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CULTURE ELEMENT DISTRIBUTIONS: XV
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BY

A. L. KROEBER

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BY

A. L. KROEBER

The field work in the University's Culture Element Survey West of the Rocky Mountains was completed in July, 1938.[1] Even though the editing and publishing of data will require time to complete, it seemed desirable to begin interpretive studies. Dr. Driver had indeed already made such a study, and an intensive one, on the Girls' Puberty Rite; but this was begun in 1936, before data were in hand on all areas. I decided to review the materials on several circumscribed topics, as samples of what the list data would yield when treated nonstatistically, by established methods of distributional ethnography. Salt, tobacco, and dogs were chosen as being relatively concrete and specific subjects. The following three discussions present the more important points that emerge from a comparison of the relevant sections of the twenty blocks of two hundred seventy-nine lists. No attempt has been made to exhaust the materials. Traits that appeared in only part of the lists, whose occurrence proved local or sporadic, or on which the returns were ambiguous, irregular, nonconcordant, or of little apparent significance, were freely omitted from consideration, except in a few instances where deficiencies in the data seemed to illuminate problems in the technique of list gathering. I have also refrained from making use of the previously published literature, except in special cases. This was deliberate: the paper is designed as a test of how much in the way of significant results old-line ethnologists who distrust coefficients might secure from our Survey data alone.

In the task of extracting data from the lists, notes, and universal negatives from those of our list blocks which are as yet in manuscript, I was greatly aided by Dr. Margaret Lantis, who during 1938-1939 served as Ethnologist and then as Supervisor of a Works Progress Administration project partly concerned with the Survey. In fact it would be more accurate to say that she made herself responsible for the proper extraction of the data. Their clerical compilation, copying of manuscript, and preparation of maps have been the contribution of other members of our WPA staff. To all of them my thanks are due.

The two hundred seventy-nine particular groups of Indians dealt with are enumerated and mapped in a preceding issue of this series: my Culture Element Distributions: XI--Tribes Surveyed.

SALT

The outstanding fact regarding salt in native western North America is that it was used in half of that area and not used in the other half. It is the northern half which was saltless. The line of demarcation is sinuous; but there were virtually no exceptions to the rule that salt was eaten everywhere to the south and not eaten everywhere to the north of this line.

The boundary between the two areas (map 1) begins on the coast at the mouth of the Columbia. The Chinook are without salt, the Tillamook and other Oregon coast groups use it. Of the Kalapuya, the southerly informant affirmed salt, the northerly one was doubtful; the Tenino said no. The line evidently follows the Cascades south. It then cuts southeasterly across the northeast corner of California into Nevada, then turns south a distance. Salt-using groups in this region are the Shasta, Wintu, Western Achomawi, Maidu, Washo, and Northern Paiute of Pyramid and Walked lakes; nonusers, the Klamath, Modoc, Eastern Achomawi, Paiute of Surprise Valley, lower Humboldt River, and lower Carson River. The southernmost point of the dividing line passes between Walker and Carson lakes. From here it swings back into southeastern Oregon, the Northern Paiute of Winnemucca, Quinn River, and Malheur Lake being nonusers, the Shoshone of Reese River, Smith Creek, Battle Mountain, and Snake River, also the Paiute of Owyhee River, being users of salt. The line does not follow the Northern Paiute-Shoshone boundary. Across Snake River the line turns east: the Lemhi and Fort Hall Shoshone do not eat salt, the Great Salt Lake Shoshone, the Gosiute, and the Ute do. The Wind River Shoshone of Wyoming are not included in the Survey.

The exceptions are few:

The Northwest Coast north of Vancouver Island eats seaweed, but as "food," not as salt. More of this later.

The southerly Carrier on upper Fraser River are salt-users, though the other north Athabascan tribe in the Survey, the Chilcotin, goes with the adjoining Plateau Salish in not using it. It is not known whether the Carrier constitute a local

[1]Assistance in the preparation of this manuscript was supplied by the personnel of Works Projects Administration Official Project No. 665-08-3-30, Unit A-15.

exception or the fringe of a northern area of salt consumption. There is also a questioned affirmation for the Umatilla.

Within the salt area there are the following doubtful denials (-, -?, or ? in the lists): Shoshone of Ruby Valley and Ely, Gosiute of Deep Creek (sic O. Stewart, but J. Steward +), Uintah Ute. These are separated from one another by salt-using groups.

The upper Yurok, lower Karok, Hupa, and Chilula are technically entered as "-" for salt, but all eat seaweed as seasoning.

What do the two contrasting areas mean? The following have been or might be suggested as causes of nonuse of salt: prevalence of sea food; of a meat diet; of warmer climate. The first will not hold: salt-users extend farther north on the coast than inland. As to animal as against plant food, there is no very clear preponderance of either in either part of the region considered. Temperature fits the distribution better, but not exactly: the coast of northern California and Oregon is cool and foggy. A climate causing loss of body salt through sweating might be thought of as causing an increased physiological craving for salt. The strongest attachment to salt, as indicated by the number of deprivation taboos, ritual journeys, and salt ceremonies, evidently exists in southern California and Arizona, an area generally of long hot summers and heavy evaporation. However, this region constitutes only a small core of the distribution of salt use as shown by the Survey: the peripheral areas are several times as large. It must therefore be concluded that whatever underlying urge there may be in physiology as influenced by diet and climate, the specific determinant of salt use or nonuse in most instances is social custom, in other words culture.[2]

Seaweed.--Along the coast, a dark purplish seaweed, determined as Porphyra perforata for the Hupa by Goddard, is dried, matted, or pressed into cakes, and eaten. It undoubtedly has some food value; but the taste is also definitely salty and somewhat bitter. In northwest California, this eating is mainly as seasoning or relish: a piece of the cake is broken off and occasionally nibbled at between spoonfuls of acorn gruel. (This is my personal observation.) Presumably the same holds elsewhere in California and Oregon. On the Northwest Coast, the same purple seaweed, or possibly a related species, is dried into the same cakes, about a foot in diameter, but is then usually cut into morsels, and said to be "eaten as food." As in California, it is also traded to tribes near but off the coast. The question arises whether the difference is in recorders' nomenclature, the northern list collectors (Drucker and Barnett) construing as eating of food what the southern ones (Barnett, Driver, Gifford, Harrington) classed with "salt" and therefore construed as seasoning.

There is however this difference between the northern and southern data which may justify the distinction. In California and Oregon indubitable salt is also got from springs or deposits, from the ocean, or from burned plants. The Indians therefore tend to think of seaweed as a sort of salt or surrogate; it is a seasoning, not a staple. In British Columbia salt as such is universally denied, and the seaweed is therefore not only spoken of as food but is treated as such. In other words, the plant may be the same and its use is similar, but the attitudes do seem different. It is for this reason that I have rated the British Columbia seaweed eaters as nonusers of salt in the foregoing discussion.

The distribution of the use of this purple seaweed is peculiar in that there are three areas of use and three of nonuse along the coast (map 2). From southern Alaska to Queen Charlotte Sound the Tlingit, Haida, Tsimshian, Bella Coola, and mainland Kwakiutl eat the seaweed. The Vancouver Island Kwakiutl use it only as medicine. The Nootka, Gulf of Georgia and Puget Sound Salish, the Klallam, Makah, and Chinook, according to Drucker, Barnett, Gunther, and Ray, do not use it at all. An exception is formed by the Comox and Pentlatch of Vancouver Island,[3] near the northern end of the Gulf of Georgia; this may be an extension from the eating habits of the mainland Kwakiutl not far to their north.

With the Tillamook, seaweed use recommences, and continues as far as the Coast Yuki, including nearer inland tribes like the Karok, Hupa, Nongatl, Lassik, and Kato, but not the Chimariko and Yuki.[4] For the Pomo area, there are only negatives, except for the Makahmo Pomo of Cloverdale, an inland group! I doubt many of these Pomo negatives.

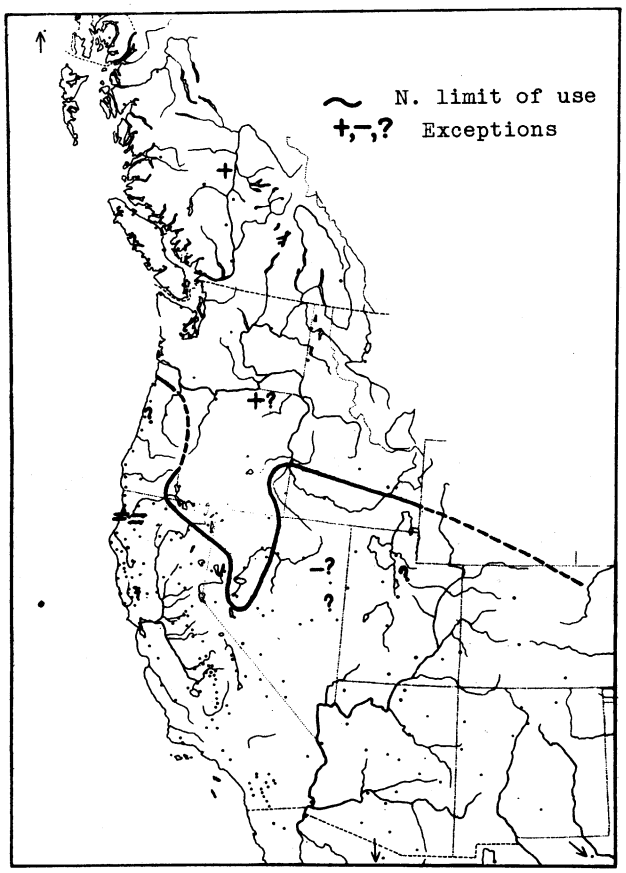
South of San Francisco, Harrington records seaweed for the San Juan Bautista Costano, both his Salinan groups, and the Santa Inez and Santa Barbara Chumash, most of them not immediately on the coast. For the Ventureño and Gabrielino he has no entries, which probably means that they did not use it, since Drucker records universal negatives for the Luiseño and Diegueño.

