at this point will complicate the analysis, but need not negate the results.

Once the relative homogeneity of the Yuman and Shoshonean areas has been established for a limited area within Southern California (assuming that such a homogeneity actually exists) it is necessary to examine the archaeological resources for the larger area to see if this homogeneity can be documented for larger segments of the two linguistic communities. To limit the spatial territory involved and to

provide some formal boundaries to the proposed future efforts in this direction, it is suggested that the extension of the study be made in terms of two strips of land extending out from the San Diego County coast forming a large "V"-shaped pattern. One arm of this "V" would angle across territory occupied by Shoshonean speakers, and the other across Yuman territory (see Map 17). Artifact samples from a number of sites within this strip would then be analyzed moving from the coast into the desert and in a sense from the known to the unknown, in short controlled steps. In effect, this is a proposed application of the "method of controlled comparison" (Eggan, 1954).

The application of the comparative method in the evaluation of archaeological resources is of course a normal and regularly used technique. Almost all archaeologists use this method when they compare the results of a specific study with data previously published by other workers. However, the results of such comparisons often suffer from a general lack of comparability in terms of artifact descriptions, terminology, and basic understanding of archaeological techniques resulting from various levels of expertise, differing training backgrounds, and significant differences in philosophical attitudes toward the utilization of archaeological resources. Further, and perhaps more commonly, the results of such comparisons are weakened because of the space existing between the compared areas. Such spatial



gaps, plus potential temporal differences between the compared elements or components, combine to create a number of hiatuses or areas of potential weakness in any proposed areal synthesis based upon the traditional archaeological use of the comparative method. The approach proposed here is not new nor is it unique and most archaeologists recognize the value of such controlled applications. Failure to use this approach has, for the most part, probably been the result of lack of published data from areas contiguous to the specific site being reported. More importantly, perhaps, it is the result of the fact that until very recently the archaeology of any area has been attacked piecemeal on the basis of existing expediencies rather than in terms of a long-range problem-oriented plan.

It is the contention of this thesis that unless this controlled comparison kind of approach is used in accordance with some long-range plan, there is little hope of defining the cultural history of any area. As long as the gaps between available data remain there will always be some question as to what took place there--or during what period of time. However, with a planned problem-oriented program designed expressly to define the culture history, using standardized criteria, and strictly adhering to the principles explicit in the concept of "controlled comparisons," a body of knowledge could be assembled which would provide a sound basis for desirable large-scale syntheses.

This approach would eventually have to be expanded to include several temporal planes. As temporal controls are established within the various local units, the direction of flow of influences and traits through time, and from one area to another, could be established.

The collections resulting from studies in each of the areas and in the aggregate could be analyzed and described in a number of ways. For those circumstances where only two areas or a few elements are involved the use of simple percentage relationships should suffice. In case of more complex relationships, other more sophisticated statistical or illustrative techniques would have to be employed. Possibilities here include Kroeber's formulations for the grouping of cultural patterns (Kroeber, 1940:29-44), the Brainard-Robinson seriation technique (Robinson, 1951:293-301), cumulative graphs, and perhaps some of the more recently developed applications for the "computerizing" of various comparative data.

By utilizing a simplified classification based upon some sort of standardized criteria, and by focusing the primary effort upon each group of previously established diagnostic elements, the mechanics of such a program would be relatively simple. Once the basic collections and analyses have been made for each of the defined territories, a number of different kinds of studies could be made, all oriented toward the long-range definition of the overall

culture history, but at the same time each with its own unique contribution and some degree of autonomy. Such comparisons could be made with respect to the total artifact sample from all areas, with the total sample from selected areas, or specialized distribution studies could be made for selected artifacts or attributes.

In the case of the latter type study, one approach is suggested to illustrate the direction such analyses might take.

Side-notched projectile points have been traditionally identified with the Shoshonean Paiute occupation of the Great Basin. In the Luiseno-Diegueno analysis, however, they turned out to be practically nonexistent in the Shoshonean Luiseno components and were significantly diagnostic in the Yuman Diegueno components. This distribution is of interest and suggests that side-notched points per se are not potential diagnostic elements for one or the other linguistic grouping.

The side-notched series of projectile points is made up of several recognizable subtypes. These subtypes do not necessarily have similar points of origin or areas of optimum use through time or space within the California-Great Basin area. Thus, the tracing of such attributes over a defined spatial pattern should provide some useful information for the eventual definition of the overall cultural pattern. This approach is limited primarily by a lack of

adequate sample at the present time. Because of this, the application here is illustrative rather than definitive in nature.

Samples from sites in the extreme margins of the defined triangular area were examined with respect to the relative frequency of three side-notched subtypes. In this case temporal aspects are assumed to be essentially similar, although in the case of the Hohokam sample they obviously are not actually contemporary. The proper application of this suggested procedure would of course include consideration of temporal factors and comparisons would have to be made with such factors clearly in mind.

