

Eastern Miwok

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Language, Territory, and Environment

The Eastern Miwok (¹mē,wuk or ¹mē,wāk) comprise one of the two major divisions of the Miwokan subgroup of the Utian language family. The Eastern Miwok peoples belonged to five separate linguistic and cultural groups, each having a distinct language and culture. The Bay Miwok or Saclan occupied the eastern portions of Contra Costa County extending from Walnut Creek eastward to the Sacramento-San Joaquin delta. The Plains Miwok inhabited the lower reaches of the Mokelumne and Cosumnes rivers and both banks of the Sacramento River from Rio Vista to Freeport. The Northern Sierra Miwok occupied foothills and mountains of the Mokelumne and Calaveras river drainages. The Central Sierra Miwok occupied the foothill and mountain portions of the Stanislaus and Tuolumne drainages. The territory of the Southern Sierra Miwok embraced the upper drainages of the Merced and Chowchilla rivers.

The five Eastern Miwok languages have been assigned to three distinct groups on the basis of their phonological history and structural and lexical similarity. Plains Miwok and Bay Miwok are each the sole member of a distinct group while the remaining three languages (Northern, Central, and Southern Sierra) make up a Sierra Miwok language group (Callaghan 1971).*

There appears to have been internal dialect differentiation within at least three of the five Eastern Miwok languages. Central Sierra Miwok was spoken in two dialects, West Central Miwok and East Central Miwok (Freeland 1951:9). A line of cleavage seems to separate Southern Sierra Miwok into two dialect areas, one centered upon the Merced River drainage and the other on Mariposa Creek and the Chowchilla and Fresno rivers. Speakers of the Merced River dialect used a retroflex *s* as the reflex of Proto-Sierra Miwok **ʃ* while speakers of the Mariposa-Chowchilla dialect used *h* (Broadbent 1964:13-14; Merriam 1966-1967, 3:326; Callaghan 1972). There also appears to have been inter-

* Phonemic orthographies have been worked out for Central Sierra Miwok (Freeland 1951:1-9; Freeland and Broadbent 1960:v) and Southern Sierra Miwok (Broadbent 1964:11-32). The inventories for these two languages are essentially the same. Forms taken from these sources are here italicized and a few standard Handbook symbols have been substituted: *ɨ* for the high central vowel, *y* for the alveolar semivowel, and *č* for *c*.

nal dialect differentiation within Plains Miwok (Callaghan 1972).

Lexicostatistic data suggest that the Western Miwok languages and the Eastern Miwok languages have been separated for approximately 2,500 years. Plains Miwok separated from the Sierra Miwok languages about 2,000 years ago. The internal time depth of Sierra Miwok is approximately 800 years (Levy 1970b).

The classification of the Miwok languages and the lexicostatistic chronology suggest that the ancestors of the Miwok have been resident in the central California delta region for a long period of time. The occupation of the Sierra Nevada and its foothills is probably a much more recent event.

In discussing the geography of Eastern Miwok territory from a political point of view a number of different and hierarchically arranged units must be recognized. At the grossest level of analysis the five languages and their constituent dialects embrace a certain prescribed physical territory. Such language areas (Bay Miwok, Plains Miwok, Northern Sierra Miwok, Central Sierra Miwok, Southern Sierra Miwok), while of very great importance to anthropologists and other students of Miwok culture, were of little interest to the Miwok themselves. The Plains Miwok, for example, though they spoke a common language, were not in any sense a single people, but rather a number of separate and politically independent nations that happened to share a common language and a common cultural background.

The foremost political unit of the Miwok was the tribelet. Each tribelet was an independent and sovereign nation that embraced a defined and bounded territory exercising control over the natural resources contained therein. The nationality of a Miwok, then, was a statement of his tribelet membership. Within each tribelet were several more or less permanently inhabited settlements and a larger number of seasonally occupied campsites used at various times during the seasonal round of hunting, fishing, and gathering activities.

The only other unit of political significance to the Miwok was the lineage. Lineages were localized and named for a specific geographical locality. In most cases these lineage localities were the permanently inhabited settlements of the tribelet. Each tribelet, then, included a number of lineage settlements. Among the Sierra Miwok the population of these settlements was probably about

25 persons on the average. Plains and Bay Miwok lineage settlements were probably larger.

Knowledge of the number and names of Eastern Miwok tribelets and lineage settlements is fragmentary. For the Bay and Plains Miwok there are mainly the names of tribelets with little or no information on lineage settlements within most tribelets. The locations of Bay and Plains Miwok tribelets given in figure 1 are based on studies of ethnohistoric documents from the Spanish colonial period (Schenck 1926; Cook 1955, 1960, 1962) and on a map of the area drawn by a Spanish missionary in 1824. Attempts by twentieth-century ethnographers to obtain information on tribelet locations in the delta area produced only incomplete and conflicting testimony since there was tremendous depopulation and relocation of people and consequent loss of geographical knowledge

during the nineteenth century (Merriam 1907; Kroeber 1908c).

Knowledge of Sierra Miwok ethnogeography, on the other hand, is largely confined to simple lists of lineage settlements or hamlets with very little information on tribelets and the tribelet memberships of the various lineage settlements. Locations of lineage settlements for the Sierra Miwok peoples have been determined by ethnographers (Merriam 1907, 1966-1967, 3; Kroeber 1925; Gifford 1917a) during the early twentieth century. Some reconstruction of tribelet membership of these settlements is attempted in figure 2. The reconstructions are based on a number of considerations. All Miwok tribelets had the same name as their principal or capital lineage settlement. Capital lineage settlements have been identified by references in ethnographic literature to the presence of a chief in the community or the presence of an assembly house in the community. Settlements within a tribelet are usually located in close physical proximity to one another.

The Eastern Miwok inhabited four rather distinct biotic areas: the valleys of the inner Coast Range, the delta-plains region of the central valley, the Sierra foothills, and the Sierra Nevadas. The Bay Miwok were located in the inner Coast Ranges in the vicinity of Mount Diablo and extended northeasterly from there into the delta of the Sacramento-San Joaquin river system. Most of the delta and the plains along the Cosumnes and Mokelumne rivers were the territory of the Plains Miwok. The foothills and higher mountains of the Sierra were the home of the Sierra Miwok.

A number of differences between Plains Miwok culture on the one hand and Sierra Miwok culture on the other seem to be correlated with their differing ecological contexts. While the most notable examples of cultural difference are exhibited by material culture and subsistence practices, there were probably also significant differences in sociopolitical organization. The Bay Miwok probably were culturally more like the Plains Miwok than the Sierra Miwok.

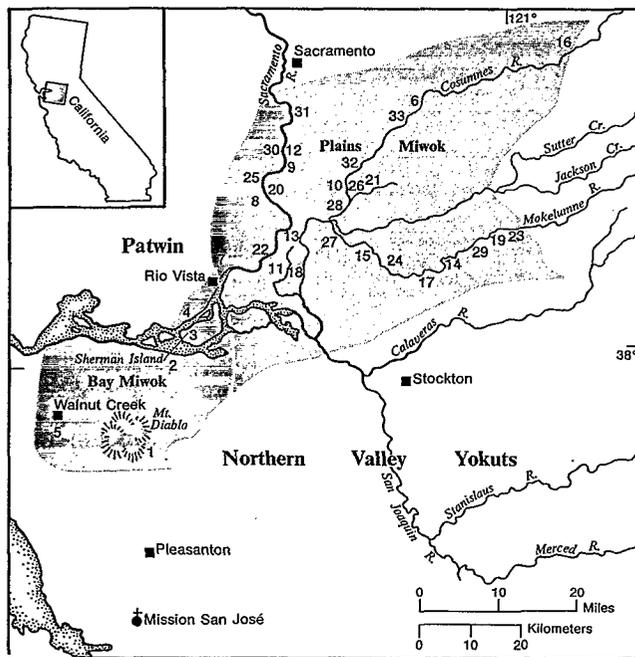


Fig. 1. Bay and Plains Miwok tribelets. Years during which baptisms took place and total number recorded are given. Bay Miwok. 1, Bolbon, 1803-1813, 67; 2, Chupcan, 1804-1812, 103; 3, Julpun, 1806-1827, 149; 4, Ompin, 1811-1812, 108; 5, Saclan, 1794-1798, 20. Plains Miwok. 6, Amuchamne, 1834-1835, 13; 7, Anizumne, 1812-1825, 244; 8, Chucumne, 1816-1825, 369; 9, Chupumne, 1828-1836, 8; 10, Cosomne, 1826-1836, 84; 11, Guaypemne, 1821-1834, 41; 12, Gualacomne, 1825-1836, 57; 13, Junizumne, 1813-1836, 119; 14, Lelamne, 1821-1836, 22; 15, Locolomne, 1826-1834, 52; 16, Lopotsimne, 1824, 1; 17, Muquelemne, 1817-1835, 143; 18, Musupumne, 1818-1828, 46; 19, Noypumne, 1827-1834, 6; 20, Ochehamne, 1829-1836, 428; 21, Olonapatme, 1834-1835, 14; 22, Quenemsia, 1811-1828, 185; 23, Sakayakumne, 1839, 1; 24, Seguamne, 1821-1835, 47; 25, Siusumne, 1827-1836, 14; 26, Sotolomne, 1828-1834, 12; 27, Tauquimne, 1815-1828, 73; 28, Tihuechemne, 1820-1836, 35; 29, Tusealemne, 1825-1835, 10; 30, Ylamne, 1818-1836, 74; 31, Hulpumne, no baptisms; 32, Newachumne, no baptisms; 33, Shalachmushumne, no baptisms. All data from Merriam (1968).

