

## PAST AND PRESENT ACORN USE IN NATIVE CALIFORNIA

“...Acorns were the staff of life, the food people ate nearly everyday of their lives.”\*\*

For thousands of years, acorns were life for the majority of California Indian peoples. As a staple food source, acorns figured prominently in the diets and daily lives of individuals for countless generations. Gathering, processing, cooking, storing, and eating acorn were important and time-consuming activities, and lives revolved around them. These rhythms of life were severely disrupted during Euro-American contact, conquest, and settlement—and every California Indian person eventually felt its effects.



A few hundred years later, despite catastrophic demographic collapse, removal from ancestral lands, and vast environmental change, California Indian peoples continue to consider acorn use important in sustaining their cultural identities. Although processing techniques have changed and acorn is no longer an everyday food item, it persists as a significant connection between the past and present and a celebration of the traditional ways. In the book entitled *It Will Live Forever: Traditional Yosemite Indian Acorn Preparation*, Coast Miwok/Pomo elder Julia Parker describes why she makes acorn: "I know that lots of times I think, 'Why do I do this? We don't eat it everyday. Why should I do it?' But . . . it's a special food. It was life to them in the earlier years, and it is still life to a lot of us who want to learn the ways. Who wants to learn to prepare acorn to eat . . . Then again, we should not lose the old way.”\*

### *Pre-contact Acorn Use*

In pre-contact times, acorns were eminently suitable as a food resource because of their availability, productivity, storability, and nutritional content. Anthropologist Alfred Kroeber estimated that more than 75 percent of native Californians relied on acorns for food on a daily basis. In all, 18 species of oak, including shrubs and trees, are distributed throughout the state of California. Indian people probably had little trouble accessing oaks except in some areas of the Central Valley as oaks grow principally in riparian zones, alpine environments, and desert areas. With the exception of the Tanbark Oak (*Lithocarpus densiflora*), all of the oaks belong to the genus *Quercus*, meaning “fine tree” in Latin.

Acorns come in many different shapes and sizes, varying from long and conical to short and rounded, with the largest—canyon, Oregon, valley, and black oaks—measuring up to 2 inches in length. California Indian peoples harvested acorns of most species, but preferences for Tanbark and Black Oak acorns were perhaps most widespread. Although people competed for acorns with deer, bears, rodents, and birds, it is thought that the average annual production exceeded subsistence demands. For example, one researcher suggested that oaks could have supported population densities 50-65 times higher than those estimated at the time of contact in the North Coast Ranges. The productivity of oaks varies, however, and the majority of species produce

---

\* Bev Ortiz, *It Will Live Forever: Traditional Yosemite Indian Acorn Preparation* (Berkeley: Heyday Books, 1991), 127.

\*\* Malcolm Margolin, *The Ohlone Way: Indian Life in the San Francisco-Monterey Bay Area* (Berkeley: Heyday Books, 1989).

good acorn crop yields only every 2-3 years. Most Indian groups constructed acorn caches or granaries to offset this shortcoming, resulting in the ability to store unshelled acorns for up to 10 or 12 years.



Above is a 1930s photograph of Maggie Howard (ca. 1870-1947), also known as Tabuce, a Paiute born near Bridgeport. In this photograph she is shelling and skinning acorns. Notice the beautiful and specialized basketry.  
*Courtesy Yosemite Research Library, Yosemite National Park.*

The nutritional value of acorns is high, and depending on the species, acorns can contain up to 18 percent fat, 6 percent protein, and 68 percent carbohydrate, with the remainder being water, minerals, and fiber. Modern varieties of corn and wheat, in comparison, have about 2 percent fat, 10 percent protein, and 75 percent carbohydrate. Acorns are also good sources of vitamins A and C and many essential amino acids.

A limitation of the acorn is its high content of tannic acid, which makes it bitter and unpalatable to humans without substantial leaching. In all, converting the acorn from an inedible nut high in an oak tree to the soup, mush, or bread generally consumed by Native people required a lengthy process involving a diverse array of tools. Beginning with the harvest in the fall, men and women worked together to knock acorns from trees with sticks or pick them up from the ground. Women gathered the acorns into large burden baskets and transported them to villages or encampments for processing.

Processing techniques varied substantially across cultures, but typically people followed some or all of these steps. Acorns were first dried, and then either stored in granaries for future use or shelled and winnowed using a hammerstone/anvil combination and winnowing basket, respectively. Next, the nuts were pounded into flour or meal using a mortar and pestle. Soaproot brushes were employed among some groups to clean mortars and pestles or consolidate flour on the mortar surface, while others used basket hoppers to contain the meal around the mortars. The meal was sifted with a basket repeatedly and the coarser meal was returned to the mortar for further pounding. The tannin was leached from the flour by repeated flushing with either hot or cold water in a shallow, sandy basin or in a basket filter. Leaching with hot water necessitated the additional step of first heating of stones in a fire, then placing them in a basket filled with water. Heated stones were also used for cooking the leached acorn into a soup or mush, and bread was made by placing the leached acorn on a hot stone to cook. To prevent the basket from scorching, a looped stirrer was used to move the hot rocks around in the basket.

