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# Agricultural Motifs in Southern California Indian Mythology

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**T**HE creation myth of the Cahuilla Indians of southern California is one of the great works of oral literature of the American Indian. This eloquent epic-like narrative, which survives only in fragmented form, required four nights in the rendering. Each year or every other year at the winter *nukil* ceremony, Cahuilla gathered for a week-long religious festival which culminated in the burning of images representing those who had died in the interval between observances. This seasonal event was not solely a "mourning ceremony," but a sacral event of profound complexity. The ceremony made manifest to all participants the natural order of the Cahuilla universe and served as a rite of world renewal through the recapitulation of tribal history. The central focus of the *nukil* was a recitation in song by different lineage groups of the Cahuilla creation myth accompanied by interpretive comment, dance, and the ritual enactment of various parts of the narrative.

The myth relates the origins of the world out of chaos and describes a mythic primal past in which the world was very different. In that ancient time, man lived and conversed with *nukatem*, spiritual beings who sometimes appeared in human form and sometimes in the form of plants and animals. Originally, everything in the universe had been created

by Mukat and his twin brother, Temayawet. After a power struggle between these brothers, Temayawet was vanquished beneath the earth. At first, Mukat was a teacher and benefactor to his people, but gradually he also became a tyrant. The decisive event which gave rise to the present order of the Cahuilla world was a conspiracy among the primal beings to slay Mukat. Several attempts were made to murder the creator-god, but Mukat cleverly eluded them. Finally, the Blue Frog (*Hyla regilla*) succeeded in bewitching Mukat. As Mukat lay dying, the first people gathered around him, pretending to show concern as they awaited his death. Before dying, Mukat established the future order of Cahuilla society by passing on his knowledge and instructing his people in all of the rites they must thenceforth observe, including the cremation of their dead and an annual burning of effigies in memory of the dead. After Mukat's death, Coyote (*?isil*) leaped over the heads of the people gathered around the funeral pyre and stole Mukat's heart, thus acquiring much of his power.

The death of Mukat and his subsequent cremation did not, however, mark the end of primal history. Instead, the narrative continues until the following year when Coyote served as the first *net* or ceremonial leader, faithfully making an image of Mukat in

accordance with the creator's dying instructions. The people then assembled for the first nukil rites. With the burning of Mukat's effigy, grief entered the universe and all creation wept for the slain father. Primal innocence was shattered, sacral time ceased, and the present order of the world began.

One specific portion of the narrative has long puzzled ethnographers, giving rise to the question of whether it was originally part of the Cahuilla cosmogony or whether it is a post-Spanish contact intrusion. The incident is the account of Mukat's last gift to his people and of the journey of a shaman, Palmitcawut, into the land of spirits (*Telmekish*) to learn the meaning of the gift. In the cosmogony, this episode occurs immediately after the death of Mukat and prior to the calling of the first nukil by Coyote. Although several versions of the cosmogony exist, Strong probably provided the most complete account of the narrative and the most accurate paraphrase of the songs which make up this portion of the Mukat cycle.<sup>1</sup>

Then in the place where Mukat was burned there began to grow all kinds of strange plants, but no one knew what they were. They were afraid to go near the place for a hot wind always blew there. One, Palmitcawut, a great shaman, said, "Why do you not go and ask our father what they are?" No one would go so he followed the trail of Mukat's spirit although whirlwinds had hidden the trail. In one place were thickets of prickly cactus and clumps of interlaced thorny vines, but at the touch of his ceremonial staff they opened up for him to pass. Far away on the horizon he saw a bright glow where the spirit of Mukat was leaning against a rock. The creator's spirit spoke, "Who are you that follows me and makes me move when I am lying still?" When the creator's spirit spoke Palmitcawut was dumb and could not answer, though Mukat asked him several times. Finally, he was able to speak: "Yes, I am that one who

disturbs you while you rest, but we your creatures do not know what the strange things are that grow where your body was burned." Mukat's spirit answered him, "Yes, that was the last thing I wanted to tell you, but you killed me before I could do so." Then he continued, "You need not be afraid of those things. They are from my body." He asked Palmitcawut to describe them and when he had finished the spirit of Mukat said, "That big tree is tobacco. It is my heart. It can be cleaned with white clay, and smoked in the big house to drive away evil spirits. The vines with the yellow squashes are from my stomach, watermelons are from the pupil of my eye, corn is from my teeth, wheat is my lice eggs, beans are from my semen, and all other vegetables are from other parts of my body." (Thus when any vegetables are gathered and brought to the "big house" all of the people must pray to the creator.) [Strong 1929:142.]

This account of the origins of crop plants from the body of the slain god, of course, represents a well-known type of vegetation myth motif. Similar myths were prevalent in early agricultural societies of the Old World, and its presence in many cultures has been documented by numerous mythographers and folklorists. Sometimes it is referred to as the "dying god myth" or the Adonis-Tammuz-Osiris archetype. Stith Thompson (1955, I: 330) in a motif-index of world myth lists it as A.2611 ("Plants from the body of a slain person or animal."). More recently, Jensen (1951) in a highly speculative study of this theme has given the label of "Hainuwele mythologem" to such myths, taking as their prototype a version found in eastern Indonesia, where the slaying of a deity known as Hainuwele gives rise to the origin of crop plants. Claude Lévi-Strauss (1969, I:104, 165-169) has also dealt with the motif among Amazonian Indians, suggesting that mortality is forced upon humanity as the price to be paid for cultivated plants.

### THE PROBLEM POSED BY THE CREATION MYTH

The Cahuilla explanation of the origin of crop plants presented in their cosmogony is in direct conflict with the accepted view that agriculture in southern California was post-contact (e.g., Kroeber 1925; Sauer 1936; Driver 1961). Until recently, most anthropologists, historians, and geographers were agreed that all southern California Indian groups west of the Colorado River were non-agricultural prior to the establishment of Mission San Diego in 1769, except possibly the Kamia of Gifford (1931), who may have practiced flood-water farming aboriginally in the Imperial Valley along the New River, perhaps as far west as the eastern extension of Cahuilla territory near the edge of the present Salton Sea.<sup>2</sup>

It has been generally accepted that after establishment of the California missions by the Spanish, knowledge of agriculture diffused from coastal mission Indian groups trained in crop-growing by the Franciscans to unmissionized Indian groups of the interior such as the Cahuilla. This view failed to consider the fact that agriculture was widely practiced by Indian groups east of the Cahuilla along the Colorado River for possibly centuries before European contact, and that Indian ethnic and cultural ties could have contributed even more readily to diffusion of crop-growing westward into adjacent areas of southern California. Acceptance of agriculture as mission-derived was further strengthened in the 1930s by the development of the Kroeber-Sauer hypothesis that the rainfall regime in California was peculiarly unsuited to production of maize, beans, and squash (Sauer 1936:295; Kroeber 1939:211). Forbes (1963:1) first attacked this environmental hypothesis by pointing out that California's subsistence was largely based upon maize from 1769 until the 1850s. Bean and Lawton

(1973:x-xi) challenged it by citing examples to show that maize-growing in California in the early nineteenth century was not always irrigation-dependent.<sup>3</sup>

Since the beginning of the century, a number of researchers have questioned the assumption that aboriginal agriculture failed to extend west of the Colorado River tribes. Barrows (1900) believed agriculture was aboriginal with the Cahuilla, but presented no supporting data. Gifford (1931) assumed Kamia agriculture was aboriginal on the basis of interviews with elderly informants—all born in the post-contact period. Rogers (1929:8; 1933:119; 1941:1-6) theorized agriculture was once practiced on the Mohave River. Subsequently, Rogers (1945:174) reported finding corn cobs in association with house floors in the Mohave Sink.<sup>4</sup> Treganza (1947) hypothesized that agriculture was aboriginal with the Southern Diegueño-Kamia on the basis of a pottery cache of crop seeds stored in the Jacumba area in the historic period.<sup>5</sup> Within the past few years, renewed attention has been given to the problem of aboriginal agriculture in southern California by a number of investigators, who have developed a strong circumstantial case based largely on ethnographic and ethnohistoric materials.<sup>6</sup> The author and Lowell John Bean recently published a review of this literature, briefly summarizing some of the arguments and issues involved (Bean and Lawton 1973:viii-xvii). We suggested that aboriginal agriculture extended into parts of northern Baja California and that the farthest westward extension of crop-growing probably halted at the San Jacinto Mountains.

Hooper (1920:328) was first to call attention to the presence of crop plants in the Cahuilla creation myth, but neglected to explore the implications. Forbes (1963:5), who also noted the presence of crop plants in the Cahuilla cosmogony, suggested agriculture might have diffused to some aboriginal Cali-

fornia groups from the Colorado River region. At the same time, however, there remains the possibility that this motif in the Cahuilla cosmogony represents a post-contact alteration. In the Luiseño version of the cosmogony from the La Jolla area, the oak tree grows from the ashes of the dead god Wiyot (DuBois 1940a:186). In the Cupeño account of the creation, the people who gather around the funeral pyre of Mukat become oak and pine trees (Strong 1929:270; Hill and Nolasquez 1973:7a). In the Serrano creation myth, a spring emerged from the spot where the deity, Kukitat, was burned (Gifford 1918:184).

The purpose of this paper is to examine the implications of crop plants in the Cahuilla creation myth through a comparative study of agricultural motifs and elements which may be found elsewhere in Cahuilla mythology or in the myths of other California Indian groups. A number of assumptions will be made and several hypotheses will be tested. Before proceeding to these hypotheses, however, I should like to make several comments about the Cahuilla creation myth and problems which are posed by Mukat's last gift to his people—crop plants.