Prehistory

Knowledge of prehistory varies from one group of Eastern Miwok to the next. A fairly good picture of the prehistory of the Plains Miwok area is available, but knowledge of the Sierra Miwok peoples is fragmentary. Linguistic evidence indicates a considerable time depth for Eastern Miwok, arguing that the ancestors of the Eastern Miwok occupied the delta region during the Middle Horizon of California prehistory. The Miwok occupation of the Sierra Nevadas, on the other hand, appears to be considerably more recent and probably occurred after the beginning of the Late Horizon. The Mariposa archeological complex is probably identifiable with the Sierra Miwok (Bennyhoff 1956) and appears to

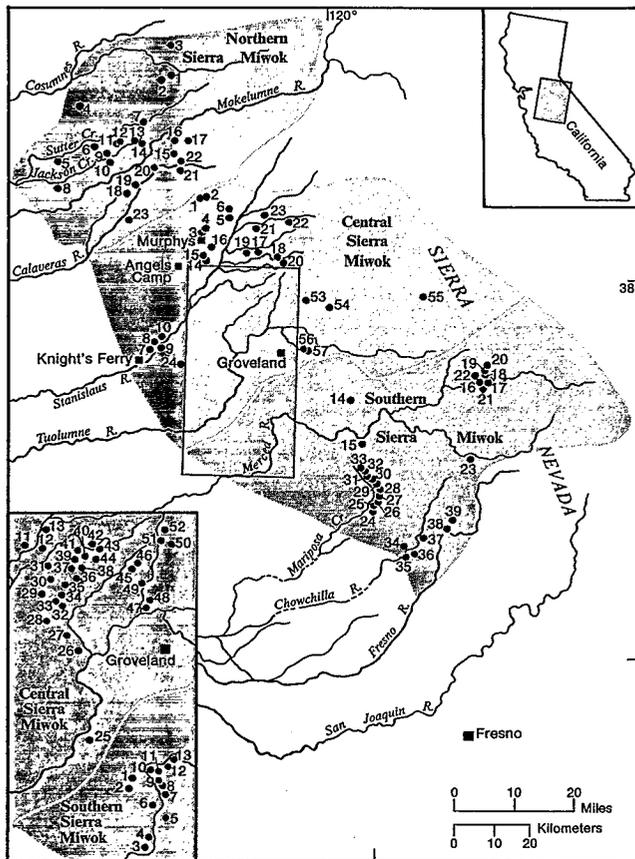


Fig. 2. Sierra Miwok lineage settlements. Northern Sierra Miwok. Settlement clusters may correspond to tribelets. Omo Ranch Area: 1, Omo; 2, Noma; 3, Chik-ke'-më-ze (M). Plymouth Area: 4, Yule. Sutter Creek Area: 5, Chakanesü; 6, Yulonchi; 7, Seweusu. Buena Vista Area: *8, Upüsüni. Jackson Area: 9, Tukupesü; 10, Polasü; 11, Tã-woo-muz'-ze (M); 12, Yu'-yut-to (M). Westpoint Area: 13, Tumuti; 14, Sopochi; 15, Heina; *16, Künüsü; 17, Penkensü. Rail Road Flat Area: 18, Ketina; 19, Monasü; *20, Apautawilü; 21, Kaitimü; *22, Hechenü. San Andreas Area: 23, Hutasü.

Central Sierra Miwok. 1, Sasamu; 2, Shulaputi; 3, Katuka; 4, Humata; 5, Yungakatok; 6, Alakani; 7, Tuyiwünü; 8, Keweno; 9, Tulanachi; 10, Oloikoto; 11, Wüyü; 12, Tipotoya; 13, Loyowisa; 14, Akutanuka; 15, Kosoimunonu; 16, Newichu; 17, Hangwite; 18, Wokachet; 19, Tulsuna; 20, Sutamasina; 21, Takema; 22, Hang-e'-we-ë (M); 23, Kawinucha; 24, Singawunu; 25, Hochhochmeti; 26, Siksikeno; 27, Sopkasu; 28, Akankaunchi; 29, Suchumunu; 30, Kotoplana; 31, Poktono; 32, Akawila; 33, Kahp'-pah-nin'-nah (M); 34, Ko-tup'-plan-hah (M); 35, Chakachino; 36, Wakache; 37, Akankaunchi; 38, Kuluti; 39, Pota; 40, Pã'-pah-lã'-no (M); 41, Wolangasu; 42, Tel'ula; 43, Tunukchi; 44, Kesa; 45, Hung'-ah (M); 46, Tã'-les-sã'-nah (M); 47, Pasinu; 48, Pangasemanu; 49, Sukanola; 50, Sukwela; 51, Teleseno; 52, Hunga; 53, Olawiye; 54, Kulamu; 55, Hechhechi; 56, Pigliku; 57, Sala.

Southern Sierra Miwok. Settlement clusters may correspond to tribelets. Merced River Miwok: 1, Sayangasi; 2, Ko'-yo-che (M); 3, Alaulachi; 4, Kuyukachi; 5, Angisawepa; 6, Hikena; 7, Owelínhatihü; 8, Wilito; 9, Kakahulachi; 10, Awal; 11, Yawokachi; 12, Kitiwina; 13, Sisochi. Bull Creek Miwok: *14, Sopenchi. Bear Creek Miwok: 15, Sotpok. Yosemite Miwok: 16, Hokokwito; 17, Kumaini; 18, Macheto; 19, Notomidula; 20, Lesamaiti; 21, Sakaya; *22, Awani. South Fork Miwok: 23, Palachan. Mariposa Miwok: 24, Chahm-hahn'-che (M); 25, Lë'-ham-mit-te (M); 26, He-hut-to-che (M); 27, Tin-pã'-nah-che (M); 28, Nok'-too-tah-che (M); 29, Nochuchi; 30, Wahk-kal'-loo-tah-che (M); 31, Kasumati; 32, Pe-loo'-ne-che (M); 33, *palpalya*? (B). Chowchilla Miwok: 34, Nowach (= *now-oc*, B); 35, Olwia; 36, *chíchi*? (B); 37, Wehilito; *38, Wasema (= *wasama*?, B); 39, Hitch-ã-wet-tah (M) (= *hüwe-ta*?, B).

Sources: Kroeber 1925 where unmarked, Merriam 1907 (M), and Broadbent 1964 (B). Lineage settlements known to have had either a chief or an assembly house in the late nineteenth or early twentieth century are preceded by an asterisk.

be chronologically contemporaneous with the Late Horizon sites elsewhere in central California.

History

The Eastern Miwok were first contacted by Spanish exploring expeditions to the Sacramento-San Joaquin Valley in the second part of the eighteenth century. With the depletion of the population in coastal areas, where Spanish missions were established, the attention of the missionaries shifted to the conversion of interior peoples—the Bay Miwok, the Plains Miwok, and the Valley Yokuts. The Bay Miwok were the first of the Eastern Miwok to undergo missionization, with the first recorded Bay Miwok converts coming from the Saclan tribelet to Mission San Francisco in 1794. Plains Miwok converts from the westernmost delta begin appearing in the Book of Baptisms of Mission San José in 1811. It appears that many Bay Miwok and Plains Miwok tribelets disappeared through the combined effects of removal of the population to the missions and epidemics, which killed many thousands of persons in the central valley in the first half of the nineteenth century.

Most of the Bay and Plains Miwok converts were taken to Mission San José. The Plains Miwok were by no means willing converts; there are several accounts of Christian Indians fleeing the missions and returning to their villages in the delta. Military expeditions were sent to bring the

fugitives back to the mission establishments. At first the Indian response was to hide from the soldiers in the tule swamps of the delta; but as hostilities increased and the Miwok learned techniques of warfare from the Spanish, several tribelets participated in a series of Indian wars that involved systematic raids upon missions and ranchos to obtain horses. Considerable amounts of culture change must have been involved in the development of these raiding practices (Heizer 1941b). Previously independent tribelets seem to have acted in concert to resist incursions of the punitive military expeditions and raids, changing their subsistence economy to one based on extensive consumption of horse meat. Plains Miwok militarism grew during the 1820s and 1830s until they and their Yokuts neighbors to the south posed a substantial threat to the Mexican settlements in the coastal areas (Cook 1960, 1962).