This intermittent distribution is due to culture, not ecology. As the following records show, Porphyra perforata occurs along the whole coast; two of its subspecies from the Mexican border at

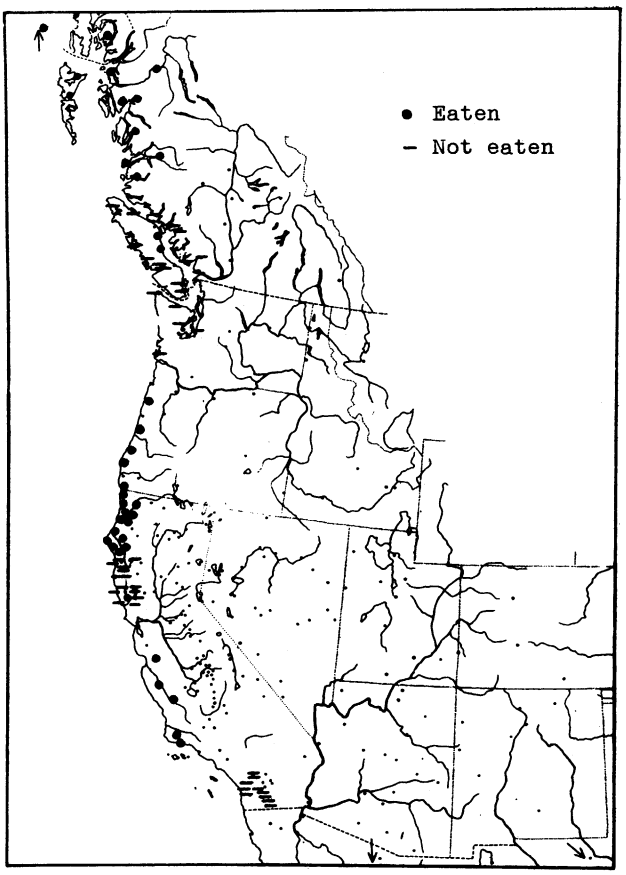
[2] This conclusion differs from that of M. O. de Mendizabal, Influencia de la sal en la distribución geográfica de los grupos indígenas de Mexico, ICA 1928 (New York), 93-100, 1930. He posits vegetal diet as the primary impulse to use of salt. His paper is valuable, though his map suffers from areal variability in quantity of data available.

[3] Of the two Slaiamun lists, one has +, one -.

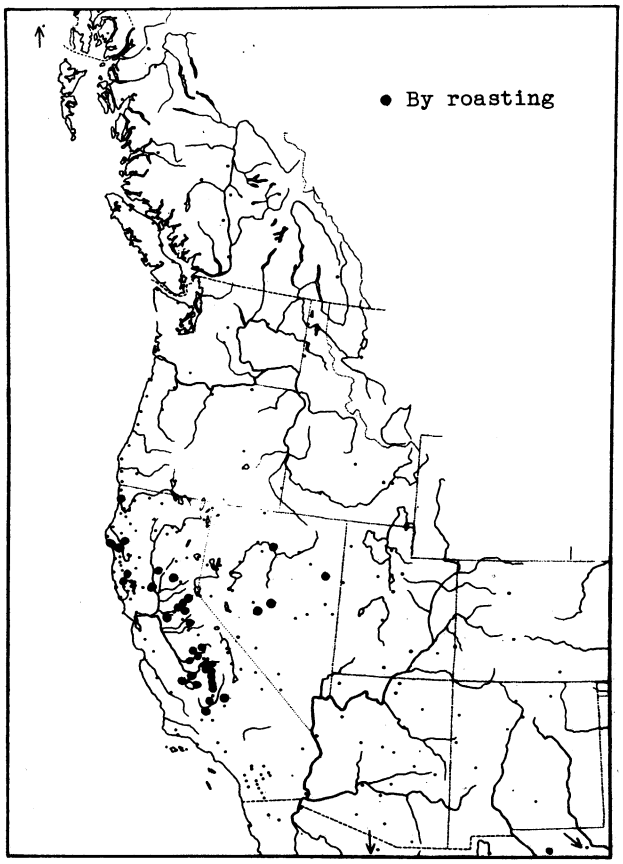
[4] Essene has a note for Kato and Lassik: eaten as food, replaces salt while available.



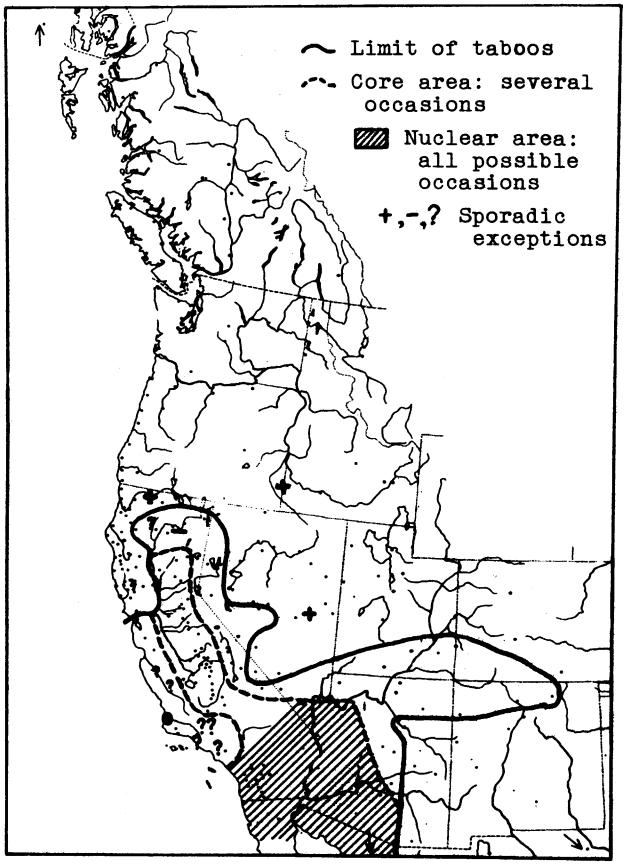
Map 1. Salt used.



Map 2. Salt: seaweed.



Map 3. Salt from grass.



Map 4. Salt taboo in ritual.

least to Washington; another species from there to British Columbia; four species from Monterey to Vancouver Island; and two are Alaskan, including one noted as eaten by Indians.

Botanical distribution of Porphyra.--These records on the occurrence of the genus are due to the courtesy of Dr. H. L. Mason: the list represents localities of specimens in the University Herbarium.

Porphyra perforata appears to have a continuous distribution from Alaska to Mexico. Of more than thirty specimens in the Herbarium, five are from Alaska: Glacier Bay, Sitka, Seldina, Baranoff and Shumagin islands. British Columbia is represented by Victoria and "Vancouver Island"; Washington by six localities, including Puget Sound; Oregon by two. Fort Ross and three points in Marin County show that the alga is not lacking where the Indians appear not to have used it in the stretch of coast north of San Francisco. For southern California, there are specimens from San Simeon, Santa Rosa Island, and San Diego. In all regions of nonuse, custom rather than nonoccurrence of the plant is accordingly the cause; though there may well have been local stretches of shore where it was not available.

P. perforata f. lanceolata specimens range from San Diego to Chehalis Bay; f. segregata from Mexican California to Puget Sound.

The known range of other species of Porphyra is as follows:

P. abyssicola, from San Diego to Sidney, British Columbia.

P. miniata, variegata, naiadum, from Monterey to Vancouver Island.

P. nereocystis, from Monterey to Uyak Bay and Kodiak, Alaska.

P. tenuissima, from Alaska only: Yakutat, Sitka, Baranoff.

P. laciniata is represented by eight Alaskan localities including the Pribylov Islands, and from Chile (!). The Yakutat specimen is accompanied by the legend: "The kind of seaweed Indians cook [sic] and eat."

Salt burned out of grass.--In parts of California and Nevada, a certain grass was roasted or burned in a pit, in the bottom of which "salt" would then collect. The first fuller description is from the Valley Patwin of Colusa;[5] E. Voegelin's notes contain a similar account from the Valley Maidu of Chico. Voegelin is the only one to identify the plant: Distichlis spicata, salt grass according to Jepson,[6] who gives as the habitat "salt marshes and alkaline soil, low altitudes, common along the coast, and in the interior valleys and deserts; extends from southern British America to Mexico." Pending further verification we can assume that wherever a grass is burned for salt in this part of the world it is Distichlis; except perhaps in eastern Nevada.

Map 3 shows that this salt roasting has a much narrower distribution than the plant. Its main area is the Central Valley of California. Thus, of 12 Yokuts tribes, 11 burned grass, together with 5 out of 7 Mono and both Tübatulabal divisions; 5 of 8 Miwok groups, 3 of 6 Maidu-Nisenan; there is no reported case from the north end of the valley. Beyond, there are scattering cases only: 2 in Russian River drainage, 3 in Eel, 1 on the lower Klamath. South of the Great Valley, the practice is universally denied. East of the Sierra Nevada, J. Steward secured 5 affirmations of "brush burned" for salt; 1 from Owens Valley (burning from grass denied by Driver's informants), and 4 from scattered Shoshone bands in eastern Nevada.

It is reasonably clear that what we have here is a practice substituted for the gathering of mineral salt, or sometimes added to it, according to opportunities of local environment. Grass burning never displaces mineral salt gathering over any considerable area: the two habits occur interdigitated, not infrequently among the same group. Thus while most of the Yokuts--prevailingly a people of the valley plains and lower foothills--burned grass, the Choinimni division used a mineral supply, and the Nutunutu, Chukchansi, and San Joaquin Yokuts used both. For 7 Mono groups, the figures are: grass only, 3; mineral only, 2; both, 2; for 6 Maidu: dry mineral, 6; salt spring or marsh, 3; grass burned, 3.

In southern California, where salt from burned grass is universally denied, 5 informants--Serrano, Cahuilla, Luiseño, Cupeño--spoke of salt being "collected from grass," presumably rubbed or stripped off. This suggests the Yaudanchi Yokuts practice of beating the salty juice out of Alit grass (Handbook, 530).

Inorganic sources of supply.--These of course vary endlessly in character according to local topography and geology. We have some rather tantalizing entries, as: "from the ocean," "from beach rocks," "from kelp," "ocean water as seasoning," "alkali." Other descriptions are: from mineral, dry mineral, from springs, from salt marsh, from salt lake, from playa, mineral on surface, mineral dug from stalactites, from caves or rocks, ashes in bread, mush, or herbs; also, not infrequently, got by trade. There are excellent local notes from a number of tribes, especially in the lists for Northwest California, Pomo, Yana, Northeast California, Miwok, the Basin Shoshoneans, and the Pueblo-Apache area. The main value of these is for topographic ecology, and they will not be considered further in the present comparative survey.

