

An Ethnobotanical Research Study on Western Mono and Yokut Traditional Plant Foods and
Their Miscellaneous Usages

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Abstract

There has been a drastic change in the region of California and its vast ecosystems since Indigenous contact with Europeans. This is according to the many oral descriptions of elders and descendants of California's Indigenous Tribes. Western science may not believe oral tradition to be evidence but it is the trusted method that has sustained native peoples for thousands of years. This change in ecosystem health within California is believed to have been caused by several influencing factors including large amounts of agriculture, invasive species of plants and animals, logging, and most importantly the lack of proper management of our environment, etc. Tribal peoples managed the surrounding environment to retrieve desired plant and animal species while providing rich habitats for organisms to flourish. One way is the method of controlled burns to reduce the fuel load on forest floors and help increase plant seedlings to sprout. Another method includes trimming of shrubs and collection of plants for food and weaving material. This paper focuses on two groups of Indigenous Peoples, the Western Mono and Yokuts and their traditional knowledge and modern documentation of methods of caretaking for a few types of abundant traditional foods.

Introduction

The focus on this report is about the usage of native food plants by the Mono, also called Monache or Western Mono, and the Yokuts Peoples of California. I am focusing on these two Indigenous groups because I have grown up in their traditional ways and am a descendent. Specifically, I am a descendant of the Yokut/ Western Mono villages or tribelets known as; Wuksachi, Wukchumni, Michahai, Koyote, Patwisha, Entimbich, and Tachi. The Yokuts and Western Mono regularly intermarried. Although I am a descendant of many villages, I am a

member of the Wuksachi Indian Tribe. Our Tribe practices our culture with traditional basketweaving, language classes, ceremonies, gathering plants, visiting sacred sites, and more.

Yokuts is the traditional word for “People” and are known by anthropologists to have expanded throughout most of the San Joaquin Valley of central California. The Yokut ranged from the Tehachapi Mountains to Stockton, and the foothills of the Coastal Mountains to the Sierra Nevada Mountains. The Western Mono ranged from the Sierra Nevada foothills to Mount Whitney and throughout these mountains. Many habitats overlapped between the two groups and trade was often. The usage of plants by California Indians ranges drastically. This is both due to the massive land area which encompasses California and the variety of ecosystems giving a great amount of plant diversity. Being such a rich environment within the San Joaquin Valley and Sierra Nevada Mountain Range, being able to understand all the plants would take years. The purpose of this project is to start the collection of ethnobotanical information for the educational use of Tribal and non-Tribal peoples. Access to important plants and knowledge is limiting, and documentation of this knowledge is important within modern society. Specifically, I would like to begin by putting together a simple paper which discusses some important and abundant food plants that we can begin to practice gathering once again.

The San Joaquin Valley currently is major producer of large-scale agriculture. I have been told by my elders and what they have been told when they were young is that the valley once was a large marshland with waterfowl that would turn the skies black when they flew. The central Sierra Nevada Mountains was also full of plants and animals that no one would ever go hungry unlike the typical belief about “hunter-gatherer” people. In Kat Anderson’s book, *Tending the Wild*, she interviews many California Tribal elders, many being my own. Anderson describes that even the typical label of hunter-gatherer for many of the California Tribes is

inaccurate. The land was managed and like a garden in which food and important plants was easily accessible if managed properly. Many Indigenous People that I have been influenced by do believe that because of the lack of the right caretaking of our lands, many of the animals and plants are in hiding. Our relationship with the land is fragile, and the thought of the land as being in a “wild” state is something foreign to the Western Mono and Yokuts because we managed and tended.

Methods

I have focused on the following plants and their usage by Western Mono and Yokuts; clovers, manzanita, yucca, pine nuts (sugar pine, gray pine), and acorns. I included the usages of neighboring Tribes on the same plants so we can combine this traditional knowledge into one. During the time of this study, many elders were unavailable due to personal limitations. I was told that once the fall season began that I would then begin to learn traditional gathering practices and continue to use these plants for weaving and food. I have documented the previous information which elders have shared with me on several occasions. I used several books which have interviewed elders that have passed on, many including crucial information. These books are anthropological records, USDA plant guides, and California Indian interview based plant guides. I took each book and combined the literature on the specific plants as well as any previous information I have learned orally. Also, Wukchimni (Yokut), Waksachi (Western Mono), and scientific names are used to describe the flora.

