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# Native Plant Gathering Along the Village Chain Routes of Yosemite Genealogical Family Use Districts

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## Native plants and family use district routes

Long before visible native land use practices in the Sierra Nevada were replaced by the cultivation methods of the Spanish and other Euro-Americans, native agroecology manicured the landscape. Manipulations by the indigenous population increased native plant yield, and propagated economic species for survival and trade (Baumhoff 1963; Anderson 1988). Southern Sierra Miwuk native plant data regarding the gathering of plants for material, medicinal, and dietary uses were viewed through this study to relate traditional plant use to the ancient and historic villages. Southern Sierra Miwuk village names were given by family members and used in a confidential native plant guide for tribal monitors. The guide is being developed in response to the need to monitor the plant resources during consultations with governmental agencies.

In precontact times, agroecological botanical life forms were managed by an indigenous methodology according to plant use category and ecosystem. Cultivation and harvesting methods varied according to the resource and harvesting calendar (Baumhoff 1963; Anderson 1988). Ceremonial roundhouse placement was related to the native plant life in and around villages. Plants with cultural religious uses are known to exist in ancient village sites, and are gathered at those sites by the current family members. Ceremonial roundhouse sites have been located within the traditional cultural property of the Yosemite families through nomenclature comparisons.

Knowledge of plant distribution is currently being mapped because it is known that some historic villages were named after the resources in those areas (Gaskell 2002). In addition to establishing associations between the villages and resources, the healing practices of a region may be extrapolated from the plant inventory after all the data are mapped. The permaculture within a village site varied greatly according to the climate and type of cultural contact (Merriam 1903). Various ethnographers documented domesticated plants, such as tomatoes, growing in the roundhouse villages around the turn of the century, interspersed within patches of local plants (Merriam 1906). Traditional plants that are California native plants are listed in the confidential tribal botanical name guide along with their uses within the territorial and tribal cultivation areas.

## Watershed and traditional travelways

Within Yosemite Valley, the roundhouse villages existed between watersheds and at the base of particular deer migration trails. This region has been divided into the eight zones present on the Yosemite Valley floor management tracts or districts (Powers 1877). There is a linguistic relationship to the natural resources in these separate regions or zones and it is related to naming practices in the family use districts and to the territorial names within the Ahwahneechee land management system where physical habitation evidence occurs (Barrett 1893–1977; Merriam 1898, 1900–1920; Powers 1877). Each watershed between the listed geographic points is connected to a family tract. Present-day families have been compiling ethnobotanical information for watersheds based on their cultural knowledge of resource use and management that has been passed down through the families. Within the archaeological record, the food production areas within the family tracts are classified by archaeologists as physical features and by the families according to the trail content of a district village chain.

The Class I villages were the center of activity for four or more smaller Class II villages supporting the Class I village. An example of the naming practices can be found in a listing at the end of a narrative by J. H. Taylor, “Yosemite Indians and Other Sketches,” published in San Francisco (Jonck & Seeger), where she writes in 1936 of witnessing the villages on El Capitan Meadows in Yosemite Valley named *Haengah*, *Awokoie*, *Helejah*, *Yuachah*, and *Hephepooma* (Figure 1; Merriam 1917). Of these five villages, Chief Lemee implicates the designation of the village named *Awokoie* as the Class I village because it was the village of the Headman Old Lancisco Wilson (Broadbent 1956). Merriam classified the villages of the Southern Sierra Miwuk into two categories: large important ceremonial centers and lesser villages surrounding it. Whitney’s explanation in the U.S. Geological Survey guidebook of California in 1871, titled “A Description of the Yosemite Valley and Adjacent Regions of the Sierra Nevada, and the Big Trees of California,” was verified by Merriam, who observed that a captain’s village name dominated the names of the villages of lesser significance (Merriam 1902, 1955).