Preservation of food by salt.--It has been generally assumed that the Indians merely dried

[5] UC-PAAE 29:280, 1932.

[6] Manual of the Flowering Plants of California, 94, 1925.

their meat and fish, without salting it. Probably this point should have been inquired into, rather than being assumed and left out of most of the lists. In two blocks of lists preservation by salting appears, apparently through having been volunteered by informants. For 16 Northeast California lists Voegelin has these entries. "Fish salted": +, Trinity Wintu, Valley Maidu; (+), Foothill Maidu, Atsugewi; -, all others. "Dried meat, salted or plain": all +, except - for Eastern and Western Achomawi and McCloud Wintu. For the Central Sierra, in 13 lists, Aginsky gives "Fish" (and again separately "Meat") "stored in baskets with salt": +, 2 Northern Miwok groups; all others, no entry. It may be that this was a native habit in some areas. The matter should certainly be reinquired into. However, it is more than eighty years since the white man overran the localities in question; and until there are further data which have been cross-checked for the point, I incline to believe that an occasional informant confused post-Caucasian and pre-Caucasian practice. If the habit were old, more of the 150 informants in the salt-using area would presumably have forced it on the recorders' attention.

Salt in ritual.--The most general appearance of salt in religion in western North America is as something tabooed on ritual occasions, especially those connected with rites of passage. The distribution of such taboos is, as might be expected, more restricted than that of the use of salt. A thing must be both fairly obtainable and fairly desirable before there would ordinarily be much motivation toward forbidding it. As map 4 shows, certain peripheral regions of salt use do not impose salt taboos. These regions are: the coast (including tracts inland to the Sacramento River) from San Francisco Bay to the Columbia River; the Shoshone and Ute territories; those inhabited by the Athabascans of the Southwest except to a minor extent the more northerly and westerly groups; and perhaps the Pueblos also, although no list inquiries on ritual were made among them. This leaves as the heart of the salt-taboo area western Arizona, southern California, and the Central Valley of California, with some extension of the latter on both sides to the central coast region and the nearer of the Northern Paiute groups.

The taboos, endlessly variable, group into classes according to occasion: Birth; Girls' Puberty; Menstruation; Death and Mourning; Initiation, Boys' Puberty, or Vision Quest. Birth taboos may refer to pregnancy or to postbirth restrictions on the mother, the father, or both. The other classes tend to subdivide analogously. In general, if the salt taboo is rigorous for one occasion, it tends to extend to others which are ritualized. Thus, in the Yuman-Piman area, where War-preparation and Enemy-slayer purification are emphasized, the salt taboo extends to them. Similarly for Initiation in southern California and among the Maidu. On the other hand, the Pomo also initiate, but having no salt taboo for crisis rites, do without it on initiation. Of course the weight of the occasion also counts. If there are frequent but not universal Birth taboos in an area, they are likely to be put more frequently on the nursing mother than on the father. Thus of 23 southern Sierra groups, 16 forbid salt to the mother, only 7 to the father, and these 7 are geographically scattered. The California "semicouvade" is not a "classical" couvade specializing on the father, but has previously been recognized as a joint parental affair, with all or part of the mother's restrictions extended to the father.

Incidentally, this last example illustrates the manner in which a wealth of comparative data on specific items can illuminate problems of cultural process and cultural direction or emphasis. Driver's data relate to 10 Yokuts tribes. All these taboo salt for the mother, except 2 adjacent southerly ones, the Yaudanchi and Paleuyami. For the father, the southern exception grows areally by the addition of the Yauelmani and Wukchamni; but 2 northern tribes, the Chukaimina and Nutunutu, also except him. When it comes to girls' puberty, the Chukaimina and Nutunutu are back among the salt-tabooing tribes, but another northern tribe, the Kocheyali, does not salt-taboo the adolescent girl. For menstruation, only the Chukaimina and lake tribes (Nutunutu, Tachi, Chunut) impose the restriction. At death, the kin mourners abstain from salt among the same 4 tribes and the Choinimni. In summary, we have 2 tribes, the Yaudanchi and Paleuyami, who profess to use no salt taboo in any crisis situation, not even for the mother at birth. We have a larger group--Chukaimina, Nutunutu, Tachi, Chunut--who impose it not only on the mother but also at puberty, menstruation, and death; half of them do and half do not extend it to the father at birth. The remaining 4 tribes--Yauelmani, Wukchamni, Choinimni, Kocheyali--adhere once with one group and then with the other. Apart from the groupings, the relative "strength" of the several occasions, as shown by the number of tribal participations, is: strongest, mother at birth; next, girl's puberty and death; weakest, menstruation and father at birth. It is evident that the preoccupation of Yokuts culture is greater with birth than with maturity or death, greater with the mother than with the father of a child, greater with the adolescent than with the grown woman. There is indication here of what is primary and more stable in the pattern, and what is secondary and more changeable.

If we consider the scattering cases of salt taboo outside the core area (Maidu to Pima), their reference is as follows: Birth (mother, father, both, or pregnancy), 29; Girls' Puberty, 12; Menstruation, 12; Death, 1; Initiation

(really boy's vision quest), 2. Nearly all the lists consider the topics in this order, and it is conceivable that occasional informants or recorders tired under repetition and skimped later cases. But even with some allowance for this possibility, it is evident that in the marginal areas of salt taboo, birth is felt as a definitely important and death as a relatively unimportant occasion for its application. It is also evident that in these marginal areas there is so little difference of emphasis between first menstruation and recurrent menstruation, that, contrary to the Yokuts attitude, adolescence in the girl is scarcely singled out as crucial but rather is considered as already part of her mature functioning.

I have designated the strip from the Maidu to the Pima as the core of the area in which salt taboos are imposed (map 4). Within this core, however, a nucleus is evident where taboos are imposed on additional occasions and where there are some positive ritual associations. This nucleus consists of the southernmost part of the core area: southern California, Yuman tribes, Pima and Papago, and a few Southern Paiute bands under Yuman influence.

All southern California groups taboo salt for the boy who is undergoing his puberty initiation. Most of them, especially the Shoshonean ones, extend the menstruant woman's taboo to her husband. Some of the Yuman groups, but not the Shoshonean ones, impose the taboo either on the burier or on the widow of a dead man.

In the Yuman-Piman area, in western Arizona, we find the following salt taboos:

Pre-war-party fast: Cocopa.
Purification of enemy slayer: Papago, Pima, Maricopa, Cocopa, Mohave, Shivwits Paiute.
Girl's tattooing: Pima, Maricopa, Yavapai, Mohave.
Boys' puberty: Maricopa, Walapai, Cocopa, Akwa'ala, Mexican Diegueño.
Husband of menstruant woman: Maricopa, Yavapai, Walapai, Mohave, Akwa'ala.
Mourners, or the ritual runners in the death commemoration: Maricopa, Yuma, Mohave, Chemehuevi, Akwa'ala, Mexican Diegueño.
A Salt cycle of songs and myth is sung by the Chemehuevi, Shivwits, Mohave, Walapai, Maricopa.[7]

Finally, the Papago practice an elaborate ritualized journey to the sea to get salt. Both Gifford and Drucker obtained accounts of this in their lists, and it appears to be as sacred an affair as the Zuñi expeditions to their salt lake. It may be as old as the Zuñi rite or older. The Zuñi salt lake was visited by other tribes. Gifford mentions the Hopi, Eastern Navaho, and Warm Springs and Huachuca Chiricahua as taking salt from it with a certain amount of ritual. Apparently the Zuñi invested their salt journey with the heaviest elaboration of ceremony, possibly adopting the idea from the Papago journey to the ocean. So far as the other Pueblos and Apache-Navaho ritualized salt expeditions, it seems to have been with reference to the Zuñi holy lake.

DOGS

Several of the twenty blocks of lists are defective on dogs, in that they did not specifically inquire whether the animal was kept at all, whether it was bred or obtained from outside, whether it was housed or otherwise cared for. This is true of the original Yana and Pomo lists; also for the four Great Basin ones which derive from Julian Steward's Nevada Shoshone one. In the former instance the responsibility is mine. Gifford's list was built up from my presurvey one, and I passed upon his additions. Moreover, I was present at the filling of the list from one tribe, the Lake Miwok, and should have observed the gap. This gap is the more unfortunate because the Pomo-Miwok region is an area in which dogs were generally not raised or kept. All I can say is that this is a point at which we slipped into the fault that almost every ethnographer sooner or later commits, but which the lists were designed to prevent: to assume a phenomenon, or its absence, instead of specifically inquiring into its occurrence.

Fortunately there are in all lists some references to the use of dogs, as for hunting, and mentions in the notes, which allow at least approximate conclusions on most matters of interest.

Domestication.--Although it is generally assumed that the dog is man's universal companion and dependent, this is of course not quite accurate. There are dogless tribes in South America; and an area half encircling San Francisco Bay on the north and east has now to be added.

Dogs were not entirely lacking in this region. All the local languages have a word for the animal. But dogs were not kept regularly; they were secured as scattered individuals from outside; they would be bought and would be taken care of as prized pets, somewhat as we keep parrots or monkeys; and they were not used ordinarily for hunting or other useful purpose. The crucial point seems to be that they remained rare enough for a local breed not to develop. The dog therefore was known to these cultures, entered into

[7] Sung by Maricopa old men and women when an enemy was killed or captured. Spier, Yuman Tribes of the Gila River, 268, 1933.

them as an occasional luxury element, but not as a normal feature or with a standardized function.

These are the data:

Mattole: not bred; a few obtained from the north.

Sinkyone: two informants in conflict.

Kato: dogs kept and used in deer hunting; but few, and rarely bred; usually secured from Wailaki to NE.

Lassik: same as Kato; mostly got from Nongatl to N.

Yuki: not remembered whether bred; secured from Wintun.

The three last-mentioned tribes got most of their dogs in trade, regarded them as valuable, and buried them like persons, sometimes with shell money.

Coast Yuki: no dogs.