First, it is important to stress that the Cahuilla cosmogony had profound religious import for all members of the culture. Although many songs making up the song-cycles of the cosmogony have been lost, these songs of creation still hold deep significance for Cahuilla people, and are sung at wakes and on other ceremonial occasions by traditional, highly respected singers (*haunikum*). Scholars who have worked with the Cahuilla soon become aware that one does not discuss these songs lightly or without proper respect.

Lord (1964:123) in his study of the Indo-European oral epic was struck by the general conservatism of the tradition—the fact that the basic story line is carefully transmitted from generation to generation even though individual singers are given relative

freedom to improvise their own embellishments and elaborations. Admittedly Lord was investigating a different epic tradition, but it is one in which somewhat analogous rules prevail. Cahuilla singers were also artists who often added their own stylistic ornamentation to the pattern of traditional song-cycles. It was not unusual for a Cahuilla *haunik* to sing a twelve-hour cycle, and his talent as a performer and ceremonialist was a matter of both religious and aesthetic concern (Bean 1972:106). Even today, however, a singer who forgets traditional lines or departs too grossly from the accepted version of a song will be subjected to scorn and indignation.

When one considers that the death of Mukat in the Cahuilla cosmogony is comparable to the crucifixion in Christian religion, then it seems unlikely that the dramatic structure of this portion of the creation story would have been altered lightly by Cahuilla singers during the early post-contact period merely to provide an explanation for crop plants from the Spanish missions. During the post-contact era, the Cahuilla witnessed adjacent Indian tribes swallowed up under missionization. Year after year epidemics of new diseases swept through Cahuilla villages, taking a high toll of fatalities (e.g., Fairchild 1933:13). In general, the Cahuilla succeeded in resisting missionization, some villages moving into the mountains to conceal themselves from Spanish soldiers (e.g., Patencio 1943:77).<sup>7</sup> In such a period of social disruption it would seem probable that older Cahuilla leaders, who controlled ceremonial practices, would have reacted as conservative forces in preserving the traditional religion.

This is not to say one cannot find evidence for post-contact alterations in the text of the Cahuilla cosmogony. Among the creatures which Mukat creates early in the narrative is the white man—"cranky and crying, always running about" (Strong 1929:135). After his creation, the white man

immediately runs away, disappearing into the north. Obviously, this insertion provides an explanation for the origin of white men. But if this were the objective in the case of crop plants, then it seems likely that these plants would have been introduced unobtrusively in the narrative much earlier at the point at which Mukat creates everything else in the universe.

Since the Cahuilla had extensive trade alliances with their Colorado River neighbors and other groups to the east (Bean 1972:93; Forbes 1965:80-81; White 1974), they could scarcely have remained ignorant of those crop plants cultivated aboriginally by these nearby tribes. All of the crop plants mentioned in the various versions of the Cahuilla cosmogony are characteristic of the crop assemblage being grown by various Yuman groups along the Colorado River at the time of Spanish contact. Even wheat and watermelon, both European introductions, moved northward ahead of the Spanish advance, and were grown along the Colorado River before the establishment of Mission San Diego (Sedelmayr 1939:108; Bolton 1919, I:249).<sup>8</sup> Although there is no real evidence that wild tobacco (*Nicotiana*) was planted aboriginally by Yuman riverine groups (Castetter and Bell 1951:120), it was cultivated by many otherwise non-agricultural California Indian groups (Harrington 1931; Kroeber 1941). Bean and Saubel (1972:90-94) consider tobacco planting to have been aboriginal among the Cahuilla. The crop plants mentioned in the cosmogony are thus confined to those it would have been possible to grow prior to the Spanish conquest. Many unique new food plants introduced by the Spanish at the missions—such as oranges, pomegranates, peaches, pears, plums, potatoes, and tomatoes—might have been expected to impress the Cahuilla far more than familiar plants grown by neighboring tribes. Yet the crop plants appearing in the creation myth are confined to those characteristic of native

agriculture at the time of Spanish conquest.

Furthermore, these native crop plants are given a specific symbolic significance in the myth: they derive from the parts of Mukat's body and represent his last gift to his people. They must always be taken to the Cahuilla big house and prayers offered to the creator for them. The myth also suggests that there was once a time when the Cahuilla were unfamiliar with crop-growing techniques and had to be instructed in planting methods. It is a shaman who brings back this knowledge from Mukat's spirit in Telmekish—the land of spirits to the east (i.e., the direction of the Colorado River region).<sup>9</sup> If this new knowledge had come directly from mission padres, it seems unlikely that Cahuilla singers would have dared tamper so drastically with the structure of the creation myth. The Cahuilla people would have all known about the crops at the missions, and such an extreme revision—making crop plants a sacred mystery in their religion—would have bordered on sacrilege.

While the above arguments may be logically persuasive, we have no way of determining their relevance to the problem, since we know nothing about the culturally subjective principles which governed myth-making and the evolution of Cahuilla mythology.

We know, however, that myths often reflect the subsistence patterns of a people. The origin myth of the Coast Yuki, for example, substantially reflects their hunting and gathering subsistence economy. Among the food plants mentioned in their myth are acorns, hazelnuts, huckleberries, sala berries, wild strawberries, wild oats, mush oak, and buckeye (Gifford 1937:116). Among the planters of the southern woodlands, the prairies, and the southwestern region of the United States, myths frequently reflect planting folkways (e.g., Underhill 1965). If the Cahuilla grew crops aboriginally, then it seems likely that agricultural motifs or elements

(such as mention of crop plants) will appear not only in their cosmogony, but in their other myths as well. Fortunately, a modest body of Cahuilla oral literature exists which can be sampled to test this hypothesis. In addition, we might expect agricultural motifs or elements to appear in the myths of the Kamia, Southern Diegueño, and any other interior groups who may have practiced agriculture aboriginally.

Before we look for agricultural motifs in the myths of these people, however, we must confront another problem. We do not know to what extent myths remain conservative in reflecting the subsistence patterns of a people once a drastic change is made in those patterns. The establishment of Spanish missions in California, beginning in 1769, led to radical transformations in subsistence patterns for many California Indian groups. Whole tribes were uprooted from their villages and brought to the missions, where they were forced into learning to till the soil and grow crops. Many neighboring groups, who were not missionized, gradually came into contact with agriculture later in the post-contact period. Eventually, many of these latter groups abandoned hunting and gathering and shifted over to an agricultural mode of life.<sup>10</sup>

If agriculture was not practiced aboriginally by the Cahuilla—as many scholars have assumed—then the agricultural motif found in their creation myth represents a post-contact intrusion reflecting an abrupt change in their subsistence patterns after 1769. If this is true, then similar post-contact intrusions of agricultural elements should occur with some frequency in the myths of California Indian groups who received agricultural training at the Spanish missions. They may also be expected to occur in the myths of California Indian groups who, like the more isolated Cahuilla, were never missionized, but came into contact with agriculture or shifted over to crop-growing early in the historic period.<sup>11</sup>

Thus, we should be able to employ the myths of many other California Indian groups as a control body of literary materials to evaluate the significance of agricultural elements in the Cahuilla creation myth.

### SURVEY OF CALIFORNIA INDIAN MYTHOLOGY

On the basis of the considerations discussed above, three trial hypotheses were formulated. Each of these hypotheses will be dealt with in turn. The first hypothesis rests on the assumption that all California Indian groups were non-agricultural at contact. Agricultural elements in the Cahuilla creation myth are seen merely as post-contact alterations reflecting the diffusion of agriculture to these people from the missions. The hypothesis may be stated as follows:

#### *HYPOTHESIS 1:*

*Agricultural motifs or elements similar to those present in the Cahuilla creation myth will be found in the myths of other California Indian groups. Such elements reflect the shift to an agricultural subsistence after Spanish contact.*

*Discussion.* It is assumed that if Hypothesis 1 proves correct, then agricultural motifs or elements will be most prevalent in the myths of those Indian groups who were assimilated into the missions, thus coming into contact with agriculture at an early date in the post-contact period. Agricultural motifs or elements will be found to a lesser degree in the myths of those Indian groups who were on the periphery of Spanish settlement or who came into contact with agriculture at a much later date (such as during the Mexican or early American period).

The myths of the Cahuilla and two other interior southern California groups who may have practiced agriculture aboriginally—the

Kamia and the Southern Diegueño—were excluded from the literature survey. If Hypothesis I is shown to be valid, then the presence of agricultural motifs or elements in the myths of any of the three excluded groups cannot be regarded as particularly significant. This will not prove conclusively that the Cahuilla, Kamia, or Southern Diegueño were non-agricultural in aboriginal times, nor that the presence of agricultural motifs or elements in their myths are necessarily post-contact intrusions. It will simply mean that because myths are altered to reflect new subsistence patterns, a mythological analysis offers little help in investigating the problem of aboriginal agriculture in California.

The myths of a fourth group, the Chemehuevi, were also excluded from the literature review. These people once occupied the eastern half of the Mohave Desert. Early in the post-contact period or possibly somewhat before, the Chemehuevi began occupying parts of the Colorado River and practicing agriculture. Agricultural elements occur sparsely in their myths (Laird n.d.), but whether these existed in their myths when they occupied their original habitat presents a unique problem beyond the scope of this paper.

*Test of Hypothesis I.* An extensive survey of California Indian mythology was conducted to test Hypothesis I. While not definitive, the survey was sufficient to provide a rigorous test of the hypothesis. A total of 1032 myths, myth fragments, and tales of California Indian groups was examined, exclusive of Cahuilla, Kamia, Southern Diegueño, and Chemehuevi myths. This total must be considered somewhat arbitrary, because on a number of occasions I was forced to make value judgments as to whether a myth was a portion of a longer cycle or deserved to be treated as a separate entity. Oral history texts dealing with events that took place after white contact were excluded from the study.