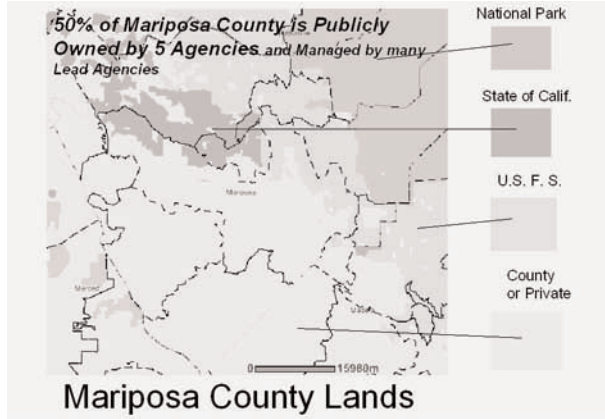
Figure 1. An example of changes to the ecology of traditional family lands can be found in the meadow under El Capitan (photo by John Muir, 1867, University of the Pacific John Muir collection, Stockton, California, and the Sierra Club).

## Agency methodology to identify family use routes

As part of the cultural landscape studies housed in the tribal council office of the Southern Sierra Miwuk Nation, there are many environmental assessment studies, and environmental impact reports written by seven or more agencies studying regions of historic villages. Boundaries were drawn along linguistic, watershed, county, and reservation delineations. Agency policies regarding the management of cultural resources and biological elements differ between organizations. Since the tribal concept of gathering includes cultivation and harvesting at all trophic levels in balance, isolation of one element could produce discord. The *spirit of the law* that defines intent when dealing with the federal government is found in 36 CFR 2.1, which designates the superintendent as the final interpreter of the *intent* of plant use.

Figure 2. The 50% of the land open to public plant gathering by local descendants of Yosemite.

Because government agencies manage 50% of Mariposa County, it is an excellent region for studying agency treatment of gathering resources (Figure 2). Elevation models and travelways as they relate to the migration patterns defined by resource gathering may reveal village systems. An overview is needed in order to understand the decision-making about and policy standards for the use of traditional native California plants of these regions. These policy standards include: (1) the policies of these agencies; (2) the geography of a travelway; (3) the genealogy and cultural landscape of the regional land; (4) the settlement pattern and village structure example; (5) health, botanical, or nutritional legislation affecting the use of resources; (6) current issues surrounding the policy at specific locations (such as endangered plants; Figure 3); and (7) the policy and philosophy of disclosure of information surrounding cultural properties and plant gathering and use practices concerning them.



### Scientific methodology to identify family use routes

Issues surrounding the indigenous knowledge of local communities were tapped by government forestry agencies for national fire management legislation signed in 2003. Recent policies regarding the harvest, preparation and sale of herbal products will have implications affecting Native American traditional family practitioners. Heritage seeds, soil seed banks, and the health of plant populations at project sites have raised questions regarding sustainability. A tribal center for scientific study of plant biology and propagation is planned in the design of Wahhohgah in Yosemite. This could influence educational directives for ecological restoration. *Wah-ho-gah* is the name of the village area recorded by Merriam in 1917, and

*Wa-ha-ka* is the name of the village area recorded by Powers in 1877. Wahhohgah has been through environmental review and designed as a facility for use by the tribe as a cultural center of activity. Plant use questions, where the

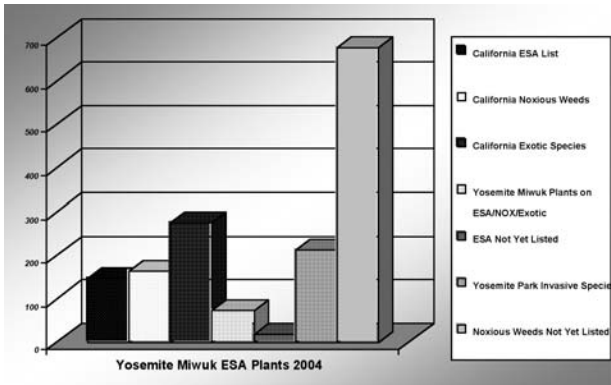


Figure 3. Comparison of Yosemite Miwuk native economic plants to ESA, CalEPPC exotic, noxious, and not yet listed lists.

stressed plant populations need to undergo rehabilitation, could be part of the scope of the cultural center.