The attributes chosen for this illustration include: (1) straight based, side-notched point (Type 6, this classification); (2) concave based, side-notched point (Type 5, this classification); and (3) single basal notched, side-notched point (Types 8 and 9, this classification). Map 18 illustrates the distribution of the selected attributes from several sites within the defined area. For the purposes of this limited illustration, such graphic presentation of the three forms and some descriptive comment are adequate. For future detailed studies, however, where relationships between a number of combinations of attributes would be desirable and where the samples from quite a few sites must be considered, it is suggested that some more sophisticated ordering technique be used.



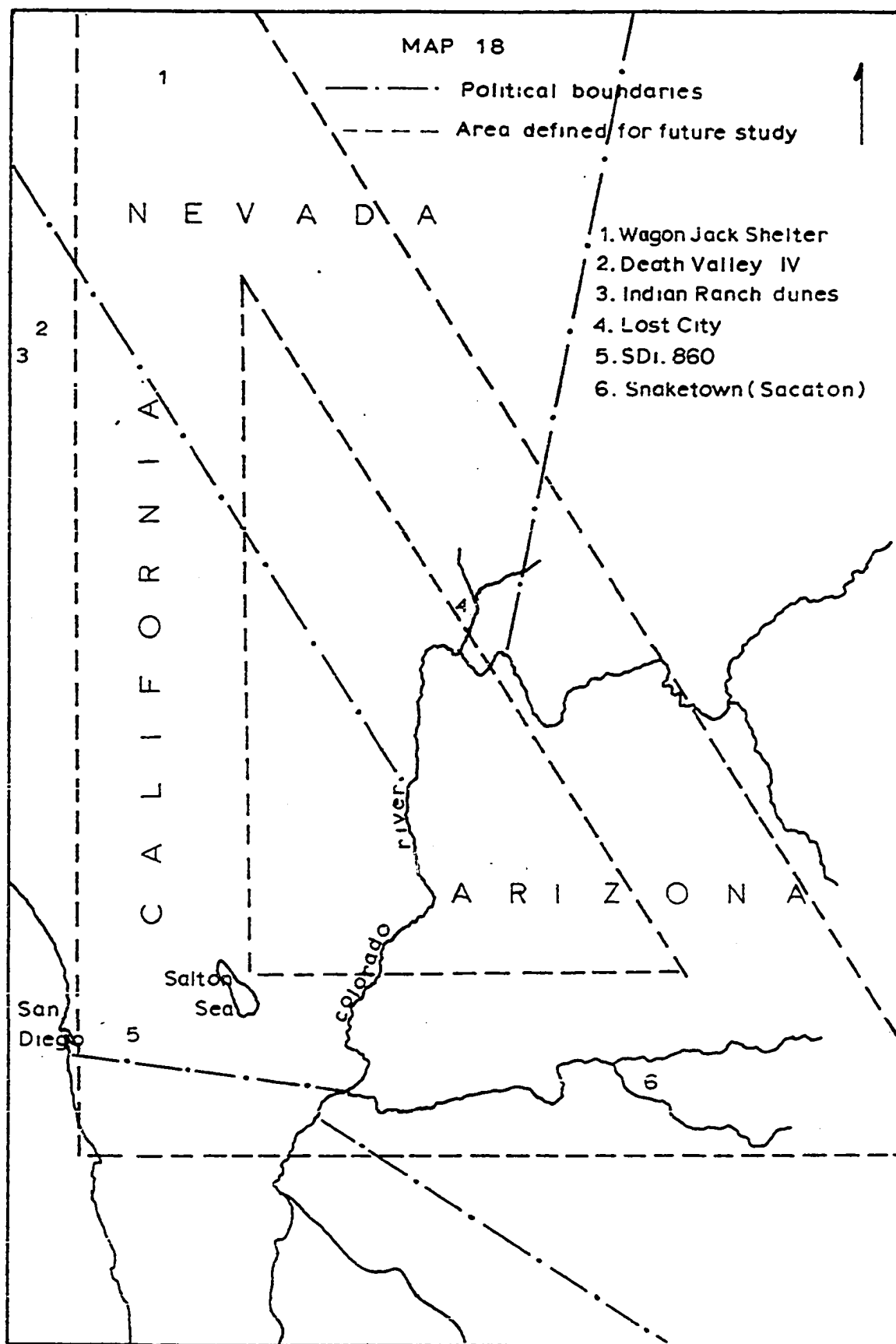
## Map 18

	<u>F</u>	<u>%</u>	<u>% three types</u>
<b>Wagon Jack Shelter (Heizer and Baumhoff, 1961)<sup>a</sup></b>			
Type 5	0	0.0	0.0
Type 6	0	0.0	0.0
Type 8 + 9	8	12.3	100.0
Other	57	87.7	--
<b>Lost City, Nevada (Shutler, 1961)<sup>b</sup></b>			
Type 5	5	14.7	41.6
Type 6	1	2.9	8.3
Type 8 + 9	6	17.6	50.0
Others	22	64.8	--
<b>Death Valley IV (Hunt, 1960) (West side Dunes)</b>			
Type 5	19	22.8	40.4
Type 6	2	2.0	4.2
Type 8 + 9	26	31.3	55.3
Others	36	43.3	--
<b>Indian Ranch Dunes, Panamint Valley (True, n.d.)</b>			
Type 5	16	20.0	41.0
Type 6	0	0.0	0.0
Type 8 + 9	23	28.7	58.9
Other	41	51.2	--
<b>SD1 860, San Diego County--<u>Diegueno</u> (True, n.d.)</b>			
Type 5	73	30.8	76.0
Type 6	6	2.5	6.2
Type 8 + 9	17	7.1	17.7
Other	141	58.8	--
<b>Snaketown (Sacaton phase) (Gladwin <u>et al.</u>, 1937)</b>			
Type 5	17	2.6	2.7
Type 6	594	93.1	94.4
Type 8 + 9	18	2.7	2.8
Others	9	1.4	--

F = Frequency      % = Percentage of total points  
 % three types = Percentages calculated using only types 5,  
 6, 8, and 9.

<sup>a</sup>Sample from top 30 inches of excavated deposit.

<sup>b</sup>Sample from so-called "Paiute occupation." This is mostly surface and unassigned artifacts from Lost City proper and adjacent areas. Sample has little validity for statistical purposes.



A possibility in this regard would be the seriation technique developed by Meighan using the three pole graph (Meighan, 1959:203-211). Using this methodology the relative similarities between any three selected elements from the same class of artifacts can be established. The original application of this technique was to establish relative temporal positions of the selected attributes, but the same principles may be used to order similarities over a spatial pattern. The suggested application here would consist of a number of analyses of several combinations of attributes from samples obtained from a series of sites within the defined triangular areal pattern. The results of such analyses with respect to at least certain attributes should order the selected elements in terms of their relative degree of similarity over the defined spatial range. Since the spatial provenience of each site is known, the results of the ordering process would be to confirm the relative similarities and relationships of the attributes with respect to contiguous sites within the defined area. The established relationships and artifact frequency percentages should provide some indication of directional movement, and areas of optimum usage for the defined attributes. With the establishment of temporal controls this movement and directionality would be even more significant in the long range definition of the culture history.