The arrival of substantial numbers of Europeans and Americans in California during the 1840s opens a third

period of Eastern Miwok history. New diseases reached California with the advent of fur trappers, gold miners, and settlers; and relations between the Sierra Miwok and the miners soon became hostile. Plains Miwok people in the valley became involved in agricultural work on the big land-grant ranchos that were established in this period. The Ochehamne tribelet of the Plains Miwok, for example, were employed by John Sutter at Sutter's Fort (Forbes 1969). For a brief period during the first year or two of the gold rush the Miwok were heavily involved in gold mining. A number of Southern Sierra Miwok and Yokuts tribelets supplied labor for J.D. Savage's gold-mining operations in the Big Oak Flat district, but as the number of miners increased large mining operations were shut down and Indian participation lessened (Mitchell 1949). Cook (1943b:106) has found records to indicate killings of at least 200 Miwok by the miners during the period 1847-1860.

With the annexation of California by the United States there began a policy of confiscation of Indian lands. Although treaties were signed by members of a few of the Eastern Miwok tribelets (Heizer 1972), the treaties were never ratified by the U.S. Senate. A few groups of Sierra Miwok were removed to the Fresno area but most of the Miwok population remained in rancherias scattered throughout the Sierra Nevada foothills. During the latter part of the nineteenth century and the early part of the twentieth, Miwoks living on the rancherias in the foothills subsisted partly by hunting and gathering and partly through seasonal wage labor on farms and ranches in the foothill area. Reliance on cash income increased throughout this period and dependence on hunting and gathering diminished. The last survivor of the Guaypeme (also rendered Wipa or Guaypen), whose home lay on Sherman Island in the delta area, was located and interviewed by C. Hart Merriam in 1905 (Merriam 1966-1967, 3:367-369). A description of the miserable life of the surviving Miwoks at Murphys in the 1930s has been written by Burrows (1971), an account that could apply to each of the little remnants who eked out their lives on the edges of the Sierran towns.

In the early part of the twentieth century the federal government acquired by purchase and through executive order a number of small parcels of land (ranging from 2 acres to over 300 acres) as reservations for some rancherias of Plains Miwok, Northern Sierra Miwok, and Central Sierra Miwok. No reservations were established in Southern Sierra Miwok territory, and rancherias there as well as in other parts of Eastern Miwok territory received no official recognition by the federal government. Many persons of Miwok descent still lived in Sierra Nevada foothills in the 1970s.

Population

It is difficult to assess the population of the Eastern Miwok in both aboriginal and postcontact times since no

adequate census of the Miwok has ever been made (table 1). The bulk of information regarding the population of the Bay and Plains Miwok derives from historical documents, particularly mission baptismal records (Merriam 1955, 1968) and accounts of military and religious expeditions into the central valley (Cook 1955, 1960, 1962). The main techniques of estimating the aboriginal population of the Sierra Miwok, on the other hand, rely on population densities and square mileage figures or on the number of lineage settlements present in a given area. Another complicating factor in the assessment of aboriginal population is that it is impossible to estimate populations of all Eastern Miwok groups at the same point in time.

The Bay Miwok were the first of the Eastern Miwok peoples to be missionized. The first baptisms of Bay Miwok occurred in 1794 and the last in 1827; the vast majority occurred between 1805 and 1812. Transcripts of baptismal records (Merriam 1955, 1968) indicate a total of 447 baptisms from the five Bay Miwok tribelets; however, numbers of baptisms are not a very good indicator of the total population since many persons died of introduced diseases before being baptized. There is only one direct estimate for the population of a Bay Miwok settlement. On April 3, 1776, members of an exploring expedition visited a village near Antioch. Anza (1930:144) estimated the population of the settlement at 400 persons. The settlement visited probably belonged to the tribelet referred to in the mission books as Chupcan. The mission records indicate a total of 103 baptisms, implying that only 25 percent of the population was baptized. If the same proportion holds for other Bay Miwok settlements then the total aboriginal population of the Bay Miwok was about 1,700 persons.

The Plains Miwok, too, were subject to missionization in the early part of the nineteenth century. The first Plains Miwok baptisms are recorded in 1811 from the Quenemsia tribelet on Sherman Island. Missionization proceeded among the Plains Miwok until the end of the mission period in 1834. During the period from 1811 to 1834 over 2,100 Plains Miwok baptisms are recorded in the baptismal records. Almost all the Plains Miwok were taken to Mission San José, where they constituted the largest single ethnic group. As noted previously, the

Table 1. Population

<i>Date</i>	<i>Population</i>	<i>Source</i>
1805	19,500	estimate
1852	4,500	Cook 1943b
1856	3,000	Cook 1943b
1910	670	Cook 1943b
1930	763	Cook 1943b
1951	109 (on reservations)	California. Legislature. Senate Interim Committee on California Indian Affairs 1955

number of baptisms for any given group falls far short of the actual population. Cook's (1955) studies of aboriginal population in the delta, which rely on accounts of military and religious expeditions, suggest an aboriginal population of approximately 11,000 persons for the Plains Miwok. On the average, then, only about 20 percent of the inhabitants of Plains Miwok settlements were baptized. Plains Miwok tribelets were rather populous for central California, averaging about 400 persons each. The population density of the Plains Miwok was probably the highest of any group in aboriginal California, averaging over 10 persons a square mile (Baumhoff 1963).

Assessments of the aboriginal populations of the three Sierra Miwok groups is even more difficult than the calculation of Bay and Plains Miwok populations. Cook (1955) estimates populations of various geographical areas within the Sierra Nevada, basing his estimates on village lists compiled by Kroeber (1925), Gifford (1917a), and Merriam (1902-1930). Baumhoff (1963) has reanalyzed Cook's data to arrive at populations of 2,100 and 2,700 respectively for the Central Sierra Miwok and the Southern Sierra Miwok. Lack of adequate data on Northern Sierra Miwok settlements makes population estimates risky, but the population was probably about 2,000 persons.

The total aboriginal population of the five Eastern Miwok peoples thus amounts to 19,500. Severe population decline characterized all of the nineteenth century. Kroeber (1925) estimated the population of the Eastern Miwok in 1910 at about 700 persons. The number of persons of Miwok descent living in 1970 is difficult to assess. There has probably been a substantial increase during the twentieth century, but without an adequate census there is no way of determining the Miwok population.

Subsistence

The Eastern Miwok lacked both cultivated plants (except tobacco) and domesticated animals (other than the dog). The main focuses of subsistence were the gathering of wild plant foods and the hunting of mammals. Abundance of seed-bearing annuals and ample forage for deer, antelope, and tule elk were insured by annual burning (in August) of the Miwok lands.

The Sierra Miwok traveled to higher or lower elevations during various seasons of the year to obtain foods not found in the vicinity of their permanent settlements. The inhabitants of the Transition Zone forest moved to higher elevations in the Sierra during the summer months, following the deer. People in the foothill country would occasionally visit the plains of the central valley to hunt antelope and tule elk, species that are absent from the mountains.

Gathering of wild plant foods varied with seasons and locality. Greens were usually gathered in the spring and were used as a supplement to the diet of acorns stored since the previous fall. Seeds were gathered from May through August and were the major staple during this part of the year. After the August burning of the land the attention of the people turned to collection of digger pine nuts and finally in late fall and early winter to the all-important acorn crop. Quantities and types of animal foods also varied seasonally. Meat consumption was greatest in the winter months when consumption of plant foods (with the possible exception of mushrooms) was limited to stored foods.

• **PLANT FOODS** The most highly prized and most important plant foods were the several varieties of acorns gathered by the Miwok. Seven different varieties of acorns were used by the various Eastern Miwok peoples. The acorns of the valley oak (*Quercus lobata*) were most important to the Plains Miwok while interior live oak (*Q. wislizenii*) and blue oak (*Q. douglasii*) in the foothills and black oak (*Q. kelloggii*) in the higher mountains were most important to the Sierra Miwok. Acorns were usually allowed to ripen and fall off the tree of their own accord, but sticks were occasionally used to knock them from the branches. The acorns were then gathered in burden baskets.

Nuts used included buckeye (*Aesculus californica*) laurel (*Umbellularia californica*), hazelnut (*Corylus cornuta* var. *californica*), digger pine (*Pinus sabiniana*), and sugar pine (*Pinus lambertiana*), the most important of which were pine nuts and buckeyes. Digger pine nuts were gathered both in the spring when green and in September when ripe. Buckeye nuts were not a prepared food, being used primarily in years when the acorn crop failed.