Traditional Foods – Research

- Clovers: Ci-tat (Wukchumni.) *Trifolium* spp. (*T. barbigerum*, *T. ciliolatum*, *T. variegatum*, and *T. wormskioldii*). They are known to be readily available to gather and consume in early

spring. Clovers are harvested and eaten raw, maybe with some salt (Lightfoot 2009, Gavin 1992). Yokuts groups ate this with acorn mush, could be dried and ground up into a flour to be added to the mush or eaten raw (Lightfoot 2009). They could be ground up with a mortar and pestle. Clovers are known to natives as “greens” are described by many people today. There were a good source of nutrition and flavor.

- Manzanita: A'psoab^a (Wuksachi). A'-ptu (Wukchumni). *Arctostaphylos* spp. (*A. manzanita*, *A. nevadensis*, *A. viscida*). There are more than fifty species of manzanita within California, and are hard to identify to species due to many hybridizations within regions where they overlap (Anderson 2005). Many are known to grow in foothill woodland areas (Anderson 2005). Manzanita fruiting period is from early/late summer to early fall (Shirley 2011). The manzanita cider made by crushing the berries on a small tray with a pestle and pouring water over the berries. It was also sweetened with various unknown plants (Gayton 1948). Berries collected when ripe by knocking the berries into a cleaned ground and gathering them. Berries were dried and crushed into a pulp. To make cider, Lightfoot describes the berries were soaked in a basket of water and then crushed and water was poured (as described above) to make the cider. It was to be consumed before fermentation, this would cause the cider to become sour (Shirley 2011). The cider was sometimes drunk as appetite stimulator (Anderson 2005). The berries can also be eaten raw, chewed on, or stored for winter (Shirley 2011). Lightfoot also describes some Tribes burning the bush to increase fruit abundance. Anderson writes that fruit bearing plants such as manzanita does require human influence to be productive. This is to control for shrub density of branches allowing for more light to be directed towards fruit production. Manzanita was burned routinely in 2-3 year increments

and usually in the month of July by Yokuts, Western Mono, and other Tribes. Burning also allowed for reduction of harmful insects within dead wood (Anderson 2005). Nomlaki Tribe used the tea leaves to treat diarrhea (Lightfoot 2009). This practice was done for chokecherry, strawberry, and elderberry shrubs. Black dye from roots was used to dye basket materials (Gavin 1992). Interview: Winnemem Wintu Tribe also uses the leaves in a bath to treat poison oak and the wood hot for ceremonial fires.

- Yucca: O'pa°dra (Wuksachi). Ka'-wid (Wukchumni). *Yucca whipplei* (Our Lord's Candle, Yucca, or Spanish bayonet). In the fall, roots were dug up and roasted. In the spring, the flower buds (O'bi) and stalks were collected and cut length wise to roast. The interior pulp was chewed on and spit out to extract juices. This is told to me men's work. After cooked, the yucca could also be dried and crushed for winter food (Gayton 1948). Gavin describes the young pods were also roasted and eaten and that a thread was made from the leaf's inner pulp as (1992). *Y. whipplei* was described to have been of use to southern California Tribes. They used the fibers for rope, fishing lines, nets, and clothing (sandals). Needles on the leaves were used for tattoos and piercings (Lightfoot 2009). Cutting flower stalks before they flowered was believed to produce "pups" or clones of the main plant for survival (Anderson 2005).
- Pine nuts: Tu'ba (Wuksachi). Pone'diw^a (Wuksachi) nut from a sugar pine tree. *Pinus lambertiana* (Sugar pine). Cones were gathered during August-September when they were still green and unopened (Gayton 1948, Lightfoot 2009). The cones were put onto hot coals until the outer skin was ashy and nuts were extracted by cutting the cone in four parts and

stripping off the material to collect nuts to be eaten (Gayton 1948). The nuts could be eaten raw or lightly parched to be eaten, made into soups, or stored (Lightfoot 2009). The pitch is known to taste sweet and could be chewed on or be used to help make whistles (Goodrich 1980). Also, the pitch or sugar looks, dissolves, and tastes like a “coffee-colored divinity fudge” (443) (Latta 1977). They are known to grow from 4,000 to 9,850 ft elevation (Lightfoot 2009). The pines known to have their pine nuts eaten include; *Pinus sabiniana*, *P. edulis*, and *P. monophylla*.