From both a theoretical basis and from the limited data

available the possibility for isolating some significant distributions here appear to be reasonably good. It is possible to suggest, for example, that there is a regional preference for long, narrow side-notched forms over short, stubby side-notched forms (southern versus northern portions of the western Great Basin). The distribution of the single basal notched side-notched point (Baumhoff's Sierra side-notched [Types 8-9 here]) will probably have a significant patterning. Present data suggest a concentration of this type in the north, with only a limited number of such forms present in the southern areas.

The degree to which these clusterings or patterned distribution of attributes can be related to linguistic areas remains to be seen. The possibility that significant breaks in the continuity of the distribution of diagnostic artifacts might be correlated with linguistic boundaries is present and must be considered. Unfortunately, such breaks in the pattern could be the result of a number of other factors and all of the possibilities would have to be evaluated in context. These "breaks," if they exist, could be the result of ecological changes, physical barriers, cultural factors other than linguistic, or the linguistic boundaries themselves, if it is assumed that the boundary has been relatively constant for some reasonable period of time. The relative mobility consistent with the occupation of such desert areas would tend to reduce the chances for such

correlations. However, if the distributions do consistently correspond to the extant linguistic boundaries with regard to some defined diagnostic elements, the possibility that linguistic factors may have been instrumental in the determination of the distribution must be given serious consideration.

### C. Culture History Considerations

Up to this point all of the various analyses have been based upon the assumption of temporal contemporaneity for all of the diagnostic elements. The definition of the culture history of any area of course concerns itself with developments through time. Thus the long range development of any program designed to evaluate this history must include efforts to isolate the various temporal planes and the relationship of diagnostic artifacts in temporal as well as in the spatial dimensions.

Some comment on the potential here and a suggested methodology for the definition of selected aspects of the development of a culture history for the western Great Basin (as it relates to the California areas) was made in the last section. Because the data available in most instances are inadequate for anything more than speculation and studied guesses, no attempt will be made to expand these comments or to define cultural developments within the Great Basin proper.

However, the results of the Luiseno-Diegueno analysis call for some discussion of antecedent developments in that area. No attempt will be made to present a detailed reconstruction of the cultural developments for this area and discussion will be limited to a few aspects relevant in the present context.