Sixteen Pomo tribelets: only two admitted using dogs for hunting (Shanel North and Makahmo). These two informants probably were thinking in post-Caucasian terms. It is a full century since the Mexicans began to colonize Pomo habitat. Only four tribelets (Kabedile, Kacha, Icheche, and Makahmo) admitted dogs being named; and this is no evidence of their being common because the Kato, Lassik, and Yuki named their scarce dogs. Kabedile: three informants independently denied dogs were kept. Yokaia: "No dogs anciently."

Lake Miwok: not used in hunting.

River and Hill Patwin: not for hunt, not named, not eaten.

Hill Wintun: no dogs before whites came (but cf. Yuki above).

Northern Yana: dogs rare.

Maidu and Nisenan: Valley Maidu and Mountain Nisenan: no dogs. Foothill Maidu and Nisenan and Southern Nisenan: bought or obtained from elsewhere; belief in stealing pups from a hole while the bitch chases a stone rolled downhill; the Southern Nisenan localize this legend on Mount Diablo. Valley Maidu and three Nisenan groups: dogs not bred.

Plains Miwok: no dogs kept in prewhite days.

Northern Miwok (of Pine Grove and Indian Diggings): same.

The Central and Southern Miwok (and the Northern Miwok of West Point) kept dogs.

This makes a well-defined area, as shown by map 5, in which dogs were either not kept at all or were occasionally imported, kept as pets rather than as hunting aids, and remained so scarce that normally they did not perpetuate themselves by breeding. The groups in this area are the Southern Athabascans, Yuki, Pomo, Patwin, Wintun, Yana, Maidu, Nisenan, Lake, Plains, and Northern Miwok. (The Northern Athabascans, Wintu, Mountain Maidu, and Central Miwok had dogs as with most Indians.)

It must be emphasized that none of the tribes in question were entirely ignorant of dogs. Scatteringly they even imported them, paid for them, named, pampered, and buried them like persons; but always in small numbers. This affect attitude is evidently the correlate of scarcity. Of the two, the scarcity may be assumed as prior. It is indeed conceivable that an interest and concern in dogs might spring up of itself: Linton has given such a case for the Comanche.[8] But it is hardly conceivable that a people having such an interest should then proceed to get rid of all or nearly all their dogs. We must rather conclude that the tribes of this area first lost the habit of keeping dogs,[9] and then sporadically began to reimport individual animals as something curious and interesting. What caused the loss is obscure.

The archaeological evidence corroborates the list survey findings. Heizer and Hewes,[10] in collecting instances of prehistoric ceremonial burial of bears, coyotes, deer, eagles, and other animals in central California, especially in the region of the Sacramento-San Joaquin Delta, point out that there is no record of the discovery of dog bones, either in deposits which appear archaeologically late or those which seem early. This would argue that at least in the region occupied by the historic Plains and Northern Miwok, Nisenan, and Patwin, the absence of regular keeping or breeding of dogs is an old matter.

Heizer and Hewes's data further suggest that while certain of the animals may have been caught for use in ritual, at least some were taken young, reared as pets, and then formally buried when they died, or perhaps, in the case of bears, after having to be killed when they became large and dangerous. These ancient indications of pet keeping, not very frequently but with much fuss when it did happen, fit in exactly with the attitudes of the historic tribes of the region in regard to dogs.

Dogs as food.--In general, dogs were not eaten west of the Rockies. The principal area in which they were regularly used as food centers around the Yokuts of the San Joaquin Valley, with some scattering outliers (map 6).

Dog-eaters were: the Central and Southern Miwok (probably); all the (Western) Mono; all the

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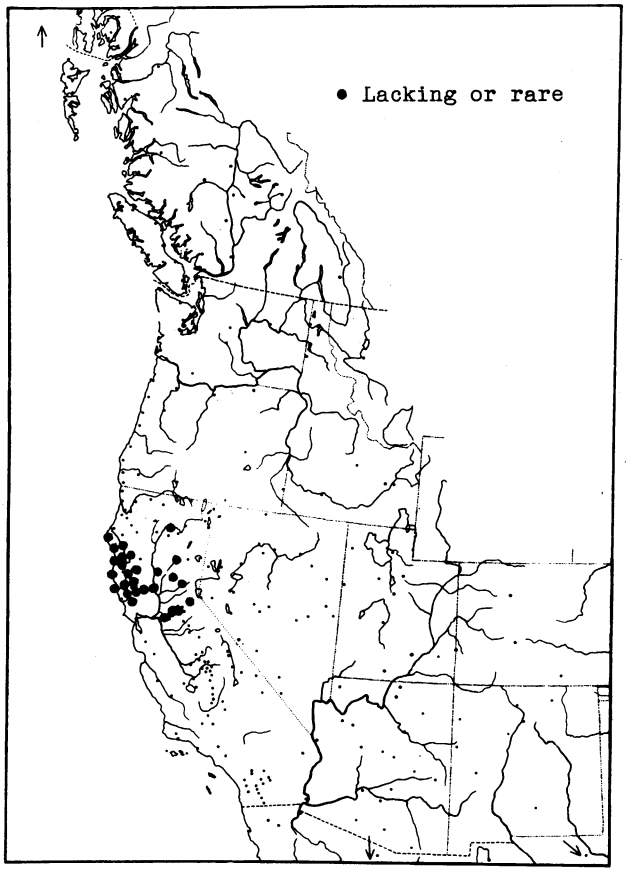
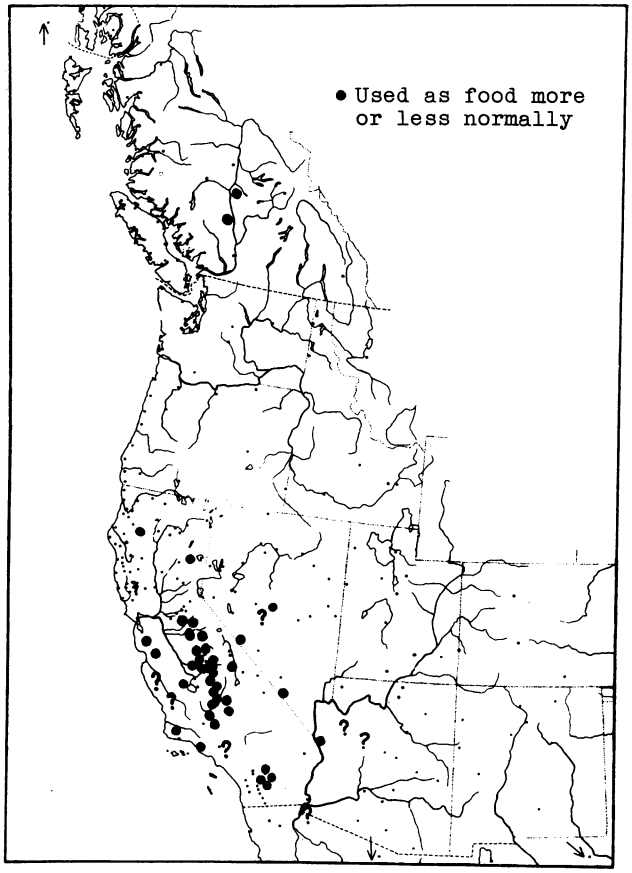
[8] Linton, The Study of Man, 428-429, 1936. The historic Comanche however had another domestic animal: the horse; and Linton's point is that the useful horse was treated as a utilitarian instrument, the useless dog as an object of affect, much as by our Californian tribes.

[9] Theoretically, they might never have had them. This however is extremely improbable because Athabascans, Hokans, and Penutians elsewhere--the overwhelming majority of tribes in these stocks--all kept dogs. It is possible that the linguistically isolated Yuki never had dogs and that from them the other tribes of the region learned to do without. I refrain from developing this hypothesis because it leads into the realm of contingency where evidence fails to equal opinion, at least in the present state of knowledge.

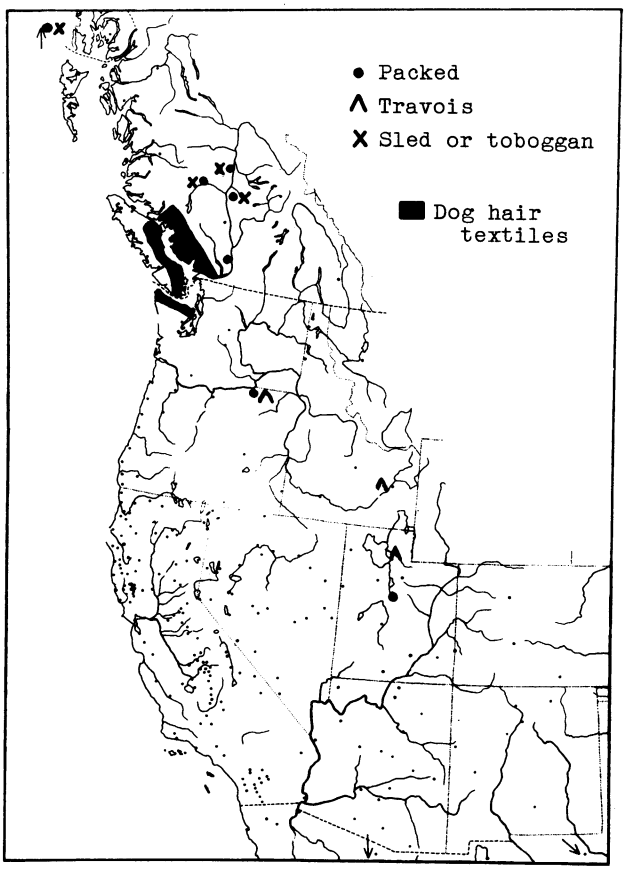
[10] Animal Ceremonialism in Central California in the Light of Archaeology, American Anthropologist 42:587-603, 1940.



Map 5. Dogs absent or scarce.



Map 6. Dogs eaten.



Map 7. Dogs in transport.

Yokuts; the Tübatulabal, Kawaiisu, and Kitanemuk; probably the Owens Valley Paiute (one each of Driver's two and Steward's two informants affirmed); somewhat doubtfully the Gabrielino; the Chumash; probably the Salinans (no data, but inferable from position); and the Costano.