### ***Post-contact Acorn Use***

The changes in native peoples' use of acorn and of their cultures in general must be viewed in the context of Euroamerican contact, and colonization. A good indicator of change is the drastic decline in the native population, although estimates should be viewed with some caution since it is believed that Indian populations were generally undercounted. Various estimates place the precontact Native population



Maggie Howard constructing a granary.  
*Courtesy Yosemite Research Library,  
 Yosemite National Park.*



Granite bedrock mortars for pounding acorn.  
*Courtesy Yosemite Research Library, Yosemite National  
 Park.*

between 300,000 and one million people. In 1769 Spain began colonization of Alta California, establishing missions and bringing about a world of disease, enslavement, and suppression of

Following the breakup of the missions and, by the 1820s, the Church's landholdings, Alta California was under the rule of the Mexican Republic until 1846. This period of history saw continuing dispossession of Indian lands, exploitative use of Native labor, and a statewide decline in Native population to about 150,000 people. During this time, a small, but increasing stream of American emigrants started to travel on land and sea from eastern states, arriving in California to stay or move north to Oregon and beyond. Almost a century later, a Hupa elder 111 years old at the time (1939), identified by a federal government official at Hoopa Valley as Indian Ned, recounted how Indians provided acorns and other Indian foods to starving emigrants who shipwrecked near Trinidad, California around 1843.<sup>+</sup>

In 1848, Alta California was annexed by the United States under the Treaty of Guadalupe Hidalgo, and in that same year, gold was discovered in the foothills of the Sierra Nevada. The Gold Rush brought about enormous changes for California Indians. Non-native peoples inundated the state—by the end of 1849, about 90,000 made their way to California—and conflicts between the newcomers and natives ensued. Two years later, on September 9, 1850, California became the 31st state in the union. In *Discovery of the Yosemite*, diary entries from 1851 described militias that actively hunted Indians and burned acorn caches and villages to starve and drive Indians out of the Central Sierras and foothills.

In addition to extermination and assimilationist policies implemented during the Spanish and Mexican periods in California history, Indian peoples were disenfranchised on a legal level by early State of California laws and policies that limited mobility, prohibited testimony in court against whites, revoked citizenship, and continued dispossession of lands. One of the first laws ever passed by the California Legislature in April 1850 (before California became a state) facilitated removing California Indians from their traditional lands, and separated children and adults from their families, languages, and cultures (1850 to 1865). The final version of the law, An Act for the Government and Protection of Indians provided for “apprenticing” or indenturing of Indian children and adults to whites. The initial version, Senate Bill 54, was authored by John Bidwell, who was a member of the first group of emigrants to arrive in California over land in 1841. Bidwell's bill permitted Indians to continue their traditional practices or “usual avocations” of “hunting, fishing, gathering seeds and acorns for the maintenance [sic] of themselves and families.” It also stated that “in no case shall [I]ndians be forced to abandon their village sites where they have lived from time immemorial.” The protection of California Indians' traditional practice of gathering acorns, and explicit recognition of their ancestral lands were never included in the final version of the law passed by the Legislature on April 22, 1850.<sup>α</sup>

---

<sup>+</sup> Office of Indian Affairs, United States Department of the Interior, *Indians at Work*, (Washington, D.C.: The Department, January 1940), 32-33.

<sup>α</sup> Original Bill File, Chapter 133, 1850, California Secretary of State, State Archives, Location E6553, Box 1; Kimberly Johnston-Dodds, *Early California Laws and Policies Related to California Indians*, (Sacramento: California Research Bureau, September 2002), Appendix 1; transcript of contents of Original Bill File prepared July 29, 2002, by Kimberly Johnston-Dodds, California Research Bureau.

A year later, in April 1851, three commissioners sent to California by President Millard Fillmore commenced negotiating 18 treaties with California Indian nations and tribes. All three of the commissioners participated in the first two treaties negotiated in April; thereafter they went separately to different regions of the state. The Indians who signed the second treaty, the Treaty of Camp Barbour (dated April 29, 1851), successfully negotiated recognition of their right to continue to hunt and gather acorns. Subsequent protests against all of the treaties by citizens and the state legislature, however, resulted in the U.S. Senate rejecting the ratification of the treaties. The printed versions of the treaties submitted by the President to the U.S. Senate for consideration did not reappear to the public until January 18, 1905, when the injunction of secrecy was removed.