The existence of a broadly based milling stone horizon in this area has been adequately documented (Wallace, 1945; Warren and True, 1961; True, 1958). The suggestion that this milling stone horizon is in some way correlated with the distribution of the Hokan speakers believed to have occupied the area prior to the Shoshonean intrusion must be considered, although no "proof" of such a relationship is presently in hand.

A detailed examination of the coastal aspects of this milling stone component has been made by Warren (C. N. Warren, 1964, unpublished Ph.D. dissertation, UCLA), and several suggestions related to the correlation of the larger linguistic groupings and specific archaeologically defined components have been made by Taylor (1961:71-81) and Hopkins (1965:48-60).

No effort will be made here to recap the area covered by Warren in any detail and it is assumed that his reconstruction of the earlier phases of the historical developments in this area is essentially correct. The significant thing for this thesis is the recognition that the milling

stone horizon did exist, and that it consisted of a relatively homogeneous assemblage of artifacts over much of Southern California. Over a period of time this milling stone pattern was subjected to ecological changes, to influences from without and other factors leading to the development of a number of localized cultures over the area at large.

In San Diego County it has long been assumed that the local pattern developing out of this base was essentially homogeneous for the area at large. Influences are known to have moved in from different quarters (Shoshonean influences from the north and pressures from the Colorado River area to the south and east), but some sort of a mixing process was postulated and the resulting culture at the time of contact was believed to have been more or less the same over the entire county--this, in spite of the fact that the region was occupied by two distinct linguistic groups.

The protohistoric component for this area was defined as Yuman III by Rogers (1945). This archaeologically defined cultural stage was believed to be the end product of a continuum developing out of the earlier La Jolla component (milling stone). The extant pattern making up the Yuman III component had been subject to marked influences from the Colorado River area, and some confusion existed with regard to whether these influences were the result of an actual "invasion" of Yuman speaking peoples from the east or not.

Considerable concern with the possibility of movements of peoples out of the interior mountains into the desert and back, in response to the rise and fall of Lake La Conte, has been expressed by Rogers. This aspect of the culture history is important and of great interest. Unfortunately, comment here must await reliable data on sites from the desert side of the mountains. In any case, these movements do not affect the developments suggested here, and the important thing is the fact that this earlier evaluation of the more recent historical developments in the area made no differentiation between the Yuman and Shoshonean elements of the population.

A more recent examination of the protohistoric archaeological component in the northern portion of the county resulted in the definition of the two San Luis Rey complexes (Meighan, 1954). Here some regional differences were recognized, setting the San Luis Rey occupation apart from the larger Yuman III pattern. But there was nothing in the data to suggest that these differences were correlated with the extant linguistic boundary.

Data resulting from the collections and artifact analyses upon which this thesis is based now permit a re-evaluation and extension of these previously published ideas. No great sweeping changes are in order, but some refinements are suggested that are believed to be of some significance.



Developments out of the later phases of the La Jollan occupation along the coast were oriented toward a changing subsistence because of changes in ecology and environmental factors (Warren, 1964; Crabtree, Warren and True, 1963). These changes are seen as (1) a move back toward a land based gathering subsistence in place of the lagoon oriented shellfish based economy; and (2) a retention of the basic marine oriented interests in certain favored locales and a subsequent development of a weak or quasi-maritime based economy.

Some time following, or during the latter stages of this adjustment, strong influences were introduced into the area from without. The most basic of these was probably the interest in the acorn-based subsistence economy. The pattern here was characterized by an emphasis upon the use of mortar and pestle grinding equipment in place of the widespread milling stone elements. Because of the subsistence base, attention was focused upon the interior upland areas rather than the previously favored coastal regions.

At about the same time, or soon after, the concept of cremation was introduced into the area. There is no way at present to tell for sure whether these two ideas came in together from the same source, came in at the same time from different sources, or came in at different times. What is apparent, however, is that they did move into the area following the period of adjustment along the coast described

by Warren, and that their introduction had a profound effect upon the cultures in the area. The possibility that this acorn-based economy was brought in or was the result of the Shoshonean intrusion from the north is considered to be good.

Whether or not these introductions were part of the actual intrusion of the area by Shoshonean speaking peoples, or were just influences moving into the area from without, is not known. It is obvious, however, that at some point in time (as yet undefined) following the initial adjustments in the coastal subsistence patterns, a portion of the larger area was occupied by the southern and westernmost penetration of the so-called Shoshonean intrusion. The results of this intrusion here can be seen in the development of two separate cultural traditions:

1. The continuation of the basic milling stone base, modified by the introduction of an acorn economy, modified by the introduction of cremation disposal of the dead and by a continuous series of influences from the desert areas to the southeast.