Nearly separated from this area was one to the southeast, in which dogs were eaten by the Pass, Desert, and perhaps Mountain Cahuilla (+:1;-:1); the Mohave; and, with some contradiction in the record, by the Walapai, Yavapai, and Cocopa. The Southern Paiute of Ash Meadows, between the Kawaiisu and Mohave, perhaps preserved continuity. (The list for the other Paiute and Ute divisions appears to have lost the trait through an oversight.)

To the east the Shoshone of Great Smoky Valley and probably of Reese River are credited with dog-eating. J. Steward says of the Shoshone generally that they ate dogs only in famine.

To the north, Voegelin has the Mountain Maidu and the Trinity Wintun, who are not adjacent to each other, eating dogs habitually. In addition, the Eastern Achomawi, the Atsugewi, and the Klamath ate them during famine or epidemic; the latter two tribes saying that they had found dog flesh a cure for epidemics. These occurrences in northeastern California are spotty, with noneating tribes interspersed, as if custom were ambivalent.

Much farther north, among the Fraser Salish, Ray records the Lillooet and probably Shuswap as eating dogs; also the Thompson and Chilcotin in time of famine. The Kutenay and Flathead do not eat dogs, in spite of Plains contacts.

Ceremonial eating of live dogs.--The spirit-possessed dancer who devours dogs is known to the Haida; Tsimshian; mainland Kwakiutl; Bella Coola; Wikeno Kwakiutl; the Squamish, Nanaimo, Cowichan, and Sanetch and Klallam Salish. The record is negative for the Tlingit, Vancouver Island Kwakiutl other than Wikeno, Nutka, Makah, Klahuse, Sechelt, Pentlatch, Comox, Skokomish, and, by inference, for all interior tribes. The solid core of the occurrence is evidently Haida-Tsimshian-mainland Kwakiutl; to the south it is scattering, and rather on the inner coast than fronting the ocean.

In the Northwest again, Barnett records, under Guardian Spirit, "dog-eating power specifically malignant" among Squamish, Nanaimo, and Pentlatch (negatives from Sechelt and Comox). This may be another aspect of the foregoing.

Dogs are occasionally eaten alive by the Zuni Newekwe clowns, but as an incident rather than a standard performance. There may be other Southwestern occurrences; our list contains no ritual items for the Pueblos.

The Kutenay and Flathead have a Crazy-dog Society of Plains type.

Dogs believed poisonous.--The Yurok believe dog flesh to be virulently poisonous. Unfortunately this item did not get incorporated in the list for the area, so its extent in northwest California remains unknown. Barnett encountered the belief only among the Tolowa; the Oregon coast tribes denied it or knew nothing of it. Both Kalapuya informants, the Skokomish, and the Makah are reported +; which however may be an error since the entries for the Chinook, Klallam, and all Northern interior tribes are -. I suspect a confusion between aversion to dog flesh and fear of it. Inasmuch as to the south the Lassik and Yuki deny poisonousness, and from the Shasta east the item does not appear, the Trinity Wintun upstream from the Hupa and Chimariko even eating dogs, it seems that the belief is confined to a few of the most specialized Northwest California tribes. It is in accord with their puritanical temperament and love of precise fears.

Use in transport.--This is rare and peripheral (map 7) in the area covered by the element survey.

Dogs packed: Chilkat Tlingit; Carrier, Chilcotin; Shuswap, Thompson; Umatilla (!); Moanunts Ute. The Uintah Ute say that their shamans used wolves as dogs to pack their medicine bundles.

Dog travois: Umatilla; Bannock; Promontory Point Shoshone. Denied by all Southwestern tribes, including Lipan and both Jicarilla divisions. These distributions suggest that the travois is not old in the Columbia region, coming in only with the horse and then being occasionally applied to the dog by poor people; and that on the other hand if the Plains Apache originally used the dog travois, as is generally assumed, they have had horses so long and in such numbers that the dog travois has become forgotten.

Dog sledge or toboggan: Chilkat Tlingit recently; Carrier, Chilcotin; Shuswap.

Dog wool for textiles.--This is a Coast Salish trait: Klahuse, Homalco, Slaiamun, Sechelt, Squamish, Comox, Pentlatch, Nanaimo, Sanetch; denied by the Cowichan; present among the Klallam according to Gunther. She also adds the Wakashan Makah; but has a denial for the Skokomish. From the Nutka and Kwakiutl north, Drucker has a universal negative; and Ray does not mention the item either for the interior tribes, Salish or other, or for the Chinook (map 7).

Mountain-goat wool is used more widely. Dog wool is therefore probably a substitute or supplement.

Hunting.--As might be expected, the use of dogs for hunting was widespread; but it varied in intensity according to the nature of the game and of the country. In general, free-running animals in open country, like the antelope, were not often hunted with dogs. In the Great Plains, whole herds of buffalo might have been stampeded and lost through dogs being turned on them. On the

whole, the deer is the animal most often hunted with dogs, especially where it can be driven to water; but in parts of the Basin and Southwest it is denied that dogs were used for deer. Mountain sheep and mountain goat can often be successfully distracted, held, or driven past an ambush with dogs. For small game the practice varies.

It will perhaps be most illuminating to cite the tribes which specifically denied all use of dogs for hunting. Question marks express my doubts.

Nutka and Kwakiutl of Vancouver Island, though the list entries are not wholly conclusive.

Klallam (?), Tualatin Kalapuya (?).

Three of 5 Mono groups, 5 of 8 Yokuts, 2 Kern River. This is the heart of the dog-eating area.

Santa Inez Chumash.

Pass and Desert Cahuilla, Mohave, Walapai, Yavapai, Yuma, Cocopa, Akwa'ala, Maricopa, Papago, Yaqui. This is desert country. Unfortunately there is no explicit general negation. One list merely inquires into communal driving with dogs, the other into their use with deer, mountain sheep, and peccary.

Lipan and Llanero Jicarilla (Great Plains habitat); Huachuca Chiricahua (no dogs).

All the Ute and Southern Paiute groups questioned (O. Stewart). This is confirmed by Gifford for the Southern Ute, Drucker for the Shivwits Paiute and Chemehuevi (?), contradicted only by J. Steward for the Ash Meadows Paiute as regards deer alone.

Fort Hall Shoshone and Bannock (Plains influence). Also a few scattered groups of Shoshone: Snake River, Elko, Reese River, Beatty, Death Valley (the last contradicted by Driver). The specific inquiry was as to deer, antelope, mountain sheep; dogs may have been used in these same bands for ground squirrels, ground hogs, and other small game.

Seven of 12 Northern Paiute bands; but again there was no general question and none about small game.

To the foregoing must of course be added the near-dogless region of California, although border tribes within this, like the Lassik and Kato, did sometimes hunt with their occasional dogs.

In general, the two most consistently negative areas for hunting with dogs are the Papago-Yuman-Cahuilla tract of low-lying creosote-bush desert, and the Ute-Southern Paiute region of high semidesert. Between were the Apache, Navaho, and Pueblos, who allege that they hunted with dogs. Is it possible that their habit is due to the early introduction of Spanish dogs and Spanish methods?

Training of hunting dogs is mentioned rather regularly north of the Columbia. The specific practices cited include: wild onion in eyes; trained on deer viscera and urine; nose rubbed on meat which is (then) set out for the crows; nose cut, concoction put in; head painted; sung to; heated deer hoofs rubbed on nose; rolled in fresh bear or beaver skin; mountain goat's forefoot warmed and pressed against pup's feet on four successive days. Obviously the training is sometimes practical, often merely magical. No single practice has a wide distribution, but one or more of them occur among most tribes in the north. South of the Columbia they are scarcely mentioned. I do not think this is due to lack of interest on the part of the southern list collectors. Rather did the northern informants volunteer items on training because their cultures were interested in the training of dogs.

Breeds of native dogs.--This is a matter on which reliable information is obviously difficult to get at this date. Several collectors have made the attempt.

Barnett, Gunther, and Ray inquired as to shaggy and short-haired dogs. The following tribes claim only long-haired dogs: Klahuse, Homalco, Slaiamun, Sechelt, Squamish, Klallam, Thompson, Kalispel, Wenatchi; also Kittitas. This is a Salish array. Short-haired dogs, besides shaggy ones, were affirmed by Comox, Sanetch, Shuswap, Flathead; also Umatilla and Tualatin Kalapuya.

The Santiam Kalapuya specified short erect ears.

"Large" dogs were described by the Kutenay, Carrier, Kalispel, Wenatchi, Kittitas, and Makah. All but the last are more or less in the area of dog transport.

For Northeastern California, Voegelin obtained several descriptions, given in her notes. These summarize thus:

One breed only: Klamath, Modoc, Eastern Achomawi.

Height 12-18 inches, size of fox (or coyote): Klamath, Modoc, Eastern Achomawi, Western Achomawi.

Prick ears: Klamath, Modoc, Atsugewi, Eastern Achomawi, Western Achomawi, McCloud Wintu.

Short hair: Klamath, Modoc, Eastern Achomawi, McCloud Wintu.

Various colors: Klamath, Modoc, Atsugewi.

Long hair also: Atsugewi.

Large dog also: Western Achomawi.

For the Northern Paiute generally, Stewart has the note: "No dogs; only Indian dogs with erect ears."

From the Eastern Navaho Gifford records: "Short-haired type height of fox terrier; long-haired type larger."

It is clear that size as well as coat varied, that some tribes had two or more varieties whereas others had only one, but that all mentions of ears are to the erect form.

Naming.--The giving of names to individual dogs was fairly general, with the possible exception of certain areas to be discussed. Whether

all dogs or only some were named, is less clear. Even in the north-central Californian region where dogs were not bred, the few that were imported were likely to be given names. Harrington cites "special dog names different from human ones" for Costano, Salinan, three Chumash divisions, Kitanemuk, and perhaps Gabrielino.