Possibly one-tenth of the myths examined (most frequently creation stories) were variants of the same myths taken from different informants or recorded by two or more ethnographers. The decision was made to treat all variants as separate myths.<sup>12</sup>

The number of myths examined for groups subjected to missionization at an early date were as follows: Northern Diegueño: 2 myths (DuBois 1904a; Curtis 1929, XV:121-123); Luiseño: 23 myths (DuBois 1908; Gifford 1918; Curtis 1929, XV:101-106; Kroeber 1906, 1925; Quinn and Quinn 1965); Gabrielino: 4 myths (Reid 1852); Chumash: 2 myths (Heizer 1955) and 50 unpublished myths recorded by J. P. Harrington and examined for me by Thomas Blackburn (personal communication); Costanoan: 6 myths (Kroeber 1907a); Salinan: 47 myths (Mason 1912, 1918).

I shall not try to categorize the extent of missionization of the remaining California groups studied. Certain branches of these groups were missionized; other groups were not missionized at all. These groups were as follows: Serrano: 17 myths (Gifford 1918; Benedict 1926); Cupeño: 30 myths (Gifford 1918; Strong 1929; Hill and Nolasquez 1973); Gitanemuk Shoshonean: 1 myth (Kroeber 1907a); Maidu: 55 myths (Dixon 1902; Shipley 1963); Nisenan: 71 myths (Uldall and Shipley 1966); Wiyot: 62 myths (Reichard 1925; Teeter 1964); Pomo groups: 88 myths (Barrett 1906; Goddard 1909; Oswalt 1964); Yurok: 19 myths (Reichard 1925; J. Sapir 1928; Robins 1958); Achomawi groups: 44 myths (Dixon 1908; Curtin 1910; Merriam 1928; de Angulo 1973); Yokut groups: 58 myths (Kroeber 1907b; Stewart 1906, 1908; Rogers and Gayton 1944); Karok: 18 myths (Olden 1923; Bright 1957); Wappo: 13 myths (H. R. Kroeber 1908; Radin 1924); Shasta: 6 myths (Dixon 1910a; Voegelin 1947); Yuki: 39 myths (Gifford 1937); Hupa: 14 myths (Goddard 1904) Chimariko: 5 myths (Dixon



1910b); Yana: 39 myths (Sapir 1910, 1923); Chilula: 29 myths (Goddard 1914); Wintu: 69 myths (Demetracopoulou and du Bois 1932); Miwok groups: 71 myths (Kroeber 1907a; Gifford 1917; Barrett 1919; Broadbent 1964; de Angulo and Freeland 1928); Tübatulabal: 14 myths (C. Voegelin 1935); Paiute groups: 47 myths (Steward 1936); Mono: 2 myths (Curtis 1929, XV:123-129); Washoe: 5 myths (Curtis 1929, XV:149-156). In addition, 82 myths of various Indian groups throughout California anthologized by Gifford and Block (1930) were surveyed, although many were variants of ones already examined.

The myths studied were found to be extremely conservative in reflecting the aboriginal hunting and gathering subsistence economies of the California Indian groups represented. References to fish and game and to wild plants and their products, such as acorns and pine nuts, were extensive throughout the literature. No agricultural elements were found in 1027 of the myths examined.

Post-contact intrusions of a non-agricultural nature appeared in a number of myths, but were relatively infrequent. Mason (1912: 186-197) recorded 5 tales which dealt with the missions specifically. Radin (1924:4-36) recorded 6 Wappo texts, which he accepted as adaptations of Spanish folk-tales. All were heavily Europeanized, containing mentions of kings, princesses, the devil, and horses. Broadbent (1964) recorded several Miwok texts which mingled native and modern elements. One was titled "Horse, Ox, and Alligator" (Broadbent 1964:181-183). Broadbent (personal communication) noted that although these tales have native elements, she considers them too heavily acculturated to be viewed as Miwok myths. Gifford and Block (1930:301-303) published two tales they considered European.

Crop plants appeared as elements in only 5 myths out of the total of 1032. Radin (1924:9-13) recorded a Wappo adaptation of

the tarbaby story, which contained a "watermelon plantation." This myth was among those he labelled as European in origin. Broadbent (1964:163-169) recorded a Miwok tale, "The Magic Cane," whose protagonist talks about planting a garden with various fruit trees and vegetables (onion, potatoes, tomatoes, cabbages, and beans). This was among the tales which she considered to be too acculturated to be termed Miwok myths. Corn was mentioned in two recently recorded Cupeño animal stories (Hill and Nolasquez 1973:62a, 64a). A field of wheat also appeared in one of these stories. The animal stories in this volume as a whole were found to contain intrusive modern elements: a stove, a cupboard, chickens, and a gate. One of the stories mentioning corn was a variation of the European folk-tale about a fox and a hen. In the Cupeño adaptation, the hen escapes from Coyote by cutting her way out of a sack with a pair of scissors. All four of the myths discussed above, for the reasons given, seemed to me to be unacceptable in demonstrating the hypothesis.

Corn and wheat both appeared in a fifth myth, which was recorded among the Northern Diegueño of Mesa Grande reservation by Constance Goddard DuBois (1904b:217-242). In this myth, "The Story of Chaup," a boy's grandfather gives him a shell full of wheat and a shell full of corn as payment for spying upon two sisters (DuBois 1904b:236). According to DuBois, however, this myth is not of Diegueño origin. DuBois (1906:146) stated that it was acquired by the Diegueño from the Mohave.<sup>13</sup> DuBois' explanation of how the myth was acquired raises several questions, including the problem of its antiquity among the Northern Diegueño and to what extent it may have been modified by them (see Note 13). Since there is doubt about this myth—and DuBois considers it Mohave—I feel it cannot be accepted as illustrating the hypothesis. Even if this myth and the four others

mentioning crop plants were not excluded, however, I would consider such a small sample of aberrant data among 1032 myths to be insufficient to support the hypothesis that California Indian mythology reflects a shift to an agricultural subsistence after Spanish contact.

*Conclusions.* The literature survey fails to substantiate Hypothesis 1. Instead, the myths remained overwhelmingly conservative in reflecting aboriginal hunting and gathering subsistence economies. The presence of the agricultural motif in the Cahuilla creation myth thus represents an incompatible element in the culture of that group or is deserving of further consideration in seeking an explanation.

### THE CAHUILLA, KAMIA, AND SOUTHERN DIEGUENO

Next let us examine the myths of the three excluded groups—the Cahuilla, Kamia, and Southern Diegueño—all of whom may have engaged in limited agriculture in addition to hunting and gathering prior to Spanish contact. Primarily on the basis of ethnographic and ethnohistoric data, several investigators have argued that one or more of these groups practiced agriculture (Barrows 1900; Gifford 1931; Treganza 1946; Bean and Mason 1962; Forbes 1963; Lawton 1968; Lawton and Bean 1968; Bean 1972; Bean and Saubel 1972; Wilke and Fain 1974; Bean and Lawton 1973). The case for some aboriginal agriculture in northern Baja California has been firmly established (Forbes 1963:8-9; Bean and Lawton 1973:xv-xvi), although how widespread crop-growing may have been remains unknown. For the groups in that area (Mission San Borja region), however, we lack mythological data for analysis.

The second hypothesis can be expressed as follows:

#### *HYPOTHESIS 2:*

*If agriculture was part of the native subsistence pattern of the Cahuilla, Kamia, or Southern Diegueño, then agricultural motifs or elements will be found incorporated into the body of their mythology.*

*Discussion.* Hypothesis 1 proved to be invalid, demonstrating instead that aboriginal hunting and gathering subsistence economies continued to be reflected in the myths of those non-agricultural California Indian groups. The second hypothesis rests on the assumption that since the myths of those latter groups remained conservative, reflecting the traditional subsistence, then Cahuilla, Kamia, or Southern Diegueño mythology will prove similarly conservative. If crop plants are actually dysfunctional elements in the Cahuilla creation myth, then references to them will not appear elsewhere in the body of Cahuilla mythology, recorded from a number of sources. If the Cahuilla did practice agriculture, then agricultural elements will be incorporated into their myths in addition to gathering elements. Obviously, the greater the body of mythological data, the more we can learn about aboriginal subsistence patterns.

*Test of Hypothesis 2.* A total of 41 Cahuilla myth samples (14 of which were variant versions) were examined for agricultural motifs or elements. In the previous test of Hypothesis 1, no tabular data were presented. Such data would have proved too bulky for this paper, and since the hypothesis was not borne out, it was scarcely necessary. Readers may be interested, however, in getting some idea of the type of data which were found reflecting traditional subsistence. The chart presented here as Table 1 presents both wild plants and domesticated crop plants as they appeared in 27 myths and 14 variants. In eight of the myths no plants were mentioned. For analysis, therefore, the sample of data

consists of 19 myths and 14 variants in which wild or domesticated plants occur.

Although the Cahuilla utilized several hundred wild plants (Bean and Saubel 1972), it will be noted that the chart tends to reflect primary food plants used by the Cahuilla. The most important Cahuilla staple, mesquite (*Prosopis juliflora* [Sw.] DC.) appears in five of the 19 myths. (Actually, it occurs several times in some of these myths as do other plants.) The agave or mescal (*Agave deserti* Engelm.), another major staple, is mentioned in three myths. The palm (*Washingtonia filifera* [Lindl.] Wendl.), which provided edible fruits, shade, and construction materials, appears in three myths. The acorn (*Quercus* spp.), another significant food resource, occurs in only one myth, although many references to "mush" probably reflect it.