Seeds also formed an important part of the Eastern Miwok diet. The following species were used by the Central Sierra Miwok: wild oats (*Avena barbata*, a European weed), balsam root (*Balsamorhiza sagittata*), dense-flowered evening primrose (*Boisduvalia stricta*), riggut grass (*Bromus diandrus*), redmaids (*Calandrinia ciliata*), painted cup (*Castilleja* sp.), Fitch's spikeweed (*Hemizonia fitchii*), clarkia (*Clarkia unguiculata*), summer's darling (*Clarkia amoena*), farewell-to-spring (*Clarkia biloba*, *C. purpurea*), gumweed (*Madia gracilis*), tarweed (*Madia elegans*, *M. sativa*), buena mujer (*Mentzelia* sp.), skunkweed (*Navarretia* sp.), valley tassels (*Orthocarpus attenuatus*), California buttercup (*Ranunculus californicus*), and a number of unidentified species.

Roots of various kinds were also important in the Eastern Miwok diet. The Central Sierra Miwok used the following species: ookow (*Brodiaea pulchella*), harvest Brodiaea (*B. coronaria*), white Brodiaea (*B. hyacinthina*), golden Brodiaea (*B. lugens*), white mariposa lily (*Calochortus venustus*), squawroot (*Perideridia gairdneri*), anise (*Perideridia kelloggii*), eupophus (*Perideridia bolanderi*)

Saint-John's-wort (*Hypericum formosum*), corn lily (*Veratrum californicum*), and a number of unidentified species.

Many species of plants were used as greens. The Central Sierra Miwok ate: columbine (*Aquilegia formosa* var. *truncata*), milkweed (*Asclepias fascicularis*), white goosefoot (*Chenopodium album*), western larkspur (*Delphinium hesperium*), larkspur (*Delphinium* sp.), horsetweed (*Conyza canadensis*), tibinagua (*Eriogonum nudum*), alum root (*Heuchera micrantha*), wild pea (*Lathyrus vestitus*), rose lupine (*Lupinus densiflorus*), broad-leaved lupine (*L. latifolius*), common monkey flower (*Mimulus guttatus*), musk flower (*Mimulus moschatus*), miner's lettuce (*Montia perfoliata*), twiggly water dropwort (*Oenanthe sarmen-tosa*), sweet cicely (*Osmorhiza chilensis*), sheep sorrel (*Rumex acetosella*), green dock (*Rumex conglomeratus*), clovers (*Trifolium ciliolatum*, *T. wormskioldii*, *T. tridentatum*), mule ears (*Wyethia helenioides*), and many other species.

Berries did not constitute a major portion of the diet. Madrone (*Arbutus menziesii*) and manzanita (*Arctostaphylos viscida*, *A. tomentosa*, *A. manzanita*) berries were used in the production of an unfermented cider by the Central Sierra Miwok. The Central Sierra Miwok ate nine-bark berries (*Physocarpus capitatus*), chokecherries (*Prunus virginiana* var. *demissa*), wild plums (*Prunus subcordata*), wild Sierra currants (*Ribes nevadense*), gooseberries (*Ribes roezlii*), blackberries (*Rubus vitifolius*), nightshade berries (*Solanum xantii*), and wild grapes (*Vitis californica*) raw; but blue elderberries (*Sambucus cerulea*) and toyon berries (*Photinia arbutifolia*) were always cooked before eating.

A number of different varieties of mushrooms were consumed but none has been specifically identified.

•ANIMAL FOODS Mule deer (*Odocoileus hemionus*) was the most important mammal in the foothills and mountains. Tule elk (*Cervus nannodes*) and pronghorn antelope (*Antilocapra americana*) were most important to the Plains Miwok but were occasionally hunted by the people of the foothills who journeyed to Plains Miwok or Northern Valley Yokuts territory for this purpose. Black bear (*Ursus americanus*) and grizzly bear (*Ursus horribilis*) were hunted by the Sierra Miwok. Blacktailed jackrabbits (*Lepus californicus*) and cottontails (*Sylvilagus audubonii*, *S. nuttallii*, *S. bachmani*) were hunted with nets in the summer. Beaver (*Castor canadensis*), gray squirrels (*Sciurus griseus*), ground squirrels (*Spermophilus beecheyi*), and woodrats (*Neotoma* sp.) were also eaten.

The most important game birds for the Sierra Miwok were the valley quail (*Lophortyx californicus*) and the mountain quail (*Oreortyx pictus*). Waterfowl were of considerable importance to the Plains Miwok. Band-tailed pigeons (*Columbia fasciata*), red-shafted flickers (*Colaptes cafer*), jays, and woodpeckers also served as food.

Fishing was very important in the Plains Miwok economy and locally of significance in the Sierra Nevada.

Salmon were the dominant food fish for the Plains Miwok, and trout held a similar position in the mountains. The Plains Miwok also fished for sturgeon. Lampreys were caught by all of the Eastern Miwok.

A number of insects, most prominent among which were grasshoppers and yellow jacket larvae, served as food. River mussels, freshwater clams, and species of land snail were also used as food.

A number of animal species were avoided as food. The Plains Miwok never ate grizzly bear, black bear, fox, or wildcat, although all of these species were seen as fit food by the Sierra Miwok. Some species were avoided by both the Plains and Sierra Miwok: dog, coyote, skunk, eagle, great-horned owl, road runner, and all types of snakes and frogs (Aginsky 1943:397-398).

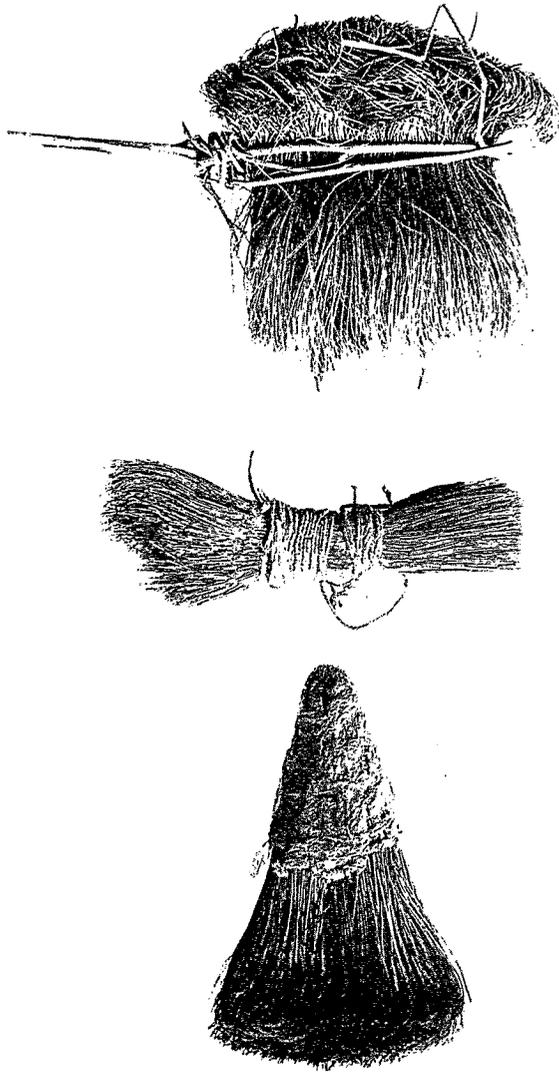
•SALT The Eastern Miwok obtained salt from a number of different sources. A number of saline springs were exploited. Salt was also obtained in trade from the Mono Lake country east of the Sierra Nevada. A third source was salt obtained from a plant belonging to the Umbelliferae. The plant was gathered along the lower course of the San Joaquin River and was burned to release salt. Linguistic evidence suggests that the Plains Miwok obtained salt in trade from the Costanoan peoples to the west.

•TOBACCO Two species of tobacco (*Nicotiana bigelovii*, *N. attenuata*) were used by the Eastern Miwok. Most tobacco was obtained from plants that grew wild, but seeds were sometimes planted. The cultivated plants produced bigger leaves and had better flavor.

Tobacco was smoked in tubular pipes made of oak, ash, maple root, manzanita, or elder. Smoking was usually reserved to males; women smoked only to cure bad colds.

•GATHERING TECHNIQUES Different techniques were used in the gathering of plant foods. Acorns and pine cones were dislodged from the branches of trees with poles of various sorts. They were then gathered into burden baskets for transportation. Roots were dug from the ground with a digging stick made of mountain mahogany or buckbrush wood. The point of the digging stick was hardened by fire.

There were two general methods used in gathering seeds. Most kinds of seeds were collected with a seed beater and burden basket. The seed-bearing head of the plant was bent over the mouth of the basket and the plant was beaten with the seed beater, dislodging the seeds. A second method was used in obtaining seeds from red maids, summer's darling, and farewell-to-spring. The entire plant was collected and spread on a granite outcrop or similar flat hard surface. After the plants had dried for a sufficient length of time they were beaten to dislodge the seeds onto the surface of the rock. The plants were then removed and the seeds swept together with a soaproot brush (fig. 3).