Lineal descendants of the Class I villagers relate that the historic locations of these villages was usually determined by the juxtaposition of water and plant resources. Village naming procedures within the culture also suggest this. Historically, agencies interested in weeds or native California plants were intent on classifying them as either invasive, exotic, or worthy of listing as threatened or endangered. Now, with the resurgence of interest in the chemical components and uses of plants thought to be wild, even the gathering of these plants by native peoples on public lands has been highly scrutinized. The Southern Sierra Miwuk Nation has created a method for reconstructing, through evidence found in oral history, archaeological records, and geographical identifying characteristics, a strategy for identification of California native plant populations along a family use district, emanating from the center of a village settlement region.

This knowledge was a part of the plant and wildlife resource knowledge revealed in the “Petition to the Senators and Representatives of the Congress of the United States In the Behalf of the Remnants of the former Tribes of the Yosemite Indians Praying for Aid and Assistance,” written about in the 1891 report of the acting superintendent of the park. The village and potato field became a hayfield. How this process impacted the Inner Valley (high-ground) family use districts and the territorial family districts is learned by examining the ethnographic data identifying village headmen. A comparison between the oral interviews of pioneer settlers and the Native American oral tradition shows how the resource management styles collided and put the entire ecosystem into chaos in El Capitan Meadow. Gathering in another family’s resource area was cause for discord, and the Native Americans were more willing to approach the settlers for their land by petitioning the government than to encroach upon the land rights of adjoining families. Cultivation and gathering practices specific to the Yosemite Valley were performed by the families of sister villages inhabited concurrently in the valley and outer territories (Gaskell 2002).

Today, the outer territorial villages are population density centers for the Native American population, and the family burial and ceremonial areas are not far from them. Family members maintain areas of many varieties of nutritional, medicinal, and basketry plants on land near their homes. Soil seed banks in the ancient and historic villages should provide biological data. Surveys of the current plant and wildlife populations of historic family use tracts can contribute to the knowledge necessary to plan for future resource management.

### **Sovereign tribal cultural resource management office role**

Institutional mission statements are useful in determining the philosophical goals of cultural resource management businesses. The goals of a cultural resource management professional are determined by the policy of the agency that employs her or him. Family use tract managers continue to frequent old village sites to collect and gather materials for daily use. Due to the holistic nature of the Southern Sierra Miwuk belief system, it is sometimes difficult to separate the indigenous knowledge system (IKS) regarding sacred sites and medicinal plants from village health. In order to identify the plant varieties used, since they are naturally occurring, this study needed to investigate villages where the resources were located.

Pharmaceutical business philosophy follows paths similar to tribal philosophy while trying to identify new treatments. Comparison of plant use in herbal products, alternative medicine, and homeopathic medicine against tribal healing methods reveal similar uses for regional species of the family use tracts.

The spiritual aspect of the practice of healing transcends the chemicals found in the native plants. This raises the question of what part of the plant knowledge is culturally sensitive? The whole process is culturally sensitive—the soil growing the plant, the water feeding the plant, and the practice of preparation, the use, and the healing. The use of a plant crosses over issues of cultural sensitivity and religion. IKS locations constitute gathering areas where there is a high probability of the existence of undisclosed villages of past family members. Ethnobotany is defined as the study of the utility, diversity, and chemical characteristics of plants found in their environment of indigenous people, while ethnopharmacology is defined as the “observation, identification, description, and experimental investigation of the ingredients and the effects of indigenous drugs” (Yano 1993). This traditional ethnopharmacological knowledge provides researchers with the first-hand, ages-old experience and experimentation of medicinal plant resources by indigenous peoples.