Corn appears in as many myths as mesquite. I am not suggesting that this indicates corn ranked with mesquite as a staple, but I do feel its prominence suggests it was important in the Cahuilla diet or one of the favorite plant foods. If we exclude the *beans* in Myth 24 (see Table 1), which I feel may refer to mesquite beans, then domesticated food plants are represented in six myths. Proto-agricultural references related to planting of wild plants occur in four myths. Thus, agricultural or proto-agricultural references are found in 14 out of 33 myth samples (variants included) or in roughly 40 percent of all versions of our mythological data.

Some of the myths provide instructive details concerning Cahuilla knowledge of agricultural technology and their attitudes toward crop plants. Myth 23 (see Table 1) reveals a knowledge of dry-farming (a method which could be readily carried out—as it is in the myth—in the mountains, but not in the Coachella Valley, where annual rainfall is three inches below the cut-off point for *temporales* agriculture). This myth tells us that crop seeds (wheat) were hoarded and

worth stealing, that planting of crops conferred status, that rain-making songs were associated with crop-growing, that too much rain could lead to crop failure, and that birds were recognized as a threat after sowing (Hooper 1920:336-371). The hero, Kunvachmal, succeeds as a farmer only after he acquires the ability to turn himself into a frog—the fertility symbol responsible for Mukat's death and the origin of crop plants.

Turning now to the myths of the Kamia and Southern Diegueño, we find only a limited body of materials available. For that reason, I will forego presenting this data in tabular form and simply confine myself to a discussion of the material which exists.

Although Gifford (1931) frequently refers to other Kamia myths, he published only a cosmogony and two short tales. The cosmogony appears to be greatly abbreviated, since Gifford (1931:71-81) throughout his monograph alludes to many details in the creation myth which are not found in the account itself. Neither wild plants nor crop plants occur in the two short myths, "Deer, Sheep, and Antelope" and "The Mountain Wiwotat" (Gifford 1931:81).

In the cosmogony, the future tribes of earth migrate from the mountain Wikami to their homelands. The Kamia journey to Imperial Valley and establish themselves near the eastern end of the present Salton Sea. They are followed to the new land by the future Kamia leaders, a hermaphrodite, Warhomi, and her twin "sons" (not really her sons, according to the informant), both called Madkwahomai. These three are told by the god Mastamho—who gives them beans and maize—that they are to join the Kamia and become planters. They plant their first crops at Saxnuwai in the Imperial Valley, where they find wet soil. They also bring with them wild seeds (presumably to plant).

According to Gifford's informant, Narpai, the beans which Mastamho gave to Warhomi

**Table 1**  
**AGRICULTURAL ELEMENTS IN CAHUILLA MYTHOLOGY**

Myths Examined	Tobacco or Edible Wild Plants Present	Crop Plants Present	Source
1. Five variants and one short fragment of the cosmogony	Tobacco, palm, salt grass, wild plum, tule (varies in different versions).	Account of origin of crop plants (corn, beans, squash, pumpkins, watermelon, wheat) appears in the Hooper, Strong, and Patencio versions. The Curtis-Seiler versions halt at Mukat's <i>nukil</i> ceremony.	Hooper (1920:317-328) Strong (1929:130-143) Patencio (1943:1-32) Curtis (1929:106-121) Seiler (1970:38-63)
2. Girl's puberty rite myth	None	None	Patencio (1943:40-41)
3. "Some of the Early People"	None	None	Patencio (1943:32-34)
4. "Esel I Hut"	Tule	None	Patencio (1943:34-37)
5. "Yellow Body," two variants	Cholla cactus	None	Patencio (1943:37-40)
6. "Eagle Flower," three variants	None in Patencio-Seiler versions. Cactus and mescal in Strong version.	None	Patencio (1943:41-44) Seiler (1970:74-81) Strong (1929:86-87)
7. "Taquizt," two variants	None	None	Patencio (1943:44-45) Hooper (1920:364-365)
8. "The Devil Woman"	Tule, wild seeds	None	Patencio (1943:45-50)
9. "The Story of the New Stars"	None	None	Patencio (1943:50-52)
10. "Chehaum and Tukwishemish"	None	None	Hooper (1920:365-366)
11. "Evon Ga Net"	None	Semi-agricultural. Evon Ga Net sows wild wheat in the sand hills, where it continues to grow to this day.	Patencio (1943:52-54)
12. Kausiktum legend, two variants	Acorns, mescal in Strong version. Mention of a war over Evon Ga Net's wild wheat in the Patencio version.	None	Strong (1929:100-101) Patencio (1943:85-89)
13. "The Story of the Spring at Palm Springs"	Palms	Indians said to have planted <i>Washingtonia filifera</i> palms at Palm Springs (semi-agricultural since the fruits were edible). The southwestern "sipapu" concept of all springs and lakes being united underground is expressed. Rotted ears of corn said to float to the tops of springs.	Patencio (1943:91-95)

Table 1 (Continued)

Myths Examined	Tobacco or Edible Wild Plants Present	Crop Plants Present	Source
14. "Ka Wis Ke On Ca and the Old Indian Boundaries"	None	None	Patencio (1943:95-99)
15. "Settling of Coachella Valley"	Palms	Semi-agricultural. Indians said to have carried seeds of palm to various places on the desert (planting implied).	Patencio (1943:99-102)
16. "Sundown or Sunset"	Wild seeds	Young boy is bribed by Sundown with popcorn (?) or corn. Text varies, which may result from a misunderstanding by the amanuensis, Margaret Boynton.	Patencio (1943:103-112)
17. "The People Who Went to Visit the Sun," five variants	Fruit, herbs, seeds, nuts in Patencio version. Pine tree in Woosley version. Pine burns up as sun descends, regrows each night.	A magically renewing corn plant grows in the land of the sun in the Patencio version. Magically renewing corn, watermelon, cantaloupe, and grape plants occur in the Seiler version. No crops in Woosley version. Renewing corn in Jacobs version. Corn and watermelon in Harrington version.	Patencio (1943:113-118) Seiler (1970:82-89) Woosley (1908) Jacobs (1972) Harrington n.d.
18. "Story for Children"	None	None	Patencio (1943:128-132)
19. "Takweltekesnikish"	Mescal, tobacco, yucca	None	Hooper (1920:371-376)
20. "Origin of the Birds"	None	None	Hooper (1920:376)
21. "Whirlwind"	Sage, mesquite beans	None	Hooper (1920:377-378)
22. "Whirlwind and Crow"	Mesquite	None	Seiler (1970:132-137)
23. "Kunvachmal and Tukvachtahat"	Mesquite (bark), cactus fruit	Kunvachmal steals wheat from Tukvachtahat and plants it in the mountains.	Hooper (1920:366-371)
24. "Kúnvaxamal" (Same hero as in [23])	Grain, mesquite	Beans (not specified, possibly mesquite)	Seiler (1970:100-112)
25. "Coyote Goes Visiting"	None	Coyote's daughter has corn in storage and prepares corn mush.	Seiler (1970:92-99)
26. "The Adventures of Pacagarawih"	Herbs	None	Seiler (1970:112-131)
27. "Origin of Mesquite"	Mesquite	Semi-agricultural. When Lake LeConte subsided, Coyote came down from the mountains and planted mesquite.	Bowers (1888:1-7)

and the twins included both teparies and cowpeas (*Phaseolus acutifolius* L. and *Vigna sinensis* L., respectively). The latter are a Spanish introduction from the Old World, but apparently reached the Colorado River at least as early as 1775 and were regarded as aboriginal by the Yuman groups (Castetter and Bell 1951:129).

Gifford (1931:79) records one other reference to planting in the creation myth. During the migration of tribes from Wikami, one group settled in Baja California, where they were said to have planted "a kind of food called hatsot." This was said to be a shrub with a small orange-colored fruit.

Elsewhere, Gifford (1931:13-14) paraphrased a portion of another myth, which probably belonged to the cosmogony. According to this myth, Wildcat (*Nyimet*) was appointed by the god Pukumat to be the patron of farmers. Wildcat was told by Pukumat that he was to study and "know about the moons [months] and thus know when to plant crops." Pukumat appears also at the beginning of the cosmogony, where like the Cahuilla creator-god Mukat, he is bewitched by Frog and dies (Gifford 1931:75-77). During the cremation, Coyote steals Pukumat's heart. Unlike Mukat, however, no crop plants grow from the ashes of Pukumat. The similarities in the Cahuilla and Kamia myths and the fact that Pukumat like Mukat is also associated with agriculture, even if less directly, represent intriguing parallels.

Another myth fragment reported by Gifford (1931:68) relates that the star constellation Anyihai (Girl), which was evidently the Pleiades, was created in the summer at the beginning of the world. Pukumat then instructed people that they were to plant crops following the annual appearance of Anyihai in the summer sky just before dawn. It was also said that the girl in the constellation Anyihai is in the act of planting, and that another constellation, Chiyuk, is protecting her. Simi-

lar star lore associated with the time of planting has been reported among the Cahuilla (Lawton and Bean 1968) and the Yuman Indians (Castetter and Bell 1951:146-147).

The Southern Diegueño oral literature was limited to 9 myths, four of which were variants (DuBois 1905a, 1905b, 1906; Waterman 1910; Gifford 1918; Spier 1923; and Florence Shipek, personal communication).

No crop plants occur in the three versions of the cosmogony (Waterman 1910:338-341; Gifford 1918:155-219; Spier 1923:328-331). Neither were crop plants mentioned in a short myth on the origin of song and dance (DuBois 1905b:627-628) nor in the "Bungling Host" (Spier 1923:332-334). Crop plants did appear in two of three versions of the long cycle dealing with Kwiwow humar (DuBois' Cuy-a-ho-marr), which she first called "The Story of the Chaup" (DuBois 1904b, 1905a, 1905b, 1906). A corn origin myth was also recorded by Florence Shipek (personal communication).

