

morphic representation occur in a culture in which all graphic representation is virtually absent?

#### ACKNOWLEDGEMENTS

Claudia Nissley of the Museum of Northern Arizona made the copy of the non-reproducible photogravure from the original account.

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## The 'Watcher's Stage' in Lower Colorado River Indian Agriculture

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Over the past ten years, the authors and other investigators have published a series of papers presenting an increasingly strong circumstantial case for the diffusion of native agriculture westward from crop-growing Indian tribes along the Colorado River to various interior Indian groups of the California deserts prior to Spanish contact.<sup>1</sup> The crop-growing complex in southern California probably was most developed among the Kamia of Imperial Valley, the Cahuilla of the Colorado Desert, and certain Diegueño groups of the desert interior and northern Baja California. The advance of aboriginal agriculture appears not to have extended west of the Salton Basin.<sup>2</sup> Coastal southern California

Indian groups learned agriculture as neophytes at the Spanish Missions or acquired it by diffusion from European sources after contact.

In our study of aboriginal agriculture in southern California, we have recently begun examining photographs of southern California Indians taken in the late historic period, looking for evidence of agriculture. The purpose of this brief report is to suggest by example how photographic images may aid in expanding or reinforcing our knowledge of native agricultural technology in the historic period. Analysis of such images can (1) reinforce ethnographic data by serving as a check on information derived from informants; (2) expand our knowledge of native agriculture in the historic period through providing new data; (3) inform us about acculturation in native agriculture (e.g., the borrowing of Spanish or American agricultural practices); and (4) possibly shed light on aboriginal agricultural practices that have extended into the historic period.

A cursory survey of images in museum and library collections indicates that photographs directly concerned with native agriculture are very rare.<sup>3</sup> Regional photographers at the turn-of-the-century in southern California were primarily interested in the picturesque when they focused their cameras on local Indians. In general, images made by C.C. Pierce, George Wharton James, J.S. Chase, and other photographers of that era—both professional and non-professional—were confined to portraits of Indians, ceremonial events, adobe and brush dwellings, and other highly graphic scenes. The same is mostly true even for the more ethnologically oriented photographers such as DeLancey Gill or H.W. Henshaw, who photographed for the Bureau of American Ethnology, and for such well-known pictorialists as Edward S. Curtis and Frederick Monsen. In general, agriculture is only an incidental component—often easily missed in studying an image—in Indian photographs of

the late historic period. Usually, a farmer's field may be discovered only as a background in a photograph of a native dwelling or as a backdrop to a photograph of Indian people. However, through use of a magnifying glass or a sectional enlargement of an image considerable information may be gained about native agriculture.

Burdick (1904:35) published a photograph by C.C. Pierce & Co. titled "A Desert Bedroom," showing an Indian sleeping at mid-day in a brush bower. The photographs in Burdick's *The Mystic Mid-Region* are mostly taken of Mohave or Chemehuevi people along the Colorado River. These images received widespread distribution through C.C. Pierce & Co. The authors have seen copies of "A Desert Bedroom" identifying the Indian as Chemehuevi, although in the absence of an authoritative source of identification it seems just as likely that he may have been a Mohave. Our attention was drawn to this image in particular by the cleared land at the left of the bower, which appeared to be marked by a series of well-spaced holes (Fig. 1). An enlargement of this section of the image showed that we were looking at an agricultural plot (Fig. 2).

What can be learned from studying this image and its sectional enlargement? First, the land adjoins the Colorado River, which may be seen just below the mountains in the upper right of the image (Fig. 1). The enlargement (Fig. 2) shows that the land was cleared and brush was piled at the edge of the field (upper part of photograph). A series of holes several inches deep, spaced about 12 inches apart, have been dug. Planted in the holes is a cereal crop (possibly barley), which has just reached the seedling stage. Water-lines near the tops of several of these holes indicate that the plants were watered by pot irrigation, undoubtedly from the nearby Colorado River.<sup>4</sup>

The method of planting and irrigation shown here appears to be an extension of aboriginal practices late into the historic

period. Both wheat and barley reached the lower Colorado River by Kino's time, ca. A.D. 1700 (Castetter and Bell 1951:123-126). Wheat was never broadcast in early times, and probably neither was barley. Castetter and Bell (1951:151-154) reported that Mohave and Yuman informants said wheat was sowed in circular holes about 12 inches apart and grown in clumps (see Fig. 2). The depth of these holes might range from 2 to 15 inches, depending probably on such local conditions as available soil moisture. Such planting and irrigation practices were observed by Castetter and Bell (1951:152) as recently as October, 1937.