Lowie Mus., U. of Calif., Berkeley: top, 1-9954; center, 1-10176; bottom, 1-10268.
 Fig. 3. Soaproot brushes for meal or hair. Top, coarse fibers from soaproot bulb bound with a twig, in order to have soaproot juice or pitch applied for a handle; center, brush bound with twine; bottom, brush bound with string covered with an adhesive. Length of top 14.5 cm, rest same scale; collected 1906.

•HUNTING Deer was by far the most important animal hunted. Deer were hunted both communally and individually. Communal methods included surrounding an area, driving deer over a cliff or into a net, and surrounding an area with a series of small fires. Individual methods included stalking while wearing a deer's head disguise, shooting from blinds alongside a deer trail, and running a deer down. The last method involved the hunter chasing a deer for a day or more until the animal tired sufficiently for the hunter to approach at close range.

When deer were killed communally the meat was divided among all the males participating in the hunt. Meat from an individually killed deer was distributed to the hunter's consanguineal and affinal kin. Consanguines were given the legs, and affines the remainder of the animal.

Elk and antelope were hunted in the lower foothills and plains. Both of these were stalked by hunters wearing a deer's head disguise. Antelope were also hunted communally by being approached by groups of hunters from two directions.

Grizzly bear and black bear were hunted by the Sierra Miwok. They were usually hunted communally by a party of a dozen or more.

Rabbits were second only to deer in terms of the quantity of meat they supplied. The main method of taking rabbits was a communal rabbit drive in which the entire population of the village participated. People chased rabbits into a net where they were clubbed by waiting hunters. The net was three or four feet high and 300-400 yards long.

•TRAPPING Traps and snares were the dominant means of taking small game. Snares were also used for deer but never for elk or antelope. A deadfall trap was used for woodrats. Both valley quail and mountain quail were taken by means of a brush fence with snares set in the openings. A snare trap baited with an acorn was used to catch band-tailed pigeons, jays, and flickers. Woodpeckers were taken by plugging most of the holes in a grove of trees and capturing the birds that entered the remaining holes. Ducks and other waterfowl were captured with nets used in two distinct ways. One method was to pull the net over the ducks while they were feeding and the second was to quickly raise a net in the path of a group of flying ducks.

•FISHING Fishing was most important to the Plains Miwok and the people who lived along the main courses of the larger rivers in the foothills. The main method of capturing fish was with nets, of which four different types were used. Dip nets were used in deep holes in rivers. Seines were used in large rivers and sloughs where the movement of water was relatively slow. Seines were usually used in conjunction with the tule balsa. In the nonnavigable waters farther upstream the set net replaced the seine. A casting net was also used.

There were several additional methods used in taking fish. The Plains Miwok caught sturgeon with hook and line. Two-pronged harpoons were used for salmon. Whitefish were taken with an obsidian-tipped fish spear. Basketry fish traps were used, sometimes in conjunction with a stone weir (Aginsky 1943:453). Fish were stupefied with crushed buckeye nuts and soaproot.

•STORAGE A number of factors allowed the Eastern Miwok to store large quantities of food. Acorns were stored in acorn granaries (fig. 4). Most other foods (seeds, greens, grasshoppers, quail, dried meat and fish) were stored in large flat-bottomed storage baskets of twined weave.

Acorns and seeds required no advance preparation for storage. Greens and grasshoppers were steamed and then dried for storage. Quail, deer meat, and fish were dried either by exposure to the sun or to the heat of a fire.



Los Angeles Co. Mus. of Nat. Hist.

Fig. 4. Yosemite Miwok acorn granaries. Photograph by Adam Clark Vroman, about 1900.

• **COOKING** Meat of large mammals was usually cut in strips and broiled directly on the coals of the fire. Birds, fish, and small mammals were roasted whole in the ashes of the fire. The earth oven was used for both baking and steaming. Bulbs, greens, and grasshoppers were cooked in the earth oven.

Seeds were generally eaten as pinole. Pinole was prepared by first winnowing the seeds with a winnowing basket. The seeds were cooked by tossing them with live coals in a basketry tray. The cooked seeds were then ground into flour with the mortar and pestle. This flour or pinole was eaten dry or made into mush depending on the kind of seeds involved.

The most complex process involved the preparation of acorns. The acorns were first shelled. They were placed on an acorn anvil and struck with a hammerstone. The meats were then ground in the bedrock mortar with a cobblestone pestle. A soaproot brush (fig. 3) was used to sweep the meal into a pile. The next step involved the sifting of the meal in a closely coiled discoidal basket. The sifted meal was placed in a shallow basin of sand, and water was poured on it to leach the tannin from the meal. The first application of water was cold and the temperature was gradually increased until about 10 applications of water had been made (at which point the water used would be quite hot). The leached meal was used to

prepare four kinds of dishes: soup, mush, biscuits, and bread.

Acorn mush and acorn soup were prepared by boiling the leached meal in baskets. Hot rocks, lifted from the fire and placed in a cooking basket containing water and meal, were stirred with a looped mush stirrer or paddle to prevent scorching of the basket. As the rocks cooled they were removed from the basket and placed in a basket of water to be rinsed. The quantity of water used determined whether acorn mush or acorn soup was made. The soup was like a thin gruel in consistency while mush was much thicker.

Acorn biscuits were prepared by extended cooking of acorn mush. As it cooked a dipper was used to remove a portion of the mush and pour it slowly back into the cooking basket from about two feet above the basket. When the desired consistency was achieved the basket was placed in a running stream to cool the ingredients, which solidified to form biscuits with approximately the consistency of a gelatin dessert.

The acorn bread (either leavened or unleavened) of the Plains and Northern Sierra Miwok was baked in the earth oven. The Central Sierra Miwok prepared acorn bread by placing freshly leached acorn meal on a hot stone, turning it as it cooked.

Buckeye nuts, too, were inedible in their natural state. They were ground into meal and leached with repeated applications of cold water. The leaching process lasted 18 hours of more.

Culture

The aboriginal culture of the Eastern Miwok as portrayed here is based upon information given to ethnographers by Miwok people living in the early twentieth century, 100 years or more after the first contact with European cultures. The data on material culture is based upon Barrett and Gifford (1933) except where otherwise noted.

Technology

• **HUNTING IMPLEMENTS AND WEAPONS** The principal tools of hunting and the primary weapons of war were the bow and arrow. No protective armament (neither shields nor armor) was used in warfare. Bows were usually made of the wood of the incense cedar in the territory of the Sierra Miwok. In some areas the wood of the ash (*Fraxinus latifolia*), oak, willow, pepperwood, maple, or hazel was used (Aginsky 1943:408-409, 456). Most bows were of the sinew-backed variety. Several layers of sinew were glued to the back of the bow with an adhesive made from the root of a species of soaproot.

Arrows were made in a number of different types. The arrows used in war and in hunting large game had a foreshaft designed to remain implanted in the victim even when the main shaft was removed or broken off. Ordi-

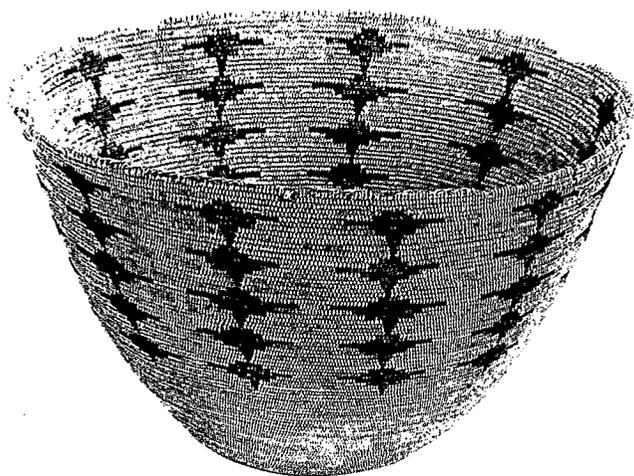
nary hunting arrows had no foreshaft, the arrowhead being attached directly to the main shaft. Headless arrows were used in hunting small game, birds, and fish. Arrows usually had three-feather radial fletching. In most cases the feathers of the redtailed hawk were used. Throughout the territory of the Plains and Sierra Miwok arrowheads were made with a concave base, at times with side notches. Laurel leaf points were used only by the Plains and Northern Sierra Miwok (Aginsky 1943:409).

Several tools were employed in the manufacture of bows and arrows. Shaping of the bow was done with an obsidian flake and a scraper made from the leg bone of a deer. Fine finishing of both bow and arrow was done with abrasive stone and with pieces of scouring rush (*Equisetum arvense*). Arrow straighteners were of two types, a perforated type made of manzanita, maple, or stone and another type consisting of a single piece of steatite with a transverse groove. Two kinds of antler chipping implements were used in the manufacture of arrowheads. Once the flake had been removed from a core with the hammerstone, the larger of the two antler implements was used to perform the rough chipping. A smaller antler tool was used for finer finish work and for side-notching. The arrowhead was held on a buckskin pad while the flaking was being done.