For three areas, there are no data on naming. On two of these, the northerly Northwest Coast and the Southern California-Yuman-Piman region, the lists were in the hands of Drucker, who evidently omitted the item as unimportant. To judge by the positive returns of Barnett, Ray, and Gunther in adjoining districts, the coastal tribes from the Nutka to the Tlingit probably named their dogs. For the California-Arizona desert area, the probability does not seem quite so stringent; though Harrington's and Gifford's specific positive data from both sides of the area suggest it. All four of the lists from the Shoshonean Great Basin, both Steward's and Stewart's, also contain no reference to naming. Since Steward's Nevada Shoshone list is itemized for detail, and served as a basis for the three others, it can be inferred that dog naming is not characteristic of the Basin, else several of the fifty informants would have been likely to intrude it into the lists by volunteered statements. This conclusion is in line both with the general meagerness of Basin culture, and with the fact that dogs were of little importance there for hunting, food, transport, wool, ritual, or anything else.

Housing.--Some of the lists omit dog shelters as trivial. Others specify kenneling in a hole in the bank, brush shelters, little domes of willow brush or lean-tos of bark, and the like. The distribution of these several types of shelter usually varies locally within any one list; and it is likely that nowhere was any one form of dog-hut standard or constructed for all dogs in the tribe, only proved hunting dogs or special pets being favored. The situation nowhere was like that of the Eskimo, to many of whom the preservation of their dogs is a matter of extreme importance, sometimes even of survival.

Whether dogs were allowed to sleep in the living house no doubt also varied tribally and individually. There is however an area in which it was more or less customary. Driver reports it universally for Northwest California. Here the frame houses were built with an anteroom where firewood was kept dry and the dogs allowed to find shelter. Also, no Northwest California group admitted knowing anything about a dog-hut. To the north, in Oregon and Washington, Barnett, Gunther, and Ray report dogs sleeping in the house only here and there. The tribal scattering suggests nonstandardized practice. In Northeast California, however, E. Voegelin reports 8 groups allowing their dogs in the house, only 4 building a dog-hut. To the south, the Kato, Lassik, Yuki also took their few dogs in at night: they were too valuable to stray away or be stolen. The distribution thus radiates out from a Northwest California center.

Dead dogs.--As among ourselves in the country, the carcasses of Indian dogs were variously got rid of without formality or channeled procedure. Only among the Lassik, Kato, and Yuki, who had so few dogs that they bought, sheltered, and pampered them, do we hear of "burial like persons," sometimes with shell money.[11] The Yurok however were likely to throw them into the Klamath, dog flesh being poisonous enough to contaminate springs, air, and land, and the river too polluted anyway to be fit to drink.

On the death of his owner, a dog might be killed or kept. The lists that inquire into the point show much local variation, which no doubt also represents individual variation in many instances. Driver first turned up a specialty: a dog is hanged by the neck from a tree on his owner's death. This he reports for Yurok, Karok, Hupa, Nongatl, and Sinkyone; the other tribes in the area denied the practice.[12] To the south, the Lassik and Kato knew the custom, and to the east the Western and Eastern Shasta, the Trinity Wintu ("because the dog liked it"), and, at a greater distance, the Mountain Maidu. Twelve of Voegelin's groups answered no to the point. The method is specific, but the distribution shows that the practice is only a "half folkway."[13]

Dog-beating at eclipses.--A more or less world-wide custom is to beat pots and pans and make dogs howl in order to scare away eclipses which are under way. This item was not in our original list; but it soon obtruded in field work, with thunder or lightning sometimes being added to eclipses, or replacing them. On the other hand, the trait did not get into certain lists, or was dropped out by some inquirers. Here is a summary of the available data, ear-pinching or twisting being included with beating:

Kato and Lassik: + (for thunder instead of eclipse); Yuki, -.

NW California: 8, +; 6, - or doubtful, for

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[11] Coast Yuki, and Huchnom also, per Handbook, 216.

[12] However, so did one of his two Yurok and one of his two Karok informants. Whenever adjacent tribes repeatedly vary in this region of small and sessile groups, we may be reasonably sure that the custom was not too rigorously standardized intratribally, and that it varied individually or according to occasion.

[13] The Northwest Californians are not known to hang themselves, one another, or anything else living; but they constantly snare deer with nooses from bent trees, and the Yurok speak of a poacher having been strangled in one of these.

eclipse. For thunder: 3, + (2 of these denying the practice for eclipses).

NE California: 2, + (Eastern Shasta, Atsugewi); 14, -. For thunder, Klamath and Eastern Shasta; to make rain stop, Modoc. All these tribes except the Atsugewi specify that bitches should be made to howl.

NE Shoshone: Lemhi, Promontory Point, Fort Hall Shoshone, Bannock, + (for thunder); 2 Gosiute bands, -.

Southern California, universally denied.

Other California, Great Basin, and Northern areas, no data.

Data that appear and disappear locally like these obviously cannot bear the usual distributional meaning. They are again "semifolkways." They can carry little compulsive force, except for excitable or suggestible individuals. They may be known to only part of each population. If so, it may be argued that a questionnaire got from one individual as representative of his tribe is inappropriate. I agree. Only, it does make very little difference whether the Chilula, whom most ethnologists cannot even place on the map and nearly all nonethnologists have never heard of, do or do not pinch their dogs' ears when the face of the moon begins to be covered up. Any real significance is evidently in a wider distribution. And if in a larger area fifty informants affirm and fifty deny the practice, the distribution of the two answers being randomly scattered, it seems a fair inference that this conflict of opinion means that tribal custom in the area is also conflicting, dubious, ambivalent, or half-hearted. In other words the culture trait is widely spread but not crystallized culturally; it is perhaps only half believed in, or not taken very seriously. At any rate, it is in a state of flux, potentially ready either to acquire significant value or to go entirely out of usage; but perhaps nevertheless remaining for a long time in indecisive status. It is thus that I would interpret distributional data of this order.

I admit that there are many errors in our lists, and on an item of this sort they are likely to be particularly heavy. Informants are mainly reporting hearsay, and some of it may refer to other groups. However, I doubt whether the most painstaking questioning of ten informants per tribe, with indefinite rechecking, would yield materially different results on this point for the area as a whole. What our questionnaire data do show, and show rapidly, on specific items not easily subject to verbal misunderstanding, is which traits are firmly established in the cultures of a region and are of value to them, and which are not and therefore fluctuate in their appearance. Dog-beating at eclipses and thunder is evidently of the latter character, in northern California: it is culturally unimportant; and this seems the most important fact about it.

I have gone into this trivial case because it seems worth demonstrating that judgments as to cultural weight, value, function, and affect, which are sometimes thought to be obtainable only by intensive studies on many individuals in still living cultures, can sometimes also be obtained by a more superficial study of cultures existing chiefly in memory, provided the study is sufficiently extensive--and the investigator of course open-minded to problems.

The portent of dogs speaking.--I have saved to the last an item which illustrates some of the tactical pitfalls of a questionnaire method.

Many years ago, Goddard and I were told by the Hupa and Yurok that they discouraged unnecessary speech to dogs, say of the nature of a conversation, because the dog might answer, and this would be an omen of death or catastrophe.[14] We would all receive such an event with emotional shock, I assume; but a fear-laden imagination seems required to think up the possibility; which thereby attains a certain interest. For this reason, and because of the specificity of the belief, I included it in the first element list; and for brevity's sake gave it a caption or catch-title: "dogs (not) spoken to." This title was intended to be used like "magic flight" in folklore studies. One would not ask a native if his people told a story called magic flight, but would tell him the episode and then ask if he had ever heard anything like it, and from whom. I neglected however to explain to our field workers what the catch-title stood for, or assumed that they knew; instead, most of them took it at face value. Some conscientiously asked their informants, and reported a consistent series of positive answers. (Even a Yurok will not hesitate to call to his dog to come or to leave the house: the precaution is only against inviting him to become human by chatting humanly to him.) Other inquirers dropped the question when they got answers like "Why not?" or "Who would want to talk with a dog?" Still others evidently considered the question meaningless or trivial, and left it out of their lists from the beginning.

Meanwhile however Dr. Erminie Voegelin informed me that the Absentee Shawnee have a somewhat similar belief. It is that "eventually you can teach a dog to speak; they sometimes do; but the moment a dog speaks, it dies." While here it is the dog that is in jeopardy, the belief is evidently related. It contains elements of an animal uttering human speech and the fatality of such an event.

Therewith we are evidently face to face either with a widespread and ancient trait, which, like an old geological formation, crops out only here and there in a continent; or with something comparable to repeatedly intrusive rocks, that is

[14] Goddard, Life and Culture of the Hupa, UC-PAAE 1:6, 1903: "They think it hazardous to talk much to dogs for fear they might reply. This would cause the death of those who hear."

to say, with a feature which independently originates in separate cultures because it expresses certain deep-seated impulses. All such traits are obviously of interest, either historically or scientifically. It is accordingly plain that I erred, not in including this minor element in our lists, but in failing to make it intelligible to all of my collaborators. If the Shawnee have it or a similar element, it might be expected to crop up a few times somewhere between them and the Yurok.

Gifford indeed several times reports on the trait. His caption runs "dogs talked to" (or "not talked to"); and in his notes on the Central Yana, the Icheche Pomo, and on the Southwest generally, he adds: "if the dog replies, the man will die." There is a possibility, however, that some of these supplements may represent answers suggested by an explanation to puzzled informants. The element ought of course to be presented in some such form as: "Did you ever hear that a dog talked?"--thereupon: "What happened then?"--finally the question as to a conversation-taboo being put only if the previous answers were affirmative. Nevertheless, Gifford received one reply which rings wholly spontaneous. A Papago said: "Yes, we do not talk with dogs, because if the dog were to answer we would turn to stone." The petrifaction is an original feature which validates the answer, and we can therefore add at least the Papago to the Shawnee and Yurok-Hupa as possessing the core of the belief.

Technically the fault with my caption was the common one that it tried to combine two traits: the omen if a dog spoke, and the means of avoiding such a possibility. The fault was made worse by the first being the cardinal feature, but the short-hand caption referring to the contingent preventive. It is no wonder that the field workers misunderstood. I trust that we made not too many such misfires on theoretically valid points.

TOBACCO

Several features emerge from the lists as of interest about tobacco. These are: the use and nonuse of the plant and substitutes for it; its cultivation; its consumption other than by smoking, that is, by chewing or eating; and its ritual functions, especially in connection with offerings and shamanistic practices.

Tobacco substitutes.--Dixon[15] has recently shown the likelihood that the "tobacco" grown and chewed with lime by the Haida and Tlingit was not a Nicotiana at all but some entirely different plant. He also doubts that true tobacco was used anywhere on the coast as far south as Puget Sound.