- Foothill/ Gray Pine: I’nid (Wukchumni). *Pinus sabiniana*. Description about *P. lambertiana* above is similar to the description by Gavin about consumption. *P. sabiniana* previous common name was Digger Pine, this was because of the Indians in California were known as “Digger Indians” by Euro-Americans because the actions of Indians included digging up roots and tubers to be used. Due to the strong usage of *P. sabiniana* by Indigenous peoples, it was nicknamed as “Digger Pine”. Also, they are known to grow on dry slopes to 5,000 ft elevation on the Sierra Nevada foothills (Gavin 1992) or 6,900 ft (Lightfoot 2009). Men used their own log ladders to climb gray pines and collect the cones (Anderson 2005). Beads are made from the pine nut shells, needles for basketry and bedding, and bark charcoal could be used to treat sores by neighboring California Tribes (Lightfoot 2009). Management includes controlled burns to clean forest floor to encourage plant growth and decrease chances for wildfire (Anderson 2005). Sierra Miwok harvest cones in the spring and roasted them for twenty minutes, the result being a sweet potato tasting syrup to be eaten (Anderson 2005). Western Mono used the branches as cooking utensils and the pitch was a type of medicine, Costanoans used pitch to treat arthritis (Anderson 2003).

- Acorns: Tikai'ya (Wuksachi), Wi''up^a (Black oak acorns Wuksachi), Pu'utuz (Common Yokuts word for acorn). *Quercus kelloggii*. Yokuts have described Black oak to be the most favored for their acorns having a sweet and oily texture. Acorns are mature once every two years (bi-annually) during April-May (Gavin 1992). Acorns were gathered by the Yokuts in early fall, after the acorns have fallen to the ground into a burden basket (ahng-ush: Yokut) (Latta 1977). Men were to knock down the acorns while still green and women gathered in burden baskets. Everyone would participate in cracking and cleaning the acorns. They were stored inside once they were dried. If stored outside, they were to still be whole. Preparation of acorns for mush, soup, or bread began by the pounding of the cleaned acorn in a mortar with a pestle pounding the acorns into a fine powder (Latta 1977). The next step after pounding the acorns is to sift on a flat tray (usually made of redbud stems and white root) this separated the fine and coarse materials which are to be pounded again (Latta 1977). Acorns contain toxic tannins and leaching is the next step to remove these toxins. For the Yokuts, the method was to make a hole in some sand (so that water can thoroughly rinse) and line the hole with leaves from a wild grape and the pounded acorn then covers the leaves. Modern day acorn preparers use cheese cloth instead of leaves due to what is readily available. Then, water that is heated with hot stones in a basket and this water is poured over the acorn flour repeatedly. Grass brush could be used to direct water flow to avoid the flour being washed away. After about the fourth pouring, the acorn is tasted for bitterness. The less bitter, the closer it is to being ready (Latta 1977). There is no set time or amount of water for this process; it depends on the acorns and taste. Oak bark could be boiled until they were black and served as dyes and to treat animal skins by Western Mono and Yokuts (Anderson 2005,

Gavin 1992). Also, various Tribes within California used the bark for ceremonial fires, looped utensils from green shoots, older shoots for cooking tongs, and much more (Anderson 2005). Controlled burns took place around October to clean under tree, to help with acorn production, control diseases and pests, encourage other important plant growth (mushrooms, grasses, herbaceous plants, deergrass) (Anderson 2005).

Discussion

Many other flora were important in the processing of foods. This includes the usage of utensils, gathering baskets, cooking baskets, storage containers, bowls, etc. The construction of these items does require personal practice and is better understood with being able to physically and orally learn. The health benefits of “wild foods” as described by Kat Anderson includes more variety, higher in nutritious fibers, minerals, vitamins than what is regularly consumed by natives today. Today, the native bulbs, tubers, acorn flour, teas are replaced by flour, potatoes, sodas, etc. This drastic change has impacted native communities and increased heart disease and diabetes. I would like to use this information to change how our future generations choose to live and consume.

This upcoming fall season, I plan to gather manzanita berries and pine nuts with my community and hold a small harvest to practice these traditional methods of management. It is important to not only document your own culture and heritage, but even more to use this information to practice and once again teach this to the younger generations. During my research I have realized the extent of how many plants were utilized and their specific usages for construction, food, medicine, clothing, etc. Many plants have multiple uses; to try and combine them all within one document would mean the production of an entire book. The literature which

I have cited, including the USDA PLANTS Database does include enormous amounts of information about location, descriptions, ethnobotany, etc. Many have been put together by M. Kat Anderson herself. Anderson has been a great influence on many modern day Indigenous peoples with her strong support on native plant restoration and continued traditional practices.

Special thanks to Gary Belovsky for his kindness in assisting this research study. I understand that although this may not be scientific study, but it is a study of traditional ecological knowledge. It is Native Science. It is oral tradition and it is important to consider when we plan to study the California environment. I plan to continue this research, through historical documentation, elders teachings, practice, and then eventually to teach the young ones within our Tribal lands.

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