This development culminated in the historic Yuman speaking Diegueño occupation of the southern portion of San Diego County, California. Not all of this area responded to the exterior influences in a like manner, however, and some regions retained a greater measure of the original coastal flavor and maritime oriented interests. Thus the areas in

and around San Diego Bay proper, although greatly influenced by the developments taking place within the area at large, were measurably different than their mountain neighbors to the east. At the time of contact these peoples were recognized as a separate subcategory of the Diegueño speaking population (western versus northern and southern Diegueño).

In general, the overall developments within the Diegueño territory were marked by the retention of an interest in the milling stone (even though they had adopted the mortar and pestle as part of the basic subsistence pattern), continued emphasis upon the use of scrapers and scraper plane elements typical of the milling stone horizon, the use of milling stones to mark the location of cemeteries and burials, the use of defined cemetery areas for the disposal of the dead, and an interest in the use of steatite and the subsequent carving of effigy forms.

Introductions from the Colorado River area and the Southwest resulted in a developed utilization of ceramics and specialized mortuary practices, which included the production of several items made especially for mortuary and ceremonial use (miniature vessels, ceremonial projectile points, etc.), and urn burial of cremations.

2. In the area occupied by the Shoshoneans, the basic milling stone pattern was terminated and replaced by the mortar and pestle. Here the change was

more marked than in the previously described Diegueno area, and milling stone elements were greatly reduced in importance. The same appears to have been the case with scrapers and hammerstones.

Subsistence here, although basically a broadly based gathering economy, was focused upon the acorn as a staple crop. The relatively rich resources in the area permitted a sedentary and "settled in" existence. Concern became focused upon property rights, ownership of resources, and a defined territorial settlement pattern. Cremations here were not marked by the specially made mortuary items, and were not gathered as were those of the Diegueno. Pottery was taken over but its use appears to have been limited.

The significant thing here so far as the culture history is concerned is the separate development in the two areas: one representing a more or less continuous development out of a milling stone subbase, and the other a replacement of the original pattern with a new way of life carried by a new and different people speaking a different language.

Just how these localized developments can be related to the larger patterns in the Great Basin or the rest of California is not known. Basically, discussion of this larger pattern is beyond the scope of this thesis. However, some few brief comments can be made suggesting some

possibilities which may bear upon the eventual definition of the larger pattern:

1. The distribution of a substantial portion of the milling stone horizon tends to coincide with the suggested distribution of the Hokan speaking peoples in California and the Great Basin prior to the Shoshonean intrusion.
2. Many basic elements in this milling stone horizon are in fact the same as those elements considered to be diagnostic of a "desert culture" level of existence.
3. The continuity between the local San Diego area milling stone base and the historic Yuman (Hokan) speaking Megeño is significant. Since there is no evidence for a break in this sequence, there is some basis for the suggestion that the culture of the milling stone horizon, at least in this area, probably was the result of Hokan speaking peoples.
4. A similar situation probably prevailed within the Chumash territory to the north, where a number of traits were shared and where it is reasonable to suggest that the historic Chumash developed out of a similar and probably related milling stone substratum. This is more apparent if the specialized maritime elements are ignored in the north and if the specialized ceramic elements typical of the

Diegueño territory are stripped away.

5. These apparent similarities are found only in the Diegueño (Hokan) area and are not present in the Shoshonean Luiseno territory.

On the basis of these relationships and a number of traits shared with cultures in the desert proper, it is possible to suggest that at least a portion of what has been termed the desert culture may have been carried by Hokan speakers. At least there is some evidence to indicate that portions of the California coastal milling stone complexes were Hokan speakers. Unfortunately, the critical middle stages of development are poorly known and considerably more work must be invested in this area before any firm conclusions can be drawn.

Some indication of the relationships suggested above is presented in Figure 18 and on Map 19.

The stated exploratory nature of this thesis and the recognition that the accomplishments so far are minimal preclude much in the way of definitive conclusions, either with regard to the culture history of the area or the relationships between cultural units and linguistic groups. It can be stated with some assurance that the break between the protohistoric Luiseno and Diegueño is a real one and that there is a definite and positive correlation between the distribution of the diagnostic cultural elements and the linguistically defined territories. A logical explanation

for this dichotomy has been proposed, as have some suggestions for the further extension of this work. Recognizing that much work remains to be done, it is considered probable that utilization of the suggested approach will provide more useful data in the future. The many gaps and errors extant in this thesis serve to emphasize that this is the end of the beginning, and not in any sense of the word the beginning of the end.