By 1870, the number of Indians in California was 30,000, and in 1900 the population nadir occurred at 15,000 people. In addition to population collapse, many also thought that Native Californian cultures and old ways would not be preserved as Indian children were forced into boarding schools and parents and elders were forced to work as laborers, leaving them little time to carry on traditional tasks or teach the young. The 20th century was rough for many California Indians as they continued to be pushed off their lands and were opportunity-less and poverty stricken.

The demographic collapse, dispossession of lands, and assimilationist policies deterred the continuing use of acorn as a staple food in the day-to-day lives of California Indians. Oak groves in former homelands would have been impossible to access let alone maintain by traditional practices such as burning. Overall environmental degradation by resource extraction (e.g., gold, logging, hydroelectricity, minerals) and increasing populations of nonnative people resulted in the loss of oak woodlands, still a concern today. The simple fact of demographic collapse disrupted the transmission of traditional ways, and finally, assimilation policies pressured people to relinquish traditional acorn gathering, processing, and eating in favor of non-Native customs.

Recent studies estimate the Native California population around 300,000 strong, and despite the catastrophic effects of Euro-American contact on California Indian people, acorn continues to be important today as a link with the traditions of the past. The processing techniques have not been lost, but in some cases creatively altered to incorporate modern technology. For example, instead of the mortar and pestle, the electric blender or a meat grinder may be used to produce flour. Cloth might be the substitute for the leaching basin, buckets may replace baskets, and a slow drip in the kitchen sink may flush the tannic acid. For cooking, the stove and a metal pot might replace heated stones placed in baskets. Whatever the preparation



*A Great Blue Oak*

techniques, acorn is special: a tangible connection to the old ways, a nourishing food, and a commitment to the future.

Although the acorn is no longer the focus of daily life, Indian people still prepare and eat acorn foods at special gatherings, Big Times, and other celebrations. Many autumn festivals are centered around the first acorn harvest, to this day, and many acorn foods are prepared and celebrated. Additionally, acorns and oaks are commonly used among California Indians in names of businesses and logos of businesses and tribes. In this way, the acorn's continued significance is obvious today.

**"And you women, strike out, gather wild onions, wild potatoes! Gather all you can! Gather all you can! Pound acorns, pound acorns, pound acorns! Cook, Cook! Make some bread, make some bread! So we can eat, so we can eat, so we can eat... Make acorn soup so that the people will eat it!... Don't talk about starvation, because we never have much! Eat acorns! There is nothing to it."**

-- Song of Chief Yanapayak, Miwok, from "The Way We Lived," edited with commentary by Malcolm Margolin, copyright 1981.

### Sources

Alvarez, Susan H., and David W. Peri

1987 Acorns: The Staff of Life. *News From Native California* 1(4):10-14.

Barrett, S. A., and E. W. Gifford

1933 *Miwok Material Culture*. Originally published by Bulletin of Milwaukee Public Museum 2(4). Yosemite National Park: Yosemite Association.

Basgall, Mark E.

1987 Resource Intensification Among Hunter-Gatherers: Acorn Economies in Prehistoric California. *Research in Economic Anthropology* 9:21-52.

Bunnell, Lafayette Houghton, M.D.

1990 *Discovery of the Yosemite and the Indian War of 1851 Which Led to that Event* (Reprint of the 4th edition published in 1911). Yosemite Association.

Johnston-Dodds, Kimberly

2002 *Early California Laws and Policies Related to California Indians*, Sacramento: California Research Bureau.

Laverty, Philip

2003 The Ohlone/Costanoan-Esselen Nation of Monterey, California: Dispossession, Federal Neglect, and the Bitter Irony of the Federal Acknowledgment Process. *Wicazo Sa Review* 18:41-78.

Mayer, Peter J.

1976 *Miwok Balanophagy: Implications for the Cultural Development of Some California Acorn-Eaters*. Berkeley: Archaeological Research Facility, University of California, Department of Anthropology.

McCarthy, Helen

1993 *Managing Oaks and the Acorn Crop*. In *Before the Wilderness: Environmental Management by Native Californians*, edited by Thomas C. Blackburn and Kat Anderson. Menlo Park: Ballena Press.

Merriam, C. Hart

1918 The Acorn, a Possibly Neglected Source of Food. *National Geographic Magazine* 34(2).

Ortiz, Bev

1991 *It Will Live Forever: Traditional Yosemite Indian Acorn Preparation*. Berkeley: Heyday Books.

Pavlik, Bruce M., Pamela C. Muick, Sharon Johnson, and Marjorie Popper

1991 *Oaks of California*. Los Olivos: Cachuma press and the California Oak Foundation.

Peri, David W.

1987 Plant of the Season: Oaks. *News from Native California* 1(5):6-9.