The lists show the following. Drucker: no smoking or pipes in pre-European native culture on the coast from Tlingit to Nutka. On the Gulf of Georgia, Barnett reports no tobacco smoking anywhere; yew or arbutus leaves were smoked in pipes by the Comox, Pentlatch, Cowichan, and Sechelt; the remaining tribes denied this or gave no answer. For the Skokomish, Klallam, and Makah, Gunther says that yew, arbutus, or salal was smoked in pipes. The Klallam and Makah affirmed that tobacco was introduced by the white people; for the Klallam, Gunther doubts this. The Kalapuya affirmed the smoking of tobacco, of kinnikinnick, and of yew, laurel, oak, and other leaves. In the interior, Ray received unqualified affirmations of the smoking of "true tobacco" only from the Kutenay, Flathead, Lillooet, Sanpoil, and Kittitas; his positive entries from the Shuswap, Thompson, and Wenatchi are queried or modified by parentheses. All 17 tribes, except the Chinook, however, smoked kinnikinnick; that is, bearberry, Arctostaphylos uva-ursi; though the term may include other plants also.[16] All those that used tobacco mixed it regularly with kinnikinnick.

On the face of the returns this makes a large northwestern area extending south to and beyond the Columbia and east to the Rockies, in most of which smoking was affirmed but tobacco was denied. Technically, the British Columbia coast proper is not included in this area; but the Tlingit, Haida, and Tsimshian had a tobacco substitute, though they chewed it; and as for the Kwakiutl and Nutka, Drucker's list inquired only whether tobacco was smoked, not as to the presence of an equivalent for smoking. In the southeast corner of the area

[15] Tobacco Chewing on the Northwest Coast, AA 35:146-150, 1933. But Heizer, The Botanical Identification of N W Coast Tobacco, in AA 42:704-706, 1940, cites Eastwood, Leaflets of W Botany, 2:No. 6, to the contrary: the Haida plant was a tobacco.

[16] The following supplements are from V. Ray and E. Gunther, of the University of Washington. Ray: In the Northwest interior bearberry is the usual tobacco substitute or admixture. The colloquial "kinnikinnick" may not always refer to bearberry, but certainly does so in most instances. Willow bark is unquestionably rarely used, if at all. The statement (UW-PA 7:122, 1938) that the Lower Chinook used bearberry leaves "as tobacco or mixed with tobacco" is based on Lewis and Clark, and on Swan.--Gunther: Yew (Taxus) needles smoked by Swinomish and Samish. Dogwood (Cornus) leaves smoked by Quileute (Reagan, Trans. Kansas Acad. Sci. 37, 1934). Salal (Gaultheria) leaves smoked mixed with bearberry by Makah; in lieu of bearberry by Quileute (Reagan). Madroña (Arbutus) leaves smoked by Quileute (Reagan). Kinnikinnick, viz. bearberry (Arctostaphylos) leaves, smoked by Quileute and Hoh (Reagan); by Makah; by Squaxsin.

the Flathead and Kutenay were buffalo hunters with tepees and would easily derive tobacco habits from the Plains tribes.

The lists however make nontobacco smoking more universal than do the scattered references in the older literature. The type specimen of Nicotiana multivalvis (the species grown by the Crow but not by the Mandan-Hidatsa) was collected by D. Douglas[17] in 1825 from a Chinook or Kalapuya plantation between Vancouver on the Columbia and Oregon City on the Willamette. Teit[18] has the Thompson and Shuswap not only using but growing a tobacco, seed from which yielded N. attenuata.[19] It therefore seems that we must modify the stark limits of our northwestern nontobacco-smoking area by admitting a southern and eastern fringe of dry country in which true tobacco, locally grown or imported from neighbors, was smoked alongside tobacco equivalents.

Nevertheless it remains evident that smoking and pipes had an aboriginal range (map 8) extending considerably farther northwest than the range of the tobacco plant. This fact can hardly be construed other than as meaning that the idea and habit of smoking spread farther from the south than tobacco itself. Historically the function outtraveled the plant, so to speak. Another inference is that the occurrence of pipes in this area may not be interpreted as evidence of knowledge of tobacco.

The smoking of vegetal substances in place of tobacco is evidently related to the admixture of bark or leaves with tobacco. The one practice employs a surrogate, the other a dilution. Either usage might logically be derived from the other. On the whole their ranges also adjoin. The Plains and the Great Basin pretty uniformly mix some kind of bark or leaves with their tobacco.[20] In the Southwest[21] and especially California the practice is definitely less common. Some tribes here use their tobacco straight;[22] others mix in curious substances, like pine nuts,[23] or angelica-root incense.[24] As regards admixture in general, the original purpose may have been to weaken rank and heady tobacco or to eke out a scant supply; once the latter practice became a habit, the toned-down taste may also have become preferred.

Tobacco cultivation.--It has long been known that tobacco was grown here and there in non-agricultural regions: in northern California, among the Thompson, the Crow in the Plains, not to mention the Haida and Tlingit who certainly planted something that was used like tobacco. It is however surprising how many tribes prove to have followed the practice. They occupied three or four areas (map 9), which apparently represent as many more or less separate historic developments.

1. NORTHWEST COAST. The Haida and Tlingit planted; the product, for chewing, was traded also to the Tsimshian. The Salish, Kwakiutl, and Nootka to the south neither chewed nor had tobacco.

2. NORTHERN INTERIOR. Inland, according to the lists, only the Kutenay planted. Teit adds the near-by Thompson and Shuswap,[25] though Ray's list-informants from these tribes gave denials, possibly because an additional thirty to forty years have elapsed since the practice was discontinued.

3. OREGON-CALIFORNIA. A long irregular area of planting stretches southeastward from the Oregon coast to south-central California. Planting groups are: the Tillamook, Alsea, Siuslaw, and the Sixes River, Tututni, Galice Creek, and Chetco Athabascans; the Tolowa, Yurok, Wiyot, Chilula, Hupa, Nongatl, Sinkyone, Lassik, Chimariko, Karok; the Shasta, Trinity and Sacramento Wintu, Achomawi, Mountain and Foothill Maidu, Mountain, Foothill, and Southern Nisenan; most the Plains and Sierra Miwok (probably);[26] the Hodogida and Entimbich Mono, Choinimni and Paleuyami Yokuts, Bankalachi, Kawaiisu, and Koso Panamint or Shoshone.

The limits of this area are defined by the following tribes who specifically denied any planting or sowing: Lower Chinook, Kalapuya,

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[17] Journal kept by, publ. 1914; cited by W. A. Setchell, Aboriginal Tobaccos, AA 23:409, 1921, and quoted in full and discussed by J. P. Harrington, Tobacco Among the Karok, BAE-B 94:19-21, 1932.

[18] AMNH-M 2:300, 1900, 4:575, 1909. (Also listed respectively as Anthr. Mem., v. 1, and Jesup Exped. Mem., v. 2.)

[19] Setchell, work just cited, 411.

[20] Of 50 Great Basin Shoshonean lists, about 40 affirm admixture.

[21] Leaves generally replace bark among Pueblos and Apache.

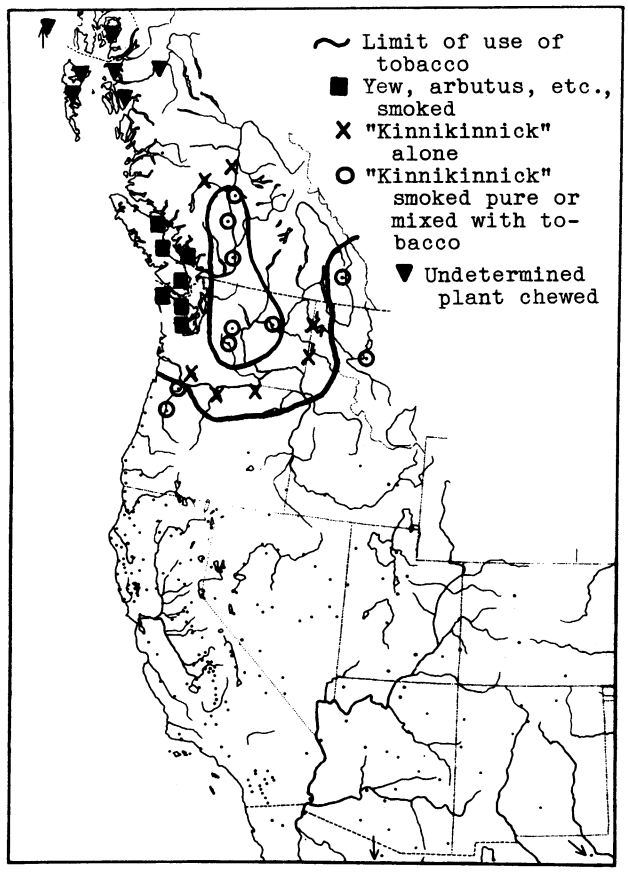
[22] Wintun, Maidu, Nisenan, Southern Athabascans, Costano, Salinan, Chumash, Yuma, Chemehuevi in California. Bark as admixture is specifically mentioned as denied by all informants by Voegelin (NE Calif.), Driver (S Sierra), and Harrington (C Calif. Coast); it is not mentioned by Barnett (Oregon Coast), Driver (NW Calif.), Gifford (Pomo, Yana), Aginsky (Miwok), Drucker (S Calif.).

[23] Some Kern River and Yokuts groups.