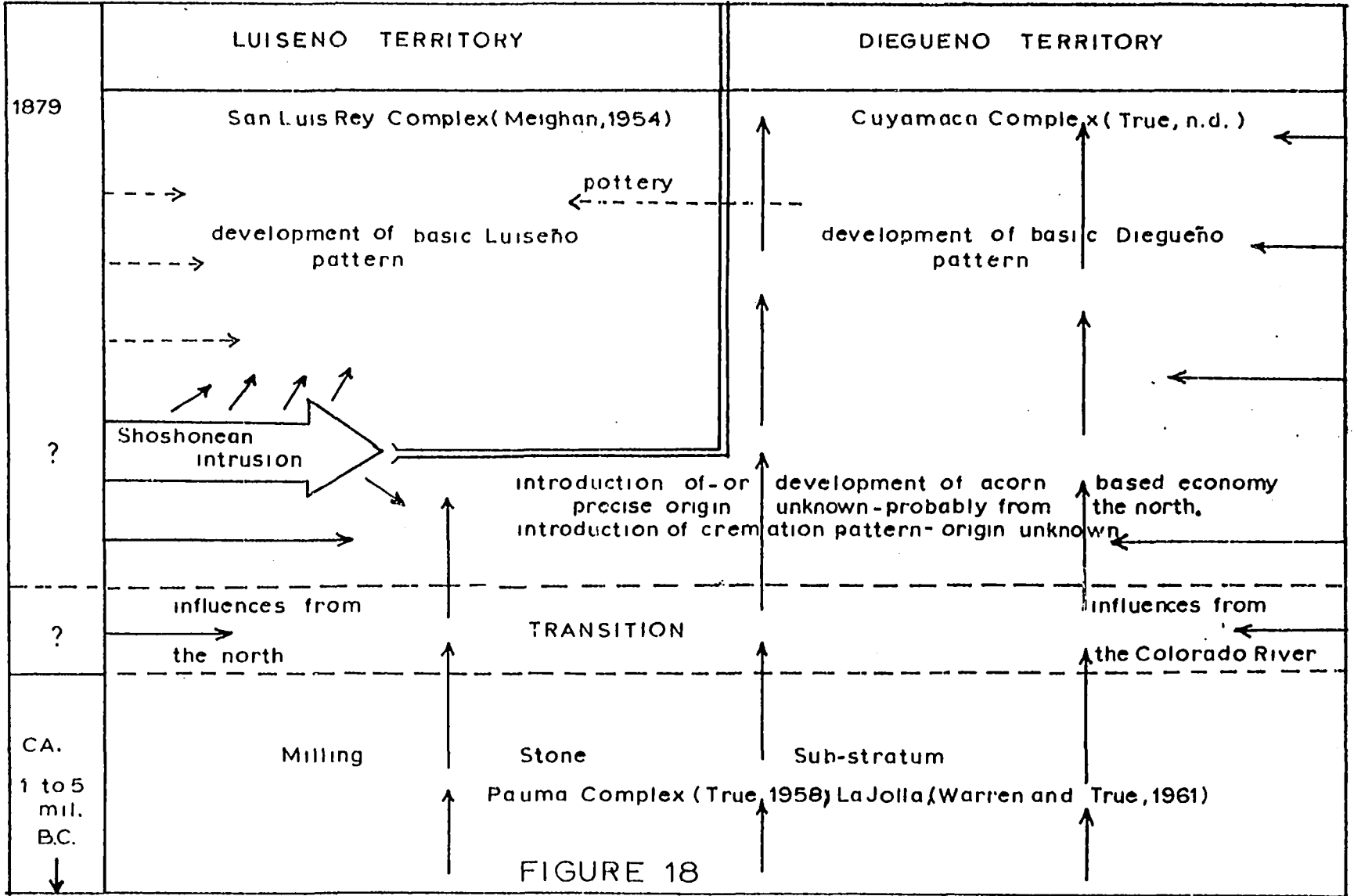
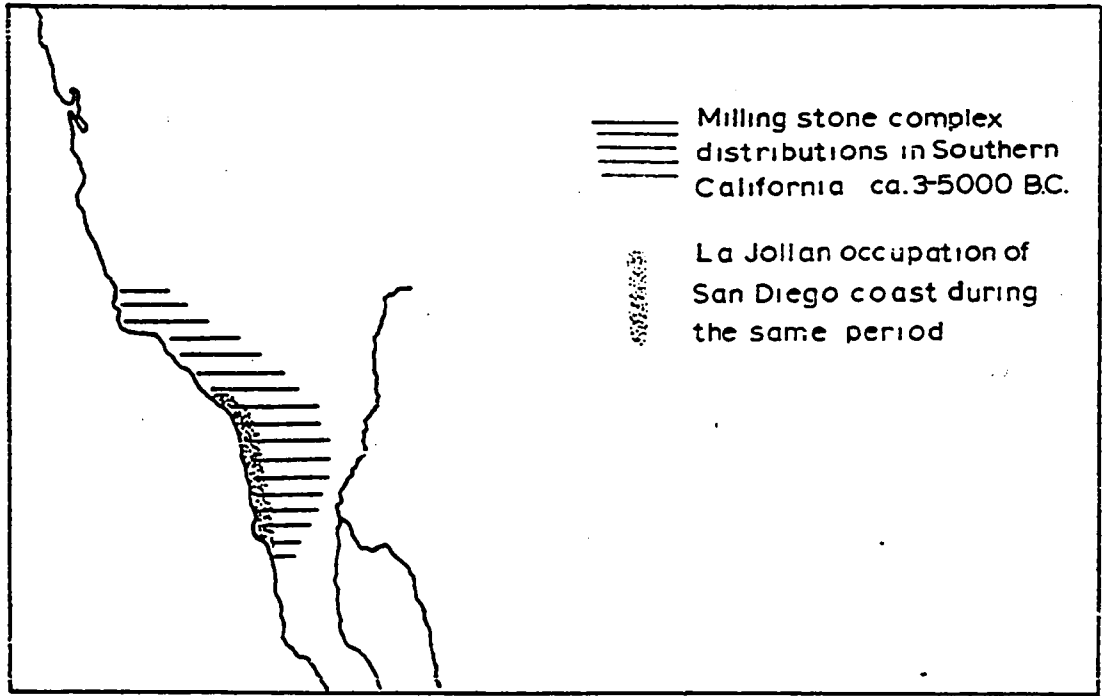
