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An Early Acorn Cache from Central California

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The antiquity of acorn processing has been a major concern of archaeologists because of its paramount importance in the historic subsistence economy of native Central California. In the lower Central Valley acorn use is amply documented for Middle period (post-500 B.C.) and succeeding cultures, but whether the Early period peoples of the region shared this well-known pattern has been a focus for debate. This paper presents the first direct evidence for acorn use during that period.

The French Camp Slough site (CA-SJo-91) is located on the southwestern edge of Stockton on the eastern periphery of the Sacramento-San Joaquin Delta. Salvage excavation in 1970 revealed two spatially and chronologically distinct components. The more westerly of these dated from the Late period, but the eastern component is much older. Radiocarbon dates on bone from this component range from about 1000 B.C. to A.D. 100—a range which spans the transition from Early to Middle period cultures. This is demonstrated artifactually by the presence of typical Early forms such as square *Haliotis* beads, punctate *Haliotis* pendants, and phallic charmstones (Heizer 1949; Johnson 1967:

256-257), as well as typical Middle forms such as saddle-shaped and oval *Olivella* beads, circular *Haliotis* beads, and *Haliotis* ring ornaments (Beardsley 1954; Cook and Elsasser 1956).

On the eastern periphery of this component a cache of several hundred hulled and charred acorns was encountered. Specific identification is tenuous, although two forms appear to be present (Fig. 1). Surprisingly, neither form closely resembles acorns of the Valley Oak (*Quercus lobata*), which was the only species present in the vicinity in historic times. Rather, they are most similar to those of the Blue Oak (*Q. douglasii*) and the Interior Live Oak (*Q. wislizenii*) (J. M. Tucker, Botany Department, University of California, Davis, personal communication). Both of these species are now limited for the most part to the valley periphery, although interior live oak extends onto the valley floor in isolated stands along the Mokelumne River (Griffin and Critchfield 1972).

A sample of the acorns was submitted for radiocarbon analysis and yielded a date of 2895±145 B.P. (945 B.C., GX-4529) (= ca. 890-1420 Bristlecone Pine years B.C.—Ed.). This is fully contemporaneous with the earlier component at SJo-91. It also provides the earliest *direct* evidence of acorn use in the lower Central Valley, and perhaps in all of California.

Traditionally, discussions of the antiquity of acorn use have concentrated on the significance of the mortars found in local Early (Windmiller Pattern) sites (Heizer 1949, 1974; Beardsley 1954; Ragir 1972; Gerow 1974).

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Fig. 1. Carbonized acorns from cache at SJo-91, Stockton, California: *a-b*, *Quercus* cf. *wislizenii*; *c-d*, *Q.* cf. *douglasii*.

Windmillers mortars, however, are almost all fragmentary, are often small, and are often stained with ochre—characteristics which compare unfavorably with the abundant deep heavy mortars and associated pestles of later peoples. These characteristics, along with the variety of items known to have been ground in mortars in historic times (ochre, deer vertebrae, fish bones, whole rodents, grasshoppers, pine nuts, and various seeds, for example) have hindered acceptance of the acorn as part of the Windmillers subsistence pattern.

Based on these findings, it would appear that acorns were in use by at least late Windmillers times. Their role in Early period subsistence and in the cultural changes taking place during the first millennium B.C., remains to be determined.

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