Arrows were kept in two sorts of quivers. A storage quiver consisting of a buckskin bag was used for storage of arrows in the owner's home. On hunting trips a quiver of fox or otter skin, open at both ends, was carried.

An obsidian-tipped spear with a mountain mahogany shaft about seven feet long was used in warfare.

•**BASKETRY** The Eastern Miwok manufactured both twined and coiled basketry. The foundation of coiled baskets and the warp and weft of twined baskets were usually made from willow. Redbud served as the wrapping element in coiled basketry. Basketry of the Plains



Dept. of Anthr., Smithsonian: 313077.

Fig. 5. Sierra Miwok coiled granary basket. Diameter 53.4 cm; collected before 1920.

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and Northern Sierra Miwok resembled that made by the peoples of north-central California, while the basketry of the Central and Southern Sierra Miwok was stylistically akin to that of the Yokuts and Numic peoples.

Twined basketry included the seed beaters and burden baskets employed in gathering seeds, triangular winnowing baskets, openwork sifters of several different shapes, globose storage baskets, basketry cradles, and rackets used in a ball game.

Coiled basketry included plate-form winnowing trays, parching baskets, and truncated conical baskets of several varieties (fig. 5), which were used to cook and serve acorn mush.

•**OTHER TEXTILES** Mats were made and used extensively only by the Plains Miwok. Two kinds of tules were used in their manufacture. Matting served primarily as a floor covering.

Cordage was made from several plants: milkweed (*Asclepias* spp.), *Fremontodendron californica*, and Indian hemp (*Apocynum cannabinum*). String was made by placing bundles of fibers on the thigh and rolling them downward with the right hand. Fish nets and net bags were made from milkweed string. Milkweed and hemp string were also used in the manufacture of braided and twined tumplines used for carrying baskets.

Woven blankets were made of rabbitskin strips or, more rarely, duck or goose feathers. The strips of skin or feathers were attached to cordage warp strands while the weft consisted of cordage alone.

•**SKIN DRESSING** Dressing of skins was the work of men. Deer hides were staked out on the ground, scraped when necessary, and allowed to dry for a few days. The hide was then soaked in water for a couple of days. After the soaking the hide was treated with pulverized deer brains, soaking in a solution overnight. The hide was then pulled and rubbed to make it pliable. A deer tibia scraper was used to remove hair from the hide.

In preparing bear skins rotten wood was applied to the skin to absorb the fat. A wooden defleshing tool was used to loosen adhering flesh from the hide. Bear skins were not softened but were allowed to dry stiff and hard.

•**NAVIGATION** At lower elevations on navigable rivers the tule balsa was the principal water craft. About 20 bundles of tules were normally used. Rigidity was obtained through the use of two willow poles for gunwales and about eight external ribs, also made of willow. The tule balsa was propelled with one or more wooden paddles.

In the Sierras the only form of water craft was a pair of logs lashed together to form a raft. The raft was used primarily for crossing streams, while the tule balsa received much more general use.

Clothing and Adornment

Young children wore no clothing. Women wore a one-piece wraparound dress of deerskin in Northern Sierra

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Fig. 6. Family of Bill Howard, Chowchilla Miwok. Short hair of older woman is probably an indication of mourning. Photograph by C. Hart Merriam, Mariposa, Sept. 1902.



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Fig. 7. Saclan Miwok women with tattooing on chin and neck. Lithograph (Choris 1822) based on lost watercolor by Louis Choris, 1816.

Miwok territory. In Central Miwok territory women wore two-piece skirts of deerskin or grass skirts consisting of front and rear aprons. In Plains Miwok territory women wore skirts of shredded tules. Men wore buckskin loin cloths. In cold weather both men and women wore robes of dressed skin (deer, bear, mountain lion, coyote, and sometimes buffalo) or blankets of rabbitskin or feathers.

The hair was worn long, being cut only upon the death of a close relative as a sign of mourning (fig. 6). The hair was brushed with a soaproot fiber brush and washed every few days with the lather of the soaproot plant. The hair was sometimes allowed to flow loosely but a headband of beaver skin, a piece of string, or a feather rope was sometimes used to tie the hair back. Hair nets were worn only on special occasion by most people; only chiefs wore them every day.

Tattooing was practiced by both sexes and usually consisted of straight lines extending from the chin (fig. 7) to the navel. Tattooing was done when a person was about 12 to 15 years old. A sharp piece of obsidian or flint was used as a scarifier and ashes were rubbed into the cut areas for pigmentation.



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Fig. 8. Northern Sierra Miwok house, aboriginal in form but built of sawed lumber with shingle roof. Photograph by C. Hart Merriam at Hachanah Rancheria near Rail Road Flat, Oct. 1905.

Body painting was done primarily on ceremonial occasions. Red, white, and black paints were used. Red paint came from a mineral source in the territory of the Eastern Mono (Owens Valley Paiute), white from locally obtained chalk, and black from charcoal.

Both the earlobes and nasal septum were pierced in childhood. Young children of both sexes wore flowers in

their pierced ears. Adult women wore earrings of beads and shells. Adult men wore earplugs made of bird bone with white feather protruding from the ends. Nose sticks were made of either polished bone or shell.

The Eastern Miwok practiced head deformation. The head was flattened in the back by the hard cradle. The forehead was pressed and rubbed from the center to the sides to produce a short flat head. Flattened noses were also desirable, and mothers would press an infant's nose to insure flatness.

Structures

The Eastern Miwok made four distinct kinds of dwellings. The dominant form of house in the mountains was a conical structure of bark slabs. Three or four thicknesses of bark slabs were arranged to form a cone that had no internal supporting posts or framework. At lower elevations the principal house type was a thatched structure. Poles were arranged in a conical framework, and a thatch of brush, grass, or tules was applied externally. These simple thatch structures were also used on hunting and gathering expeditions in the mountains during the summer. A conical house of tule matting was used at lower elevations in Central Sierra Miwok territory. Tule mats were tied to a framework of poles. A semisubterranean earth-covered dwelling was also used at times as a winter house. Only richer men built such houses among the Plains Miwok.

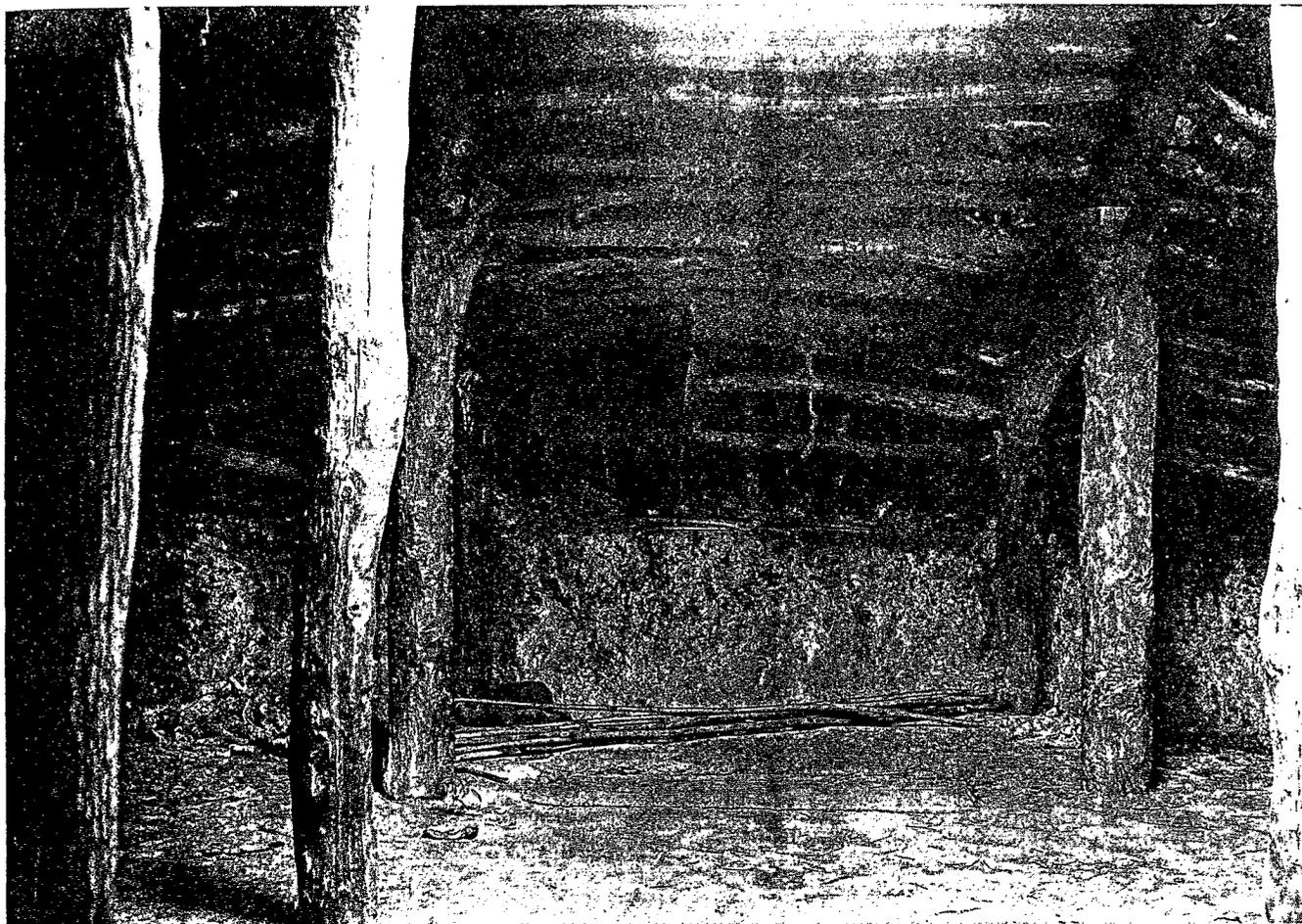
Houses had a centrally located hearth where some of the cooking was done. An earth oven was usually located