Analysis of agricultural elements in the Pierce image led us to speculate on the function of the "desert bedroom." The bower is made of willow and appears to be a form of "watcher's stage." Castetter and Bell (1951:154) reported: "Watchers' stages, built of willow poles, were sometimes erected in the fields." Rabbits, birds, and other animals were serious pests in native fields, particularly during the seedling stage of a crop and later at maturity. Such pests posed serious problems in small fields and gardens, where they could conceivably destroy an entire planting in a day or two.<sup>5</sup> The watcher's stage shown in Fig. 1 would thus have provided a comfortable place for an aboriginal farmer to watch over his crop until it passed the seedling stage. If the field was at some distance from the farmer's dwelling, he might also have spent several days at his planting, completing such tasks as weeding or pot irrigation.<sup>6</sup>

The upper part of the enlargement (Fig. 2) reveals a pole stuck upright in the ground. Attached to the pole and hanging half-way down it, there appears to be a second stick. Part of this stick seems to be covered with a white wrapping, and attached to the end of the stick is an oval-shaped object. The quality of the enlarged image is blurred. At best, we can only speculate on the function of this object. Forde (1931:113) reported that the Yumans



Fig. 1. C.C. Pierce & Company photograph titled "A Desert Bedroom."

made "scares" of poles wrapped with reeds and hung with pottery shards and stones to frighten away birds (see also Castetter and Bell 1951: 154). We suggest that the object may be a device to scare away animals.

Finally, looking through the bower (Fig. 1) directly above the man's head, one sees a tall pole, possibly 12 feet or more high, stuck upright in the ground. What appears to be a long rope is attached to the top of the pole. This "rope" extends past the bower to the far right of the image before reaching the ground. This object also may be a scaring device, but the image is too indistinct for further speculation.

While analysis of the image adds nothing

significantly new to our knowledge of native agriculture along the Colorado River, it does reinforce some of the information provided by informants and demonstrates that considerable data may be gleaned from a single photograph. In addition, perhaps most important, we have identified what may be the only existing photographic depiction of a Colorado River watcher's stage.<sup>7</sup>

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#### NOTES

1. This literature may be found cited in the



Fig. 2. Enlargement of lower left corner of "A Desert Bedroom."



references to Bean and Lawton (1973) and Lawton (1974).

2. Malcolm Rogers (unpublished fieldnotes on file at the San Diego Museum of Man) reported finding maize cobs in the Mojave Sink near Crucero and at Cronise Lake. Some years ago, the authors secured Rogers' maize specimens from the San Diego Museum of Man for analysis. The fragments examined were insufficient for interpretation. It should be noted that John Charles Frémont reported in 1844 that he was told by a member of a small party of Mohaves he encountered in the Mojave Sink that a portion of that tribe had formerly lived on the Mojave River and grown various kinds of melons (Jackson and Spence 1970, I:676). Manly (1929) reported in 1849 that Indians in Death Valley had raised corn near a warm spring and that eight miles beyond his party found a cache of Indian squashes. Coville (1892) and Dutcher (1893) reported crops being grown by Indians in the Panamint Mountains on the west side of Death Valley. None of these accounts from the late historic period contain sufficient data to determine whether agriculture in this region was aboriginal in origin or diffused from European sources. Thus, the northern limits of any aboriginal agriculture in southern California's deserts remain to be established with the exception of an aboriginal agricultural complex which emphasized "root crops" and was unique to Owens Valley and some adjoining Great Basin regions (Lawton et al. 1976).

3. Among the few photographs we have located in which native agriculture is the specific subject of the image are several photographs taken around 1900 of native fields along the Lower Colorado River in albums of the Colorado River Land Company in the Sherman Foundation Library, Corona Del Mar. These photographs show Indian cornfields (probably Yuman) with associated stands of enormous squashes. Negative 56,354 in the National Anthropological Archives, Smithsonian Institution is a view of eight Cahuilla Indians at a "threshing floor in Cohuilla [sic] Valley," photographer unidentified, taken prior to October, 1900.

The authors have identified this previously unknown photographer as David Prescott Barrows.

4. Pot irrigation is the practice of carrying water to plants with a ceramic pot or jar. Castetter and Bell (1951:135) reported that it was not uncommon for the Mohave to carry water in *ollas* to their plants when natural soil moisture was inadequate. Pot irrigation has also been reported for the Chemehuevi, Maricopa, Pima, and Papago (Castetter and Bell 1951:40, 143, 172) and for the Cahuilla in the late historic period (Bean and Lawton 1968:21-22).

5. In their efforts to better understand native agriculture, the authors for a number of years have planted Hopi maize varieties in a natural catchment basin in the Boyd Deep Canyon Desert Research Center near Palm Desert. Rodents have proven to be a particularly serious pest during the first two weeks of plant growth. Apparently attracted by smell, rodents will burrow down to five inches in soil to obtain newly planted seeds. On one occasion an entire planting was removed by rodents. The use of wire containers embedded in the ground during the first few weeks of plant growth solved this problem.

6. Mr. Mariano Saubel of Morongo Indian Reservation (personal communication) reports that structures similar to the watcher's stage were used by the Cahuilla in the late historic period. Even today, when Mr. Saubel grows maize in a kitchen garden near his house, he often sleeps outside nights during the first week or so of seedling growth to protect his plants from rabbits and other pests.

7. C.C. Pierce & Co. also made a second photograph of the watcher's stage with the same Indian standing alongside the shelter. Dr. Walter Reuther, Professor of Horticulture, Department of Plant Sciences, University of California, Riverside, examined the Pierce images at the request of the authors. Dr. Reuther, who has served as an agricultural consultant in many underdeveloped countries, informs us that shelters similar to the Colorado River watcher's stage are a common feature of subsistence agriculture in many parts of the world. They are most often used, he reports, when plantings of crops are some distance from a farmer's dwelling.

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