Corn, pumpkin seeds, and yellow beans occur in the Campo-Manzanita version of the Kwiwow humar myth told by Hatakek (DuBois 1906). In the myth, a boy named Shut-kúpf-shut-núkl is sent on an errand to spy on two girls and given parched pumpkin seed to eat on his journey. He eats the pumpkin seed and returns without finishing the journey. He is then given parched yellow beans to eat and told to complete his errand, which he does. Later in the myth, the young "Cuy-a-ho-marr" engages in a gambling game with Coyote and wins corn and grinding stones. In a second Campo-Manzanita version, told by José Santo Lopez, the young "Cuy-a-ho-marr" again wins a gambling game with Coyote (DuBois 1906:162-164). He has with him a magical bag, and he asks that it be filled up with corn as his prize. The bag can never be filled and quickly uses up all the corn from a granary.

The corn origin myth was told to Flor-

ence Shipek (personal communication) by Rosalie Pinto Robertson of Campo Reservation. Mrs. Robertson learned it from her great grandfather, who was born in the 19th century and died in the 1920s. In this myth two brothers are sent out to hunt. The eldest looks for game unsuccessfully and returns empty-handed. The younger brother is lazy and lies on top of a rock instead of hunting. Suddenly, a crow flies overhead and the boy shoots it. Corn kernels fall from the bird's crop. The boy returns home with both the crow and corn kernels. His father uses the plumes from the crow and throws the kernels away. Eventually, the kernels sprout into corn. At first the Indian people eat the corn raw, then they learn to roast it, and finally they discover how to grind it and make bread.

*Conclusions.* The myths of both the Cahuilla and the Kamia are rich in agricultural motifs and elements which strongly suggest that these groups practiced crop-growing aboriginally. Although the Kamia materials are limited and principally confined to the creation myth, agricultural concepts appear to be well integrated into the structure of the work. The mythological data for both of these groups indicates an awareness of agricultural technology and an existence of agricultural ritual or lore. In my opinion, the myths of these two groups support the hypothesis that agriculture was part of their aboriginal subsistence pattern.

I am reluctant to come to any firm conclusion on Southern Diegueño agriculture. Some evidence exists that the Southern Diegueño practiced agriculture at a relatively early date in the historic period (Shipek 1971; Bean and Lawton 1973). Southern Diegueño groups south of Jacumba in northern Baja California were reportedly cultivating wheat as early as 1785 (Bean and Lawton 1973:xvi). On the basis of a mythological analysis alone, however, there seems to be insufficient data to demonstrate the hypothesis. Two of the

data samples are versions of the myth of Kwiyou humar, which DuBois believed to be a Mohave myth (see Note 13 for discussion). The remaining single piece of data is the corn origin myth. Although this myth may well have originated in the aboriginal period, I do not feel that we have a sufficient body of Southern Diegueño data on which to form a judgment from a mythological analysis.

### CORRESPONDENCES IN YUMAN MYTHOLOGY

In 1925, Kroeber (1925:788-792) called attention to the fact that the origin myths of the central Yuman tribes share a great many characteristics with interior Shoshonean groups—the Cahuilla, Cupeño, Serrano—of southern California (see Fig. 1). Both the Kamia and Diegueño, of course, belong to the Yuman branch of the Hokan linguistic stock. Although Waterman (1909) and others had reported parallels earlier, Kroeber's synthesis was the most perceptive and remains the best synthesis of associated motifs and corresponding elements in the myths of these groups. Among shared concepts which Kroeber noted were the dying god theme, the twin brother creators who quarrel, the vanquishment of one brother, the poisoning of the other deity by Frog, and the stealing of his heart by Coyote. Spier (1928) observed parallels in mythological concepts extending as far to the northeast as the Havasupai, and Gifford (1932) commented upon the unity of associated motifs continuing southeast to the Maricopa. A comparative study in depth of Shoshonean-Yuman oral literature and interconnections has yet to be undertaken and represents an extremely fertile, unexplored area for investigation.

If the Cahuilla and Kamia acquired agriculture by diffusion from Yuman groups to the east, then one might expect to find

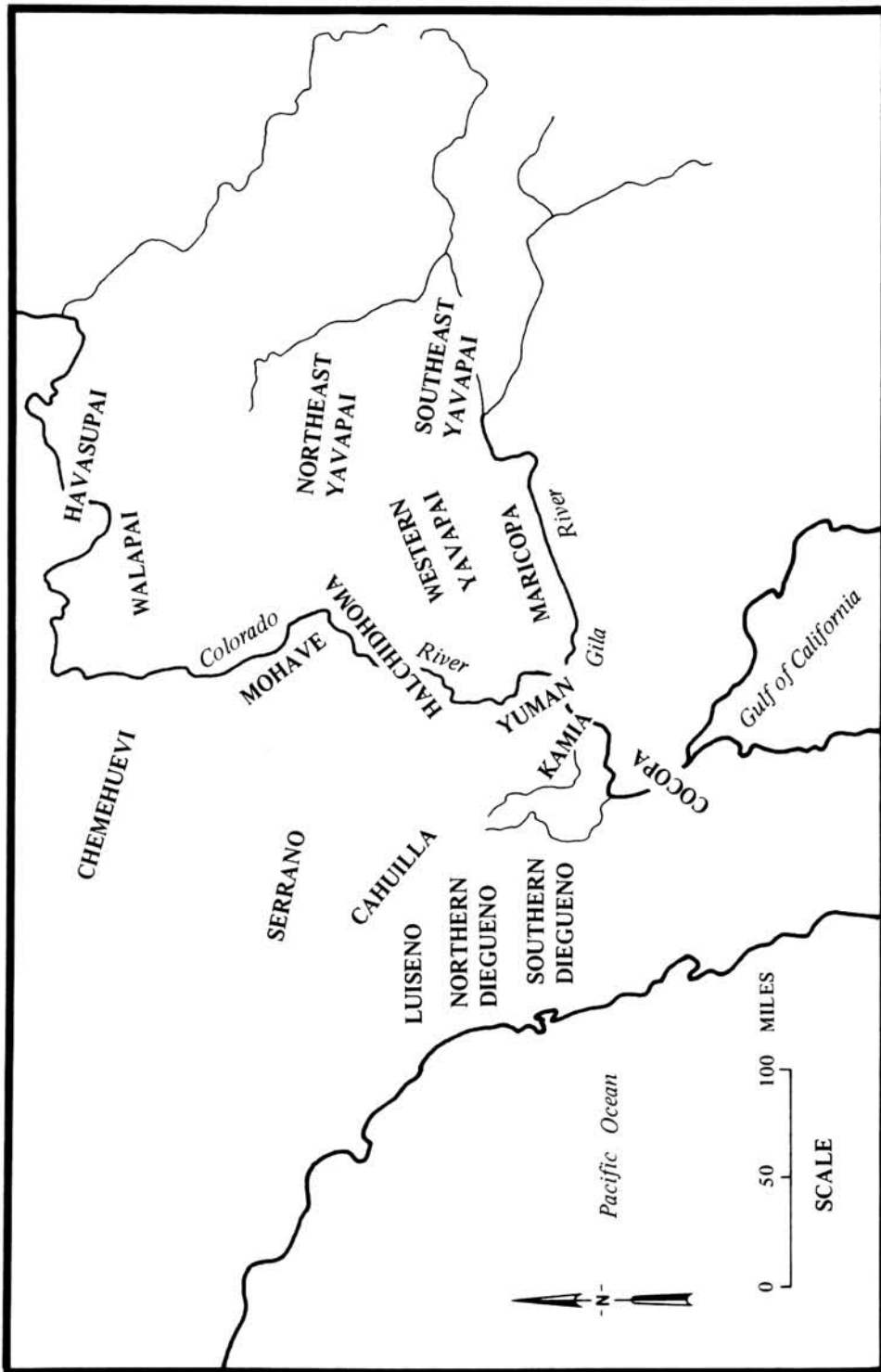


Fig. 1. Nineteenth Century Tribal Distributions for Southeastern California and Arizona.



correspondences in agricultural motifs between southern California and the agricultural southwest. The third hypothesis can be stated as follows:

*HYPOTHESIS 3:*

*Parallels in agricultural motifs and elements will be found between the myths of the Cahuilla and Kamia and those of Yuman groups of the Colorado River area or other tribes in the agricultural Southwest.*

*Discussion.* If corresponding agricultural motifs and elements exist forming a connecting link between Cahuilla and Kamia mythology and that of various Yuman groups, they would constitute strong circumstantial evidence that the myths of the two former groups were not altered during the post-contact period to account for a shift to agriculture following diffusion of crop-growing from the Spanish missions. In particular, one might expect to find the Cahuilla concept of crop plants growing from the ashes of the creator-god in the mythological framework of some Yuman groups. Earlier it was noted that the concept of wild plants emerging from the funeral pyre of deities is present in the myths of the Luiseño and Cupeño (DuBois 1904a; Strong 1929). Unless a similar concept for domesticated plants occurs among Yuman groups, it might be argued that this motif simply represents a modification of a Shoshonean concept related to non-agricultural plants. Such a modification thus could have come about in the historic period in response to a shift in the Cahuilla subsistence economy. The presence of a similar motif among Yuman myths would make it extremely unlikely that the shared association of this concept was a mere coincidence.

*Test of Hypothesis 3.* A search was made of the literature for parallels in agricultural motifs in myth between the Cahuilla and Kamia and other southwestern groups.