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408 Fig. 9. Casus Oliver, Muquelemne Miwok, at entrance to roundhouse at Buena Vista, near Ione. Photograph by C. Hart Merriam, Oct. 1905.

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Fig. 10. Interior of roundhouse at Buena Vista. Taken same occasion as fig. 9.

next to the hearth. The floor of the house was covered with digger or western yellow pine needles; mats and deerskins used as bedding were placed directly on top of this. Chiefs and important men sometimes had beds made of poles and bearskins for bedding.

The Miwok built two sorts of assembly houses, a large semisubterranean type (fig. 9) that was the focal point for most ritual and social gatherings of the community, and a circular brush structure that was used for mourning ceremonies held during the summer months. The semisubterranean earth lodge was built over a pit 40-50 feet in diameter and three to four feet deep (fig. 10). Four center posts supported a conical roof, the bottom edge of which rested upon the edges of the pit. Over a lath of closely placed cross sticks a layer of brush was placed. The brush layer was covered with a layer of digger or western yellow pine needles. The final roofing material was a layer of earth, which covered the structure. A centrally located opening at the top of the earth lodge served as a smoke hole. The earth lodge was entered by a door on one of the sides rather than through the roof.

The circular brush assembly house was a much simpler structure. It was roofed with brush or pine needles and was considerably smaller than the earth lodge. The covering material was applied in a thin layer, which allowed summer breezes to cool the occupants.

The sweathouse was from 6 to 15 feet in diameter and was built over a pit that was two to three feet deep. The structure was conical in shape and was covered with layers of brush, pine needles, bark, and earth. The sweathouse was used for the curing of disease and for purification before going deer hunting.

Other structures built by the Miwok included a small conical hut used by newly menstruating girls and aged people and a conical grinding house built over a bedrock mortar to permit grinding in bad weather. Special acorn granaries were built for the winter storage of the acorn crop. Granaries were cylindrical and up to 12 feet high and 5 feet in diameter (fig. 4). The walls of the granary were composed of upright poles to which were laced hoops of grapevine and small vertical poles. The interior lining was made of grass with a layer of twigs and brush placed in the bottom of the structure.

Political Organization

The unit of ultimate political sovereignty among the Eastern Miwok was the tribelet. These tribelets were also units of ethnic and linguistic differentiation. The population of a tribelet ranged from about 300 to 500 persons among the Plains Miwok. Sierra Miwok tribelets seem to have been somewhat smaller in population size, probably ranging between 100 and 300 persons. Each tribelet owned a definite and bounded territory and the resources of that territory.

With the coming of Whites and the subsequent decline in population there ensued a period of political realignment and, probably, consolidation of what had been previously independent tribelets. The precise number of tribelets and the exact extent of their territories is, therefore, difficult to determine.

Each tribelet contained several physically distinct settlements or hamlets. Each of these settlements was named. The tribelet as a whole went by the name of the principal settlement, the capital of the tribelet, where the chief resided. The tribelet capital contained the assembly house, which was regarded as the personal property of the chief. The assembly house was the site of all important religious ceremonies and other major social events. The authority of the chief extended over all the settlements within the tribelet.

Each of the tribelet's settlements appears to have been the headquarters of a localized patrilineage. These patrilineages bore the name of the settlement at which they originated and usually occupied that locality. Gifford's data suggest an average population of about 21 persons for each of these settlements (Cook 1955:35). Speakers acted as representatives of the tribelet chief to the various settlements. The authority of the speaker was limited to the settlement.

• OFFICES The focus of legal and political authority in the tribelet was the tribelet chief. The office of chief was a hereditary one, passing in the male line from father to son. In the absence of a male heir the chieftainship would pass to the chief's daughter. When the heir to the chieftainship was a minor the deceased chief's wife (the child's mother) acted as regent. The chieftainship was the property of a single patrilineage within the tribelet and all members of that patrilineage or "royal family" were called by the same term as the chief (Gifford 1955:262; Aginsky 1943:431).

The chief acted as an advisor to the people and manager of natural resources. It was his responsibility to prevent trespass upon the hunting and gathering territory of the tribelet and to determine the best time at which to begin the acorn harvest. The chief acted as arbitrator in disputes and had final say in settling arguments. Chiefs were also responsible for sanctioning the killing of criminal offenders such as poisoners or witches (Aginsky 1943).

The chief was a wealthy man and acted as the official host for the tribelet. Chiefs acted as sponsors for religious and social gatherings by providing food for the guests and underwriting a large proportion of the costs of producing the ceremonies. The approval of the chief was necessary before any public ceremony could be held. Chiefs delivered speeches at all public ceremonies (Aginsky 1943).

Chiefs had considerable control over the external relationships of the tribelet. The chief issued invitations to attend ceremonies to the chiefs of surrounding tribelets. Chiefs also acted as war leaders, though they did not participate in actual combat (Aginsky 1943).

Chiefs had a number of special rights associated with their office. The chief did not do his own hunting but was supplied with meat by his son and other members of the patrilineage. These hunters were usually young unmarried men who resided with the chief during their service as hunters. Chiefs also seem to have been differentiated from commoners by virtue of their possessions. Chiefs and their wives and daughters wore buckskin belts decorated with woodpecker scalps and olivella disk beads. Chiefs had bearhides for seats and bedding and might also have elevated sleeping benches (Gifford 1955; Barrett and Gifford 1933).

There were two other major political offices in Miwok society—speakers and messengers. Speakers made proclamations from the roof of the assembly house announcing to the people of the village edicts of the chief



Lowie Mus., U. of Calif., Berkeley: top, 1-10360; bottom, 1-24328.
Fig. 11. Top, invitation string, with knots showing the number of days before the ceremony begins, collected 1906; bottom, model of necklace of wormwood leaves tied around the neck of a mourner at the funeral of a close relative, worn until the next annual mourning ceremony or until it wears in two, collected 1923. Length of top, 57.5 cm, other same scale.

pertaining to the gathering and preparation of food. Speakers were also responsible for soliciting contributions of food and obtaining ritual paraphernalia in preparation for a ceremony as well as the actual distribution of food during the festivities (Gifford 1955:264, 268-269). According to Merriam's informants the office of speaker was an elective one and there were speakers for each of the settlements in the territory of the tribelet. The speakers functioned as subchiefs having authority only in the settlement where they resided, serving as representatives of the chief (Merriam 1966-1967, 3:348, 355).

The primary duties of the messenger were to deliver invitations (fig. 11) to attend ceremonies to the chiefs of surrounding tribelets and to act as official announcer on ritual occasions by addressing guests from the top of the ceremonial house. The office was hereditary, passing in the male line.

A number of minor officials aided the chief. These included the hunters who provided him with meat for his own personal use and for ceremonial occasions, fishermen who provided salmon in the same way, four ceremonial cooks who prepared meat for religious and social events, servers who distributed food to guests at ceremonies, and a fire-tender for the assembly house (Gifford 1955:264).

Other offices seem to have existed in some areas of Miwok territory. There were apparently moiety chiefs in at least some sections of Northern Sierra Miwok and Southern Sierra Miwok territory (Aginsky 1943:430, 461). War chiefs, distinct from the tribelet chief, are known from some areas in Central and Northern Sierra Miwok territory (Aginsky 1943:433; Gifford 1955:264).