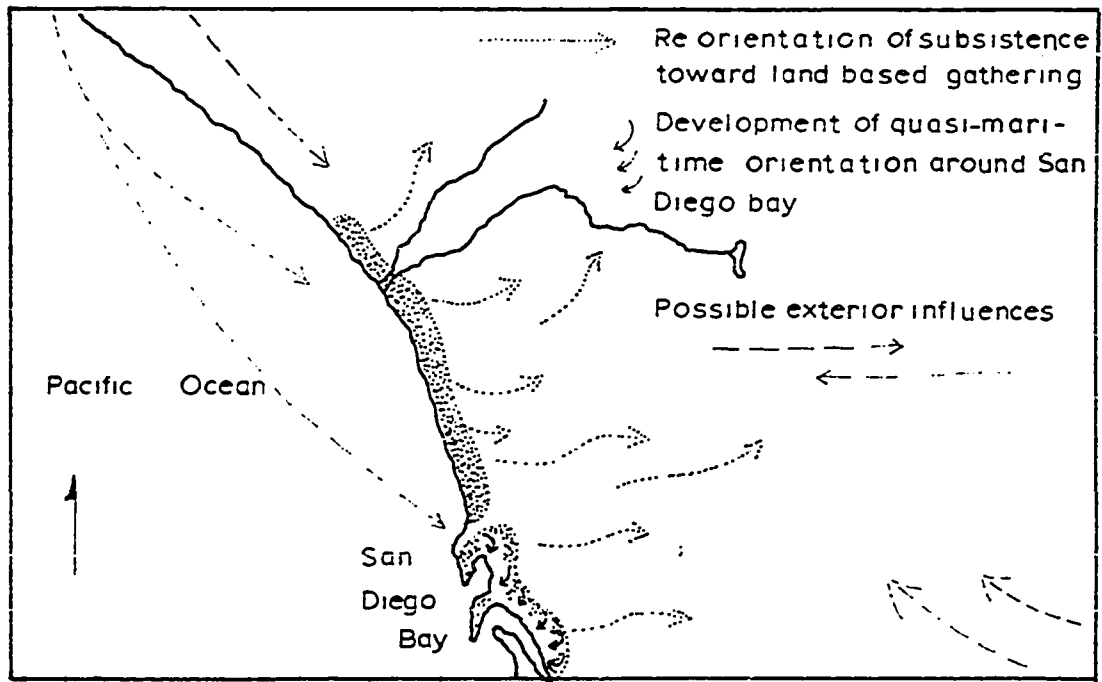