The origin myth of the Kamia showed its greatest correspondence not with the nearby Quechan Yumans of the Colorado River—as might have been expected—but with the Mohave, who occupied the river farther north, and with the Maricopa, who inhabited the middle Gila River in central southern Arizona. The Yumans call their creator Kwikummat, and his companion, who is no longer his brother, is Blind-Old-Man (Harrington 1908). The son of Kwikummat, Kumastamxo, introduces agriculture by causing sky-kernels of corn to fall to the ground as hail. The dying god theme occurs in relation to Kwikummat, but in general the Yuman cosmogony is much different than that of the Kamia. In the Mohave version, the two brother creators are present, the eldest, Matavilya, approximating the Kamia deity Pukumat (Kroeber 1906:314-316; Kroeber 1948:52-69). The younger brother, Mastamho, bears exactly the same name as his counterpart in the Kamia cosmogony. Like Mastamho in the Kamia version, he also teaches the tribes to plant crops: maize, wheat, beans, and melons (Kroeber 1948:63). The Mohave story contains the dying god theme also, relating it to Matavilya. In the Maricopa version, there are two creator brothers, Cipas, who is vanquished, and Kumkumat, who is the dying god (Spier 1933:345). Crop plants are introduced by the culture hero Kwistamxo, whose role is similar to that of Mastamho in the Mohave and Kamia cosmogonies (Spier 1933:352). Sufficient correspondences exist in both the Mohave and Maricopa creation myths to assert that there is an underlying unity of motifs and episodes which ties them very closely to the Kamia cosmogony.

The Cahuilla cosmogony shares the dying god motif with the Kamia, Mohave, Quechan Yuman, and Maricopa groups. It differs from those creation myths quite distinctly in that the dying god concept is more elaborately refined, the structure of the narrative appears

to be more unified in form, and each episode, unlike the rather picaresque incidents recounted in the other three cosmogonies, contributes to the building toward a climax with the death of Mukat. The end of the great god achieves a quality of universal sadness, marked not only by the loss of the deity and primal time as well, but in the knowledge that in carrying out the creator-god's commands, each man's death and mourning ceremony will forevermore recapitulate tribal history. In contrast, very little is made of the significance of the dying god theme in the other cosmogonies. The culture hero, who introduces agriculture, appears to be the more important cosmic figure. For that reason, Kroeber (1925:790) believed that the dying god concept was Shoshonean and that the motif developed in southern California. Finally, the origin of crop plants from the ashes of the dying god is completely missing in the myths of the three Yuman groups.

The motif does reappear again, however, farther to the east among other planters or limited agriculturists. The Walapai of northwestern Arizona, on the middle course of the Colorado River, believed that corn, squash, beans, and watermelon came forth from the funeral pyre of their dead creator, Hamatavila (MacGregor 1935:12-13). The Northeastern and Western Yavapai of Arizona also shared elements of the dying god concept, and believed that maize originated from the ashes of their deity, Hanyiko (Gifford 1933b:351-352). The Havasupai of northeastern Arizona have two versions of the myth. In one version, Coyote steals the heart of a culture hero after he dies (Cushing 1965:73). Coyote then eats part of the heart and plants the rest. A corn plant grows out of the buried heart, which has six ears of corn on its stalk. Each ear is a different color: yellow, white, variegated, blue, black, and red. The different ears are given to each of the nations of man—the Havasupai obtaining only a little red ear. In the second ver-

sion, the culture hero tells his people to cremate him when he dies and pour water on his ashes to keep them wet (Smithson and Euler 1964:68). He says that the plant which will grow from his ashes is called corn. The people obey his command, and from the corn plant the Mohave obtain short roasting ears and the Havasupai acquire long-eared corn like that of the Hopi. The Southwestern Yavapai hold a similar belief about a great chief who ordered his people to put wet earth over his heart when he died from which a marvelous maize would grow supplying food for all seasons (Gifford 1932:245-246).

Farther eastward in the valleys of the Gila and Salt Rivers, the dying god theme fades out. Among the Pima, the cosmogony tells of a monster, Hâ-âk, who the people pursue and kill (Russell 1908:224). After the monster dies, two boys return home and find it has slain their grandmother. Before dying, the old woman has left instructions for the boys to carry out. They give her body a proper burial in the sand. At the end of four days, she has instructed them to visit her grave and gather leaves from a plant they will see growing from it. The boys follow her command and obtain tobacco. They are then given instruction in its use by the Pima deity Elder Brother. It will be recalled that tobacco is also one of the plants in the Cahuilla cosmogony which emerges from the ashes of Mukat.

The animal variant of the crop-origin myth is found among two groups elsewhere in the Southwest. In the cosmogony of the White Mountain Apache of the upper Gila and Salt Rivers in southeastern Arizona, corn kernels are shaken forth from the feathers of the live body of Turkey (Goodwin 1939:52). In the Jicarilla Apache version of northern New Mexico and southeastern Colorado, Turkey shakes corn, tobacco, and other vegetables from his feathers while walking around a field which is a good place for planting (Opler 1938:212-213).

A parallel was also found between the Cahuilla myth of "The People Who Went to Visit the Sun" (e.g., Patencio 1943:113-118; Seiler 1970:88-89) and a Cocopa myth (Gifford 1933a:257-334). In the Cahuilla myth, a man travels on a long journey to the land of the Sun. He lives with the Sun for a long time, existing upon magically renewing crop plants. In the Patencio version, the plant is maize. In the Seiler version, there are magic corn, watermelon, canteloupe, and grapes. When one eats corn or other food from a plant, one hurls the cob or refuse back at the plant, where it becomes "fixed" and immediately whole and ripe again. This concept occurs in a Cocopa myth from the lower Colorado River. In the land of the dead, Inbawhela, a new melon immediately replaces ripe picked melons on the vine (Gifford 1933a:307). In the land of the dead, there is also said to be plenty of food for souls—watermelon, beans, maize, and pumpkins, none of which ever needs planting. Interestingly, the east is also associated in Cahuilla mythology not only with the land of the Sun, but with Telmekish, where dead souls go. The magic plant may also occur in Maricopa myth, but Spier is not specific on that point (Spier 1933:296-299). He tells us only that things always become new again in the land of the dead, and that watermelon and other foods were abundant. Similar ideas of abundant food in the land of the dead occur in other Yuman myths.

A Cahuilla myth about two twin culture heroes (Patencio 1943:103-112) contains many similar episodes and ideas to a Maricopa myth with twin brother protagonists (Spier 1933:417-419). In the Cahuilla version, an old man rewards a young boy with corn for spying on two girls (Patencio 1943:108-109). In the Maricopa tale, the reward is pumpkin seed and corn (Spier 1933:389). The same incident occurs in the Chaup story which the Diegueño say came to them from the Mohave (DuBois 1904b, 1906). Many other motifs

similar to those in Cahuilla myths can be found in those of the Maricopa, but these are non-agricultural in nature.

*Conclusions.* Agricultural motifs similar to those of the Kamia and Cahuilla were found to be present among other southwestern agricultural peoples, thus confirming the hypothesis.

### CONCLUDING ARGUMENTS

It has been shown that aboriginal subsistence economies are reflected in California Indian mythology, and that agricultural motifs or elements are not present except among southern California groups of the desert interior. Thus, no evidence was found suggesting that a change-over to agricultural subsistence during the post-contact period had any impact on the mythology of most California groups. The presence of agricultural motifs and elements in the myths of the Cahuilla and Kamia and parallels between those concepts and ideas in the mythology of Yuman groups to the east suggests (1) that these two southern California groups practiced agriculture aboriginally, and (2) that agriculture probably diffused to them from Yuman groups of the Colorado River area. The mythological data studied is thus considered to provide strong corroborating support for other circumstantial evidence which indicates that the Cahuilla and Kamia practiced agriculture before Spanish contact.

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### NOTES

1. Strong's version of the Cahuilla creation myth was obtained from Alejo Patencio, ceremonial chief, through Jolian Nortes, interpreter, immediately after a mourning ceremony held at Palm Springs in February, 1925. Each sentence in Strong's narrative

formed one verse of a song, which often was subjected to much repetition.

2. Sauer (1970:292) has abandoned the environmental hypothesis, suggesting that other factors accounted for the failure of agriculture to spread through California in the aboriginal period.

3. For example, Lt. E. O. Ord (1848:123) reported Indians in the San Dieguito Valley near San Diego gathering from 20 to 40 *fanegas* of maize from unirrigated lands.

4. Carter (1967:30) urged that Rogers' sites be relocated and dug under modern controls. Even if Rogers had dated these plant remains as coterminous with the aboriginal period, this would not have proved agriculture was aboriginal on the Mohave Desert, since corn may have occasionally been traded to interior groups by crop-growing tribes along the Colorado River. Corn cobs have been found by a number of scholars and laymen in Cahuilla sites both in the Coachella Valley and on the Anza-Borrego Desert, which appear to have features of Colorado River type maize varieties. Archaeological proof of aboriginal agriculture, however, must await the discovery of other plant parts, such as stalks and roots, indicating that maize was locally grown.

5. The cache, consisting of three large storage ollas and a cooking pot, contained maize cobs and seeds of squash, watermelon, tepary beans, wheat, barley, and sorghum. The seeds were wrapped in a fragment of a modern Caucasian twined, bi-colored textile, indicating storage had occurred in the early historic period.

6. For the purpose of this paper, we will keep the Kamia and Southern Diegueño separated into two groups. Their creation myths are distinctly different, and only the Kamia of the New River were in a position to practice flood-water farming. Even anthropologists and linguists who have regarded them as a single entity with some dialect differences (Langdon 1970:1-2) have recognized the necessity at times of speaking of the Kamia of Gifford as opposed to the Southern Diegueño.

7. The first Cahuilla baptisms at Mission San Gabriel were recorded in 1809, relatively late in the Mission period (Bean 1960).