Social Organization

• **MOIETIES** The Eastern Miwok believed that all living things belonged to one or another of two distinct categories. These two categories of things or moieties are an important part of Miwok social organization since people by virtue of their lineage membership fall into one of these two halves of the world. The two "sides" were called land and water or were referred to by the names of important and representative animal members. The Southern Sierra Miwok used bluejay and grizzly bear as representatives of the land side and coyote as representative of the water side. The Central Sierra Miwok used bluejay as representative of the land side and frog as representative of the water side (Merriam 1966-1967, 3).

The personal names of the Central Sierra Miwok contained an implied reference to an object or animal species that belonged to the same moiety as the person named. Personal names of people in the water moiety frequently referred to deer, salmon, water, and valley quail. Personal names of people belonging to land-moiety lineages frequently referred to bear, farewell-to-spring, and chicken hawk (Gifford 1916b).

The moieties were intended as exogamous units. About 75 percent of Central Miwok marriages followed this rule (Gifford 1916b).

The moieties also played a part in a few Central Miwok ceremonies. In funeral ceremonies (fig. 11) it was the duty of members of the opposite moiety to prepare the corpse. During the ritual washing that concluded the mourning ceremony people of each moiety were washed by members of the opposite moiety. Girls of opposite moiety exchanged dresses at the time of the girls' puberty ceremony. During the ahana ceremony of the Central Miwok, dancers were given presents by members of the same sex and opposite moiety (Gifford 1916b).

• **LINEAGES** Lineages were of primary importance from a political and economic point of view. Miwok lineages were local groups, lineage settlements, where a number of agnatically related men and their wives and children resided for the better part of the year. Lineage members cooperated in the exploitation of economic resources. One important ceremony of the Central Sierra Miwok, the pota, was closely connected with lineages. The lineage holding a pota erected three poles with effigies of lineage members attached. People from the opposite moiety attacked the effigies, which were defended by other lineages of the same moiety as the host lineage (Gifford 1926d).

• **KINSHIP** The kinship terminological systems of the Eastern Miwok peoples are all closely similar; they are all of the Omaha type and are in many respects similar to the terminological systems of the Wintuan, Yokuts, western Miwok, and Pomoans. There are small differences, however, between the Plains Miwok and the Sierra Miwok. The Sierra Miwok systems fall into two groups; the Northern and Southern Sierra systems form one group, while the Central Sierra Miwok stand apart (Gifford 1922).

Trade

The Eastern Miwok participated in a trade network that involved the flow of goods across ecological boundaries. There were four major physiographic and ecological areas in south-central California: the Coast Range mountains and adjacent littoral, the central valley, the Sierra Nevada, and the western edge of the Great Basin. The trade network in which the Eastern Miwok participated is characterized by movement of goods from east to west and west to east running at right angles to the generally north and south orientation of the physiographic areas. The Costanoan peoples occupied the Coast Ranges, the Plains Miwok and Northern Valley Yokuts occupied the central valley, the Sierra Miwok occupied the Sierra Nevada, and the Washo and Eastern Mono held the adjacent portion of the Great Basin.

Salt and obsidian originating in the Great Basin were traded westward to the Sierra Miwok and from them to the Plains Miwok in the central valley. Olivella and

haliotis shells originating in Costanoan territory moved eastward. Valley-dwelling peoples imported bows from both the people to the west in the Coast Ranges and the people to the east in the Sierras. Basketry was also an important item of exchange, usually moving in both directions between contiguous groups of people.

For a full listing of items exchanged by the Eastern Miwok see Davis (1961).

Religion

•SHAMANISM A number of different types of shamans were recognized by the Miwok. Shamanism, like many other offices in Miwok life, was inherited patrilineally. The shaman's skill emanated from a combination of instruction by an older shaman and the acquisition of supernatural power. The spirit doctor or sucking shaman held an important place in Miwok religion. Spirit doctors obtained their power through dreaming during normal sleep, through vision quests and the use of datura, and through trances. Spirit doctors cured their patients by locating disease objects (with the aid of guardian spirits obtained in the vision quest) and removing them by sucking. Spirit doctors engaged in contests at mourning ceremonies to see whose power was greatest. The victors were successful in poisoning their opponents and subsequently cured them.

Herb doctors were concerned primarily with the administration of medicinal plants as cures for less serious diseases. Deer doctors had the power to foretell the success of the hunt, to attract fawns, and to locate deer. Rattlesnake shamans performed at rattlesnake ceremonies by handling snakes. Weather shamans had control over the weather and could cause rain and wind to start or stop. Bear shamans performed at public ceremonies and had bears for their guardian spirits.

•CEREMONIES Quite a few distinct ceremonies have been described by Gifford (1955) for the Central Sierra Miwok. Though possessing many elaborate ceremonies, the Eastern Miwok lacked completely the secret-society type of cult system that was present in many areas of north-central California. The number and kind of ceremonies held in any given Miwok village was determined by the position of the village within the tribelet (the most important ceremonies were held only in the capital lineage settlement) and by the geographical location of the tribelet (a wider variety of ceremonies was held in the tribelets closest to the central valley).

The Central Sierra Miwok recognized two categories of ceremonies. What may be termed "sacred ceremonies" involved the use of elaborate and highly potent ceremonial costumes usually consisting of robes and headdresses of feathers. Mishandling of this ritual paraphernalia could cause sickness in either the performers in the dance or the audience. "Profane dances," on the other hand, were seen primarily as entertainment and posed no threat

to the participants, since little or no ritual paraphernalia is associated with these ceremonies.

Sacred ceremonies of the Central Sierra Miwok people living in the hills at places such as Murphys, Angels Camp, Bald Rock, and Groveland during the later nineteenth century were largely indigenous and were relatively few in number. Central Miwok people at Knight's Ferry during the same time period produced a large number of sacred ceremonies, both of indigenous origin and introduced. The introduced ceremonies were brought to Knight's Ferry by a "dance teacher" from Pleasanton named Chiplichu, as part of a major religious revival known as the Ghost Dance. The date of introduction was probably about 1872. A second dance teacher introduced similar dances to the Northern Miwok community at Ione at approximately the same time.

There was a much smaller number of profane ceremonies in both Central Sierra Miwok areas. These seem to have been largely indigenous (Gifford 1926a, 1955).

Mythology

Eastern Miwok mythology resembles closely that of other peoples of south-central California, especially that of the Yokuts and Costanoan peoples. The major characters of Eastern Miwok mythology are Coyote, Prairie Falcon, and Condor. Condor is the father of Prairie Falcon, and Coyote is Condor's father and Prairie Falcon's grandfather. Many Eastern Miwok myths relate the victories of Coyote and Prairie Falcon over monsters that formerly inhabited Miwok territory.

Synonymy

Gatschet (1877:159) and Powell (1877:535) classified the Miwok and Costanoan peoples together under the rubric Müt'sün, the name of a Costanoan tribelet. Powell (1891) later recognized the distinctness of the Miwok and used the word Moquelumnan (adapted from Latham 1856; cf. the place-name *muké-lumne*? in Northern Sierra Miwok, Freeland 1951:183) as a designation for the Miwokan language family, for which Merriam (1907:341) used the term Me'wan. The name Miwok has been fairly consistently employed in the literature either to apply to the Miwokan family or to refer specifically to the Eastern Miwok alone. It is from Central Sierra Miwok *miw-w-k* 'people, Indians' (Freeland 1951; Freeland and Broadbent 1960), evidently introduced by Powers (1873:322, 1877:346) at first as Meewoc.

The language here called Bay Miwok (a term taken from Bennyhoff 1961) has also been called Saclan. Plains Miwok is referred to as Mew'ko by Merriam (1907:338). Northern Sierra Miwok is termed Northern Me'wuk by Merriam (1907:338) and Amador by Barrett (1908b). Southern Sierra Miwok is called Central Me'wuk by Merriam (1907:341) and Mariposa by Barrett (1908b).

Sources

The only general account of Miwok culture is given by Kroeber (1925). Also useful in general terms are Merriam's (1955, 1966-1967) ethnographic notes and Aginsky's (1943) culture element distribution lists. Material culture is covered by Barrett and Gifford (1933). Social organization of the Central Sierra Miwok is described in a number of articles by Gifford (1916b, 1926d, 1944). Central Sierra Miwok ceremonies have been described by Gifford (1926a, 1955). Eastern Miwok mythology is reported by Merriam (1910), Gifford (1917), and Barrett (1919).

Major descriptive accounts of the Central Sierra Miwok language (Freeland 1951; Freeland and Broadbent 1960) and the Southern Sierra Miwok language (Broadbent 1964) include grammars, texts, and dictionaries. Historical materials relating to the early part of the nineteenth century have been assembled by Cook (1955, 1960, 1962). More recent periods in Miwok history have remained unstudied. The prehistory of the Sierra Miwok area has been reported by Bennyhoff (1956), Elsasser (1960), and Fitzwater (1961-1962, 1968a). Plains Miwok prehistory is detailed in Lillard, Heizer, and Fenenga (1939).