### **Ecological restoration and herbal medicine**

Mental inventories of village locations and plant resources are covered under the category of intellectual property rights of culture. A biological inventory is an effective tool for ecosystem management, but there are disclosure rulings regarding cultural knowledge inventory. Demands for native plants has placed pressure on the public land agencies governing areas protected for public use, and they are confronted with gathering entities from different cultures (Figure 3). Conservation of the California native plants and Native American plant gathering activities in the Sierra Nevada foothills relates to four areas of influence on the environment: (1) agricultural and conservation easements, (2) vegetation management and public roads maintenance, (3) wildlife corridors, hedgerows and integrated pest management (IPM); and (4) Native American gathering for cultural uses.

Each agency has its own cultural resources policies and means of liaison. Wildcrafting versus cultural gathering is one of the key issues of intent (Anderson 1988; McCutcheon 1996; Hurlburt 1999). In preparation for various ecological restoration projects in the future, tribal members are recording the plant habitats and populations in the regions where each individual cultivates and manages plants in Mariposa County and other areas where they gather resources. Wildcrafting philosophy and Native American plant management are closely related, but with different intents.

Southern Sierra Miwuk native plant data regarding the gathering of plants for material, medicinal, and dietary uses were viewed through this study to relate traditional plant use to the ancient and historic villages along the family use district chains (Figures 4 and 5). The distribution of various plant resources are currently being mapped by Yosemite Valley Miwuk family members. Traditional plants that are native California plants are listed in the botanical name guide along with their uses and the relationships between the tribe and the gathering territory of those species. The Class I villages were the center of activity for four or more smaller Class II villages supporting the Class I village. Village naming procedures with-

Figure 4. Percentage of references to each plant named in the 1,183 species in sample. The sample contains species confirmed through oral interview, ethnographic and geographic documents, and from other biological listings.

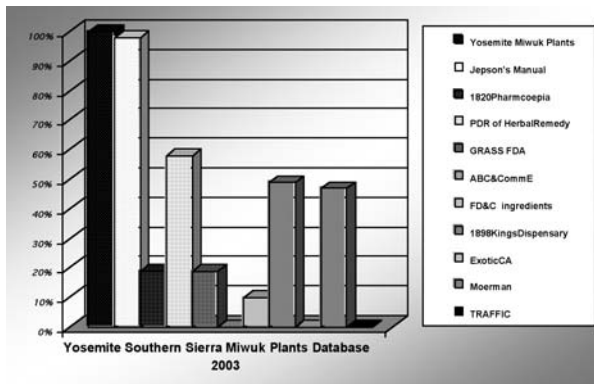
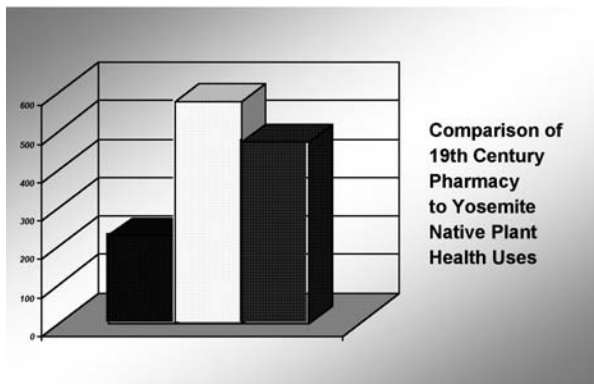


Figure 5. A comparison between the earliest American pharmacopieas and the Southern Sierra Miwuk biological inventory use list.



in the culture also suggest this. Mental inventories of village locations and plant resources are covered under the category of intellectual property rights of culture as are the practices of Native American gathering for cultural uses. Southern Sierra Miwuk native plant data relates traditional plant use to the ancient and historic villages. The sensitivity of this discussion condenses intent, philosophy, and high spiritual and monetary cost where two cultures interpret *preservation* with opposing meanings as preservation through use or preservation through nonuse.

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