8. Forbes (1963:1-2) poses the problem of wheth-

er plants such as these, acquired by diffusion through other Indian groups from a distantly removed Spanish source, can be considered part of the aboriginal crop complex. He suggests that the most realistic way to look at American Indian culture is to differentiate not between aboriginal and non-aboriginal but between pre-European contact and post-European contact.

9. Hooper (1920:342) and Patencio (1943:13-14) state that Telmekish lay in the east. Patencio (1943:14) notes specifically that the souls of the dead were unable to go north, west, or south, and were forced to go to the east.

10. Undoubtedly, many Indian groups after secularization of the missions in 1834 found their old gathering areas so disrupted by Spanish cattle grazing and settlement that even if they had wanted to return to the old hunting and gathering subsistence it would have been impossible.

11. The first Spanish expedition to explore the Coachella Valley, led by Captain José Romero, found the Cahuilla planting corn, pumpkins, melons, and watermelons near present-day Thermal in the month of December 1824 (Bean and Mason 1962:46). So far as is known this was the first contact with the Cahuilla of the desert. Kamia agriculture can be dated back as far as the first decade of the nineteenth century (Bean and Lawton 1973:xvi). Here again, we have no known earlier contact with the people of the New River.

12. I recognize that my decision to treat variants as separate myth samples can be reasonably criticized. The decision was cautiously made, however. The variants were often quite dissimilar and provenience frequently presented insurmountable problems. I might well have chosen to accept some variants as separate myths, where they were quite different and represented a version told by another branch of an Indian group. I might then have missed post-contact alterations in those myths which were discarded as more fragmentary than other longer versions. Rather than discard some variants and accept others, I chose to include all versions in my analysis. With most groups, variants represented a small portion of the body of the literature. In the case of a few groups, particularly in southern California, variants made up as much as one-half of the data. Overall, however,

they represented about one-tenth of the total sampling of myths available. I believe, however, that the size of my total sampling and the results obtained indicate clearly that the omission of variants would not have affected the conclusions.

13. The culture hero, *Kwiyow humar* (or *homar*) (DuBois' Cuy-a-ho-marr), bears a non-Diegueño name, according to Margaret Langdon (personal communication). The word *humar* is found in Mohave, however, and means a "young male person." The nominal prefix *kw*, which makes a noun out of a verb, is pan-Yuman. Although *humar* does not exist as a lexical item in Diegueño, certain cognates do. Waterman (1909:48) considered the myth to be Diegueño. As with the dying god motif, the Chaup story might well be a Diegueño myth shared in common with the Mohave. DuBois' statement that her informants recognized it as borrowed from the Mohave, however, suggests they recognized it to be a recent acquisition.

### REFERENCES

- Barrett, S. A.  
 1906 A Composite Myth of the Pomo Indians. *Journal of American Folk-lore* 19:37-51.  
 1919 Myths of the Southern Sierra Miwok. University of California Publications in American Archaeology and Ethnology 16:1-28.
- Barrows, David Prescott  
 1900 The Ethno-Botany of the Coahuilla Indians of Southern California. Chicago: University of Chicago Press. (Reprinted 1967 by Malki Museum Press, with Introductory Essays by Harry W. Lawton, Lowell John Bean, and William Bright.)
- Bean, Lowell John  
 1960 The Wanakik Cahuilla. *The Masterkey* 34:111-119.  
 1972 Mukat's People: The Cahuilla Indians of Southern California. Berkeley: University of California Press.
- Bean, Lowell John, and Harry W. Lawton  
 1973 Some Explanations for the Rise of Cultural Complexity in Native California with Comments on Proto-Agriculture and Agriculture. In Henry T. Lewis, *Patterns of Indian Burning in California: Ecology and Ethnohistory*, Ramona: Ballena Press, pp. v-xlvi.
- Bean, Lowell John, and William Mason  
 1962 Diaries and Accounts of the Romero Expeditions in Arizona and California in 1823-1826. Palm Springs: Palm Springs Desert Museum.
- Bean, Lowell John, and Katherine Siva Saubel  
 1972 *Temalpakh: Cahuilla Indian Knowledge and Usage of Plants*. Banning: Malki Museum Press.
- Benedict, Ruth  
 1926 Serrano Tales. *Journal of American Folk-Lore* 39:1-17.
- Bolton, Herbert Eugene  
 1919 *Kino's Historical Memoirs of Pimería Alta*. Cleveland. 2 vols.
- Bowers, Stephen  
 1888 A Remarkable Valley and an Interesting Tribe of Indians. San Buenaventura: Printed by the Author. (Cover title reads: The Conchilla Valley and the Cahuilla Indians.)
- Broadbent, Sylvia  
 1964 The Southern Sierra Miwok Language. University of California Publications in Linguistics 38:1-353.
- Bright, William  
 1957 The Karok Language. University of California Publications in Linguistics 13:1-457.
- Carter, George  
 1967 A Cross Check on the Dating of Lake Mohave Artifacts. *The Masterkey* 41:26-33.
- Castetter, Edward F., and Willis H. Bell  
 1951 *Yuman Indian Agriculture: Primitive Subsistence on the Lower Colorado and Gila Rivers*. Albuquerque: University of New Mexico Press.
- Curtin, Jeremiah  
 1910 Achomawi Myths. *Journal of American Folk-Lore* 22:283-287.

- Curtis, Edward S.  
 1929 *The North American Indian: Being a Series of Volumes Picturing and Describing the Indians of the United States, the Dominion of Canada, and Alaska.* Norwood: The Plimpton Press. Vol. 15.
- Cushing, Frank  
 1965 *The Nation of the Willows.* Flagstaff: Northland Press.
- de Angulo, Jaime  
 1973 *Coyote Man and Old Doctor Loon.* San Francisco: Turtle Island Foundation.
- de Angulo, Jaime, and L. S. Freeland  
 1928 *Miwok and Pomo Myths.* *Journal of American Folk-Lore* 41:232-252.
- Demetracopoulou, D., and Cora du Bois  
 1932 *A Study of Wintu Mythology.* *Journal of American Folk-Lore* 45:375-500.
- Dixon, Roland B.  
 1902 *Maidu Myths.* *Bulletin of the American Museum of Natural History* 17:33-118.  
 1908 *Achomawi and Atsuwegi Tales.* *Journal of American Folk-Lore* 21:159-171.  
 1910a *Shasta Myths.* *Journal of American Folk-Lore* 23:364-370.  
 1910b *The Chimariko Indians and Language.* *University of California Publications in American Archaeology and Ethnology* 5:293-380.
- Driver, Harold E.  
 1961 *The Indians of North America.* Chicago: University of Chicago Press.
- DuBois, Constance Goddard  
 1904a *Mythology of the Mission Indians.* *Journal of American Folk-Lore* 17:185-188.  
 1904b *The Story of the Chaup: A Myth of the Diegueños.* *Journal of American Folk-Lore* 17:217-242.  
 1905a *The Mythology of the Diegueños, Mission Indians of San Diego County, California, as Proving Their Status to be Higher than is Generally Believed.* *International Congress of Americanists 13th Session, 1902,* pp. 101-106.  
 1905b *Religious Ceremonies and Myths of the Mission Indians.* *American Anthropologist* 7:620-629.  
 1906 *Mythology of the Mission Indians.* *Journal of American Folk-Lore* 19:145-164.  
 1908 *The Religion of the Luiseño and Diegueño Indians of Southern California.* *University of California Publications in American Archaeology and Ethnology* 8:69-186.
- Fairchild, Mahlon Dickerson  
 1933 *A Trip to the Colorado Mines in 1862.* *California Historical Society Quarterly* 12:11-17.
- Forbes, Jack D.  
 1963 *Indian Horticulture West and Northwest of the Colorado River.* *Journal of the West* 2:1-14.  
 1965 *Warriors of the Colorado: The Yumans of the Quechan Nation and Their Neighbors.* Norman: University of Oklahoma Press.
- Gifford, Edward W.  
 1917 *Miwok Myths.* *University of California Publications in American Archaeology and Ethnology* 12:283-338.  
 1918 *Clans and Moieties in Southern California.* *University of California Publications in American Archaeology and Ethnology* 14:155-219.  
 1931 *The Kamia of Imperial Valley.* *Smithsonian Institution Bureau of American Ethnology Bulletin* 97:1-94.  
 1932 *The Southeastern Yavapai.* *University of California Publications in American Archaeology and Ethnology* 29:177-252.  
 1933a *The Cocopa.* *University of California Publications in American Archaeology and Ethnology* 31:257-334.  
 1933b *Northeastern and Western Yavapai Myths.* *Journal of American Folk-Lore* 46:347-415.  
 1937 *Coast Yuki Myths.* *Journal of American Folk-Lore* 50:115-172.
- Gifford, Edward W., and Gwendoline Harris Block  
 1930 *California Indian Nights Entertainment:*