FIGURE 18

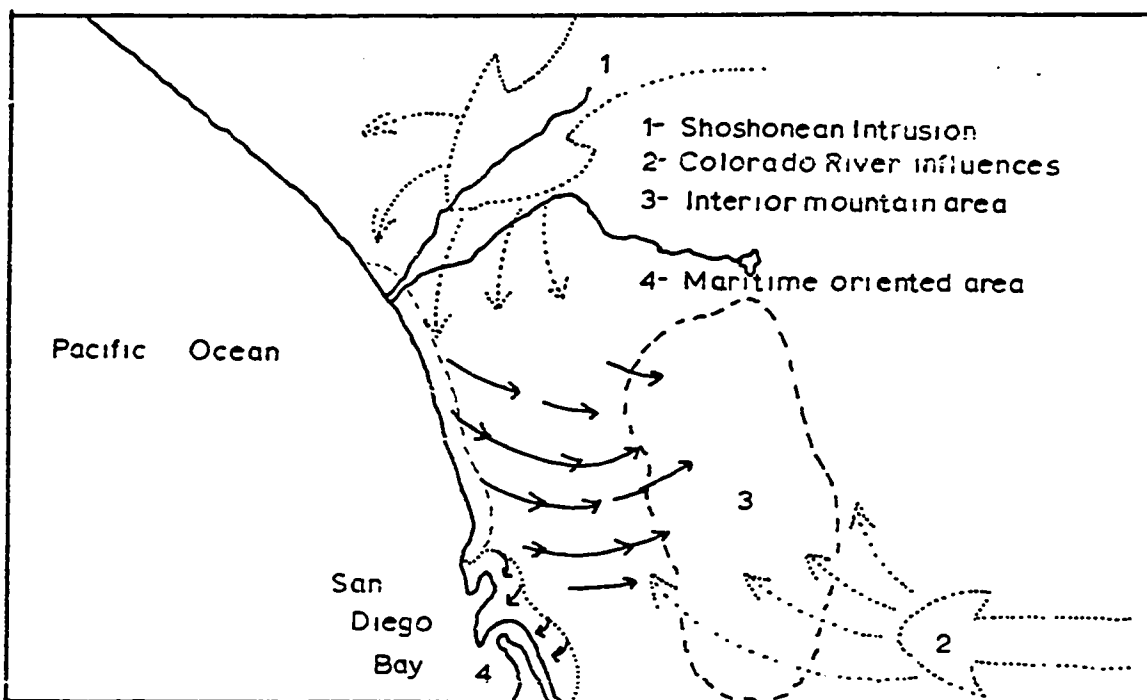




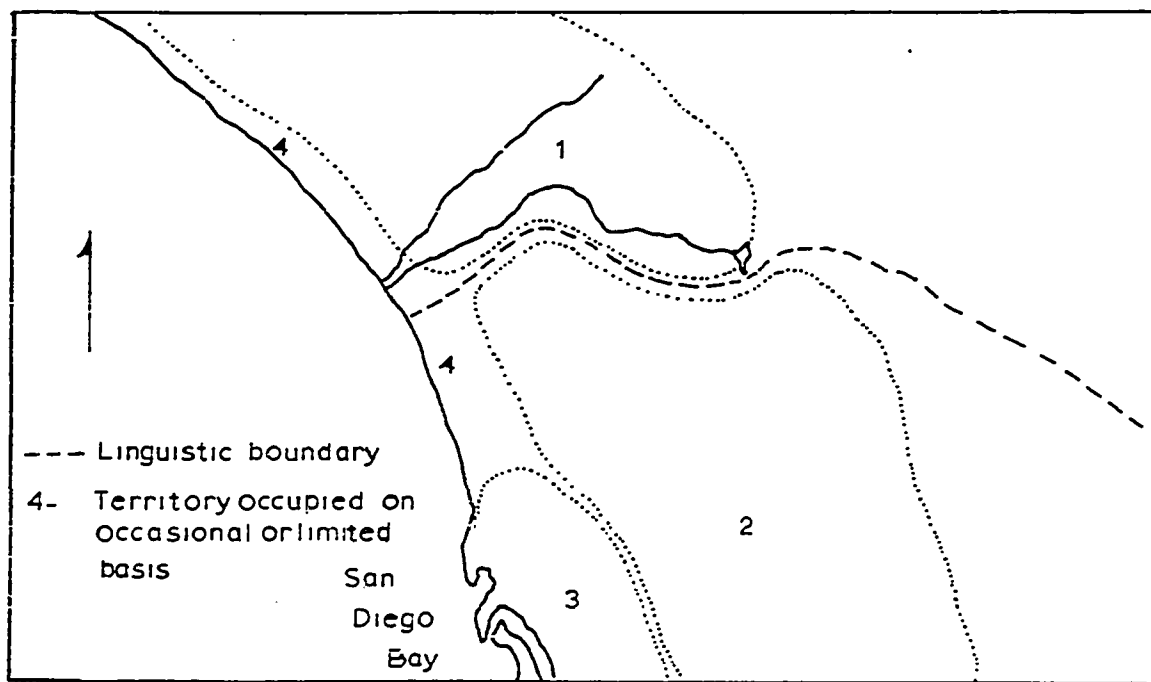
MAP 19-A General Milling Stone sub-stratum (corresponds to Hokaan linguistic distribution)



MAP 19-B Transition period following sea level changes and possible influences from without



MAP 19 - C



MAP 19 - D 1. Historic Luiseño territory (San Luis Rey Complex)  
2. Historic Mountain Diegueño (Cuyamaca Complex)  
3. Western Diegueño (may be essentially same as Cuyamaca Complex, but contains as yet undefined maritime elements)

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