- Stories of the Creation of the World, of Man, of Fire, of the Sun, of Thunder, etc.; of Coyote, the Land of the Dead, the Sky Land, Monsters, Animal People, etc. Glendale: Arthur H. Clark Company.
- Goddard, Pliny Earle  
 1904 Hupa Texts. University of California Publications in American Archaeology and Ethnology 1:89-368.  
 1909 Kato Texts. University of California Publications in American Archaeology and Ethnology 5:67-238.  
 1914 Chilula Texts. University of California Publications in American Archaeology and Ethnology 10:289-379.
- Goodwin, Grenville  
 1939 Myths and Tales of the White Mountain Apache. New York: American Folk-Lore Society.
- Harrington, John Peabody  
 n.d. Field Notes on File at the Bureau of American Ethnology, Smithsonian Institution, Washington, D. C.  
 1908 A Yuma Account of Origins. Journal of American Folk-Lore 21:324-348.  
 1931 Tobacco Among the Karuk Indians of California. Smithsonian Institution Bureau of American Ethnology Bulletin 94:1-284.
- Heizer, Robert F.  
 1955 Two Chumash Legends. Journal of American Folk-Lore 68:34, 56, 72.
- Hill, Jane H., and Rosinda Nolasquez  
 1973 Mulu'wetam: The First People. Cupeño Oral History and Language. Banning: Malki Museum Press.
- Hooper, Lucile  
 1920 The Cahuilla Indians. University of California Publications in American Archaeology and Ethnology 16:316-380.
- Jensen, Adolf E.  
 1951 Myth and Cult Among Primitive Peoples. Translated by Marian Tax Choldin and Wolfgang Weissleder. Chicago and London: University of Chicago Press.
- Kroeber, A. L.  
 1906 Two Myths of the Mission Indians of California. Journal of American Folk-Lore 19:309-321.  
 1907a Indian Myths of South Central California. University of California Publications in American Archaeology and Ethnology 4:169-250.  
 1907b The Yokuts Language of South Central California. University of California Publications in American Archaeology and Ethnology 2:169-377.  
 1908 Ethnography of the Cahuilla Indians. University of California Publications in American Archaeology and Ethnology 8:29-68.  
 1925 Handbook of the Indians of California. Smithsonian Institution Bureau of American Ethnology Bulletin 78:1-995.  
 1939 Cultural and Natural Areas of Native North America. University of California Publications in American Archaeology and Ethnology 38:1-242.  
 1941 Culture Element Distributions: XV, Salt, Dogs, Tobacco. University of California Anthropological Records 6:1-20.  
 1948 Seven Mohave Myths. University of California Anthropological Records 11:52-69.
- Kroeber, Henrietta Rothschild  
 1908 Wappo Myths. Journal of American Folk-Lore 21:231-323.
- Laird, Carobeth  
 n.d. The Chemehuevi. Unpublished ms. on file at Malki Museum, Banning, California.
- Langdon, Margaret  
 1970 A Grammar of Diegueño: The Mesa Grande Dialect. University of California Publications in Linguistics 66:1-200.
- Lawton, Harry W.  
 1968 The Dying God of the Cahuilla: Ethnohistoric Evidence of a Colorado River-Derived Agricultural Complex in Southern California. Graduate Seminar Paper in English 275A, The Oral Epic. University of California, Riverside.

- Lawton, Harry W., and Lowell John Bean  
 1968 A Preliminary Reconstruction of Aboriginal Agricultural Technology Among the Cahuilla. *The Indian Historian* 1(5):18-24, 29
- Lévi-Strauss, Claude  
 1969 *The Raw and the Cooked: Introduction to a Science of Mythology*. New York and Evanston: Harper and Row. Vol. 1.
- Lord, Albert B.  
 1964 *The Singer of Tales*. Cambridge: Harvard University Press.
- MacGregor, Gordon  
 1935 Origin Myth. *Memoirs of the American Anthropological Association, Contributions from the Laboratory of Anthropology*, I, No. 42:12-26. (Supplement to *American Anthropologist*, Vol. 37, No. 1, Part 2.)
- Mason, J. Alden  
 1912 *The Ethnology of the Salinan Indians*. University of California Publications in American Archaeology and Ethnology 10:97-240.  
 1918 *The Language of the Salinan Indians*. University of California Publications in American Archaeology and Ethnology 14:1-154.
- Merriam, C. Hart  
 1928 *An-Nik-A-Del*. Boston: The Stratford Company.
- Olden, Sarah Emilia  
 1923 *Karok Indian Stories*. San Francisco: Harr Wagner Publishing Company.
- Opler, Morris Edward  
 1938 *Myths and Tales of the Jicarilla Apache Indians*. New York: American Folk-Lore Society.
- Ord, E. O. C.  
 1848 Lt. E. O. C. Ord's First Report to General Riley. Executive Document No. 47, 31st Congress, Senate, 1st Session, pp. 119-127.
- Oswalt, Robert  
 1964 *Kashaya Texts*. University of California Publications in Linguistics 36:1-341.
- Patencio, Francisco  
 1943 *Stories and Legends of the Palm Springs Indians*. Los Angeles: The Times-Mirror Company.
- Quinn, Charles Russell, and Elena Quinn, Eds.  
 1965 *Edward H. Davis and the Indians of the Southwest United States and Northwest Mexico*. Downey: Published by Elena Quinn.
- Radin, Paul  
 1924 *Wappo Texts*. University of California Publications in American Archaeology and Ethnology 19:1-147.
- Reichard, Gladys  
 1925 *Wiyot Grammar and Texts*. University of California Publications in American Archaeology and Ethnology 22:1-215.
- Reid, Hugo  
 1852 *The Indians of Los Angeles County*. Los Angeles Star, 1852. (Several reprints have been published. For the best edition, see Robert F. Heizer, Ed., *The Indians of Los Angeles County: Hugo Reid's Letters of 1852*, Southwest Museum Papers 21.)
- Robins, R. H.  
 1958 *The Yurok Language: Grammar, Texts, Lexicon*. University of California Publications in Linguistics 15:1-300.
- Rogers, Barbara Thrall, and A. H. Gayton  
 1944 Twenty-seven Chukchansi Yokuts Myths. *Journal of American Folklore* 57:190-207.
- Rogers, Malcolm  
 1929 Report of an Archaeological Reconnaissance in the Mohave Sink Region. *San Diego Museum of Man Papers* 1:1-13.  
 1933 *The Aborigines of the Desert*. In *The California Deserts*, by Edmund C. Jaeger. Palo Alto: Stanford University Press.  
 1941 *Aboriginal Cultural Relations Between Southern California and the Southwest*. *San Diego Museum Bulletin* 5(3):1-6.  
 1945 *An Outline of Yuman Prehistory*. *Southwestern Journal of Anthropology* 1:167-198.



- Russell, Frank  
1908 The Pima Indians. Twenty-Sixth Annual Report of the Bureau of American Ethnology, pp. 3-389.
- Sapir, Edward  
1910 Yana Texts. University of California Publications in American Archaeology and Ethnology 9:1-235.  
1923 Text Analysis of Three Yana Dialects. University of California Publications in American Archaeology and Ethnology 20:264-294.
- Sapir, Jean  
1928 Yurok Tales. Journal of American Folk-Lore 41:253-261.
- Sauer, Carl  
1936 American Agricultural Origins. In Essays in American Anthropology, Robert H. Lowie, Ed. Berkeley: University of California Press.  
1970 Sixteenth Century North America: The Land and the People as Seen by Europeans. Berkeley: University of California Press.
- Sedlmayr, Jacobo  
1939 Sedlmayr's Relación of 1746. Translated and edited by Ronald L. Ives. Smithsonian Institution Bureau of American Ethnology Bulletin 123(9):97-117).
- Seiler, Hansjakob  
1970 Cahuilla Texts with an Introduction. Bloomington: Indiana University Publications.
- Shipek, Florence C.  
1971 Prepared Direct Testimony of Florence C. Shipek, Anthropologist. Exhibit B-50. Federal Power Commission Project No. 176, San Diego County, California.
- Shipley, William F.  
1963 Maidu Texts and Dictionary. University of California Publications in Linguistics 33:1-261.
- Smithson, Carma Lee, and Robert Euler  
1964 Havasupai Religion and Mythology. University of Utah Anthropological Papers 68:1-112.
- Spier, Leslie  
1923 Southern Diegueño Customs. University of California Publications in American Archaeology and Ethnology 20:297-358.  
1928 Havasupai Ethnography. Anthropological Papers of the American Museum of Natural History 29:83-392.  
1933 Yuman Tribes of the Gila River. Chicago: University of Chicago Press.
- Steward, Julian H.  
1936 Myths of the Owens Valley Paiute. University of California Publications in American Archaeology and Ethnology 34:355-440.
- Stewart, George W.  
1906 A Yokuts Creation Myth. Journal of American Folk-Lore 19:322.  
1908 Two Yokut Traditions. Journal of American Folk-Lore 21:237-239.
- Strong, William Duncan  
1929 Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26:1-329.
- Teeter, Karl V.  
1964 The Wiyot Language. University of California Publications in Linguistics 37:1-251.
- Thompson, Stith  
1955 Motif Index of Folk Literature. Bloomington: Indiana University Press. Vol. 1.
- Treganza, Adan  
1947 Possibilities of an Aboriginal Practice of Agriculture Among the Southern Diegueño. American Antiquity 12:169-173.
- Uldall, Hans Jørgen, and William Shipley  
1966 Nisenan Texts and Dictionary. University of California Publications in Linguistics 46:1-282.
- Underhill, Ruth  
1965 Red Man's Religion. Chicago: University of Chicago Press.
- Voegelin, Charles F.  
1935 Tubatulabal Texts. University of Califor-

- nia Publications in American Archaeology and Ethnology 34:191-246.
- Voegelin, Erminie W.  
1947 Three Shasta Myths, Including Orpheus. *Journal of American Folk-Lore* 60:52-58.
- Waterman, T. T.  
1909 Analysis of the Mission Indian Creation Story. *American Anthropologist* 11:41-55.  
1910 The Religious Practices of the Diegueño Indians. University of California Publications in American Archaeology and Ethnology 8:271-358.
- White, Chris  
1974 Lower Colorado River Area Aboriginal Warfare and Alliance Dynamics. *In* *Antap: California Indian Political and Economic Organization*, edited by Lowell John Bean and Thomas King. Ramona: Ballena Press. (In Press.)
- Wilke, Philip J., and Douglas N. Fain  
1974 An Archaeological Cucurbit from Coachella Valley, California. *Journal of California Anthropology* 1. (See this issue.)
- Woosley, David J.  
1908 Cahuilla Tales. *Journal of American Folk-Lore* 21:239-240.