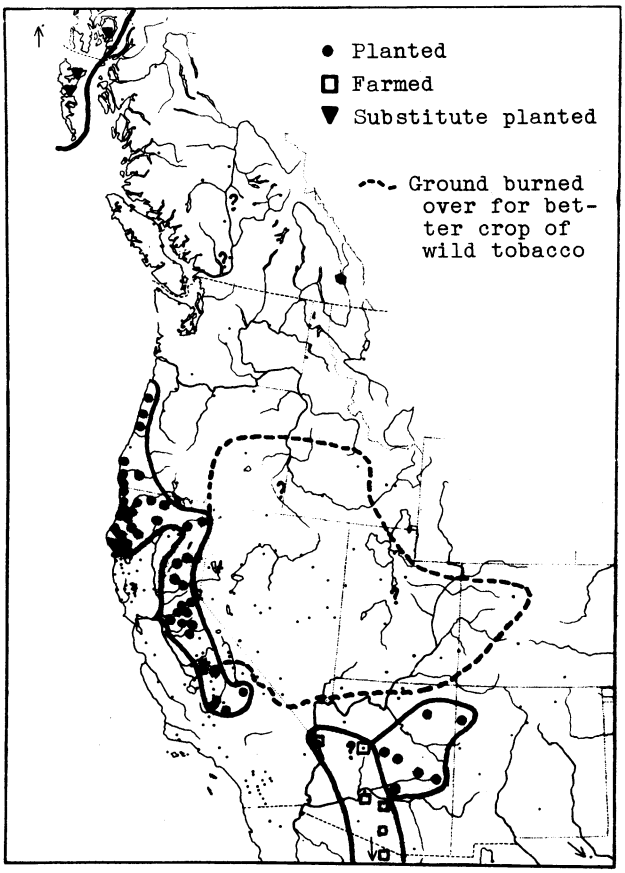
[24] NW California.

[25] As cited in note 18.

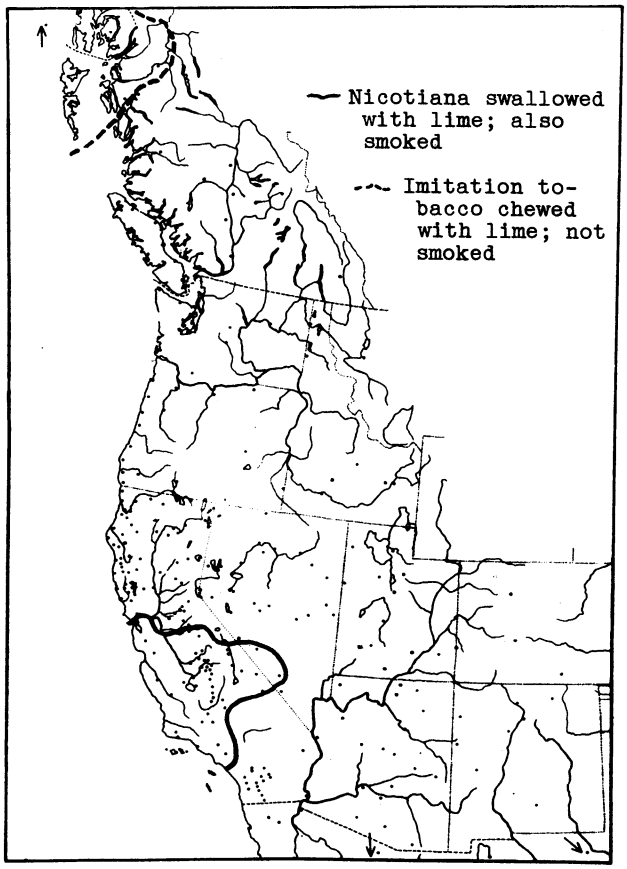
[26] The presentation seems contradictory: element 1197, tobacco gathered wild only, followed by + for all groups; 1200, field burned over in winter, + for all groups; 1200a, seeds scattered in spring, + for 7 Miwok groups, - for Ahwahnee Miwok and for 4 Yokuts and Mono groups; universal negatives: planting, pruning, thinning, weeding. Aginsky evidently understood by "planting" something like formal agriculture; the sowing of seeds in a prepared field he construed as gathering because the tobacco was one that grows spontaneously, perhaps also because the ground was not turned. The "gathered wild only" (sic) is taken over from the earlier list of Driver, who however specifically makes this item and "1198, planted, sowed" mutually exclusive.



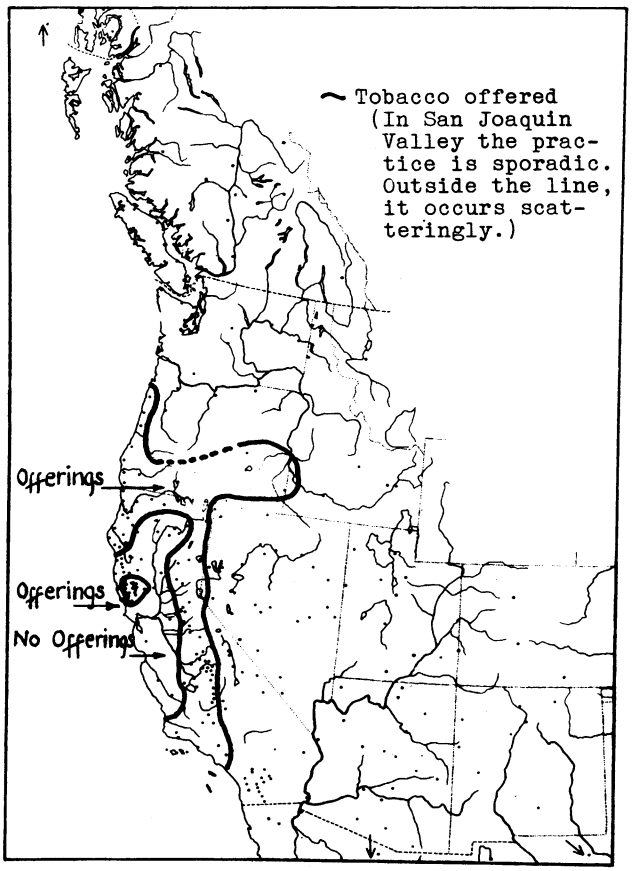
Map 8. Tobacco and substitutes.



Map 9. Tobacco planting.



Map 10. Tobacco chewed or eaten with lime.



Map 11. Tobacco offerings. (The material, not merely smoke.)

Tenino, Klamath, Modoc,[27] all the Northern Paiute, Washo, Owens Valley Paiute, Death and Saline Valley Shoshone (Panamint), Serrano, Cahuilla, Kitanemuk, Gabrielino, Fernandeño, Chumash, Salinan, Costano, Lake Miwok, Hill and Valley Patwin, Valley Maidu, Yana, Atsugewi, McCloud Wintu, Wintun, all Pomo groups, Coast Yuki, Yuki, Kato, Wailaki, Mattole.

It will be noted that all of the planting tribes of this area are nonagricultural. Also, there is almost no mention of turning or breaking the ground,[28] though the digging stick was used for bulb gathering by all tribes in question. The seeds are simply scattered in the ashes. Locally there may be a bit of makeshift fencing, thinning, transplanting, pruning, or "nursing" of plants, or even a little hand-irrigating with a basket. In short, besides deliberate sowing there is interest and care for the crop, but none of the heavy labor of agriculture.

On the whole, the process seems most elaborately carried out in northwest California and perhaps Oregon. Here too the ranks of the planting tribes are unbroken. Eastward and southward there are local defections among the Wintu, the Maidu, and the Miwok; until among the Mono only 2 out of 5 local groups averred that they sowed, among the Yokuts 2 out of 10, among the Panamint 1 out of 3. One cannot be sure, in this marginal and interdigitated area, how far informants' "yeses" and "nos" represent individual fluctuations in their recollections or temporary and local variations of usage among small groups, connected perhaps with possession or lack of ample patches of wild tobacco. Nor does it much matter, on a wider view: it is clear that the hold of the planting habit was tenuous in the south, consistent and firm in the north.

Another fact points to this. The Hupa, Yurok, and Karok[29] will smoke only cultivated tobacco; the wild is regarded as poisonous or at least dangerous; it is associated with waste places, graveyards, and death. None of the lists unfortunately deal with this attitude; it is my fault that the specific item was not included. It is inferable that the abstention extends beyond the three "classic" northwest California tribes to all in that area; because all that sowed denied to Driver that they either gathered or imported tobacco; these practices appear only with the nonplanting Mattole, Kato, and Coast Yuki. To the north, in Oregon, Barnett's list did not inquire as to wild tobacco. In Voegelin's Northeast California lists, the westerly Shasta, adjoining the typically northwestern Karok, plant but do not gather; the easterly do both; which suggests that with them we have passed beyond the range of the poison-ban. The farther northeastern tribes, it is true, all affirmed either planting or wild gathering, never both; but they evidently each made its choice according to opportunity, provincial custom, or mode; and the same farther south. The taboo on wild tobacco thus appears localized in northwest California plus possibly the Oregon coast. Therewith the focus of the planting habit is further anchored to the same region, since it is evident that a fear-taboo of the wild plant could hardly arise until domestication was pretty firmly established.

This inference leads to another one: the accentuation of planting is most marked at that end of the planting area which is farthest removed from the region of agriculture to the south. Therewith any direct relation of Californian tobacco planting with Southwestern food farming is weakened. I would not say that all historic connection is ruled out. There may conceivably have been stimulus or idea diffusion; but beyond that, the California tobacco planting development evidently followed its own lines independently. Nor would I guess that the place of origin was northwest California; it is clear only that there the custom had got the heaviest hold on attitudes--was adhered to incisively and with ramifications into other spheres of culture.

In fact, there is another practice, spread through the Great Basin to the east, which may bear on the origin of California planting. This is the custom of burning patches of brush to help the springing up of wild tobacco next year. This is reported, in the lists, by the Washo; by 12 out of 15 Northern Paiute groups; by 15 Nevada Shoshone, 2 Gosiute, 4 Southern Paiute, without exceptions; by 2 of 4 Northern Shoshone, and 4 of 8 Ute groups; and is denied by the Bannock.[30]

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[27] A borderline case: there is no sowing, but a log is burned to increase next year's volunteer crop of tobacco. The Western Achomawi are one step nearer planting: a brushy place is burned over to improve seed gathering. Next summer, tobacco is likely to have sprung up also. The pods are rubbed between the hands, the seeds sprinkled into the ashes, and these are kicked around. Next year, and for one or two more, tobacco leaves are picked. While this makes the whole process incidental to food-seed gathering, it is also true planting in that there is deliberate even though rude sowing.

[28] Driver mentions cultivation with the digging stick by the Wiyot and Sinkyone, Voegelin by the Foothill and Southern Nisenan.

[29] Goddard, Life and Culture of the Hupa, UC-PAAE 1:37, 1903; Kroeber, Handbook, p. 88; Harrington, Tobacco Among the Karok, BAE-B 94: 78-79, 1932.

[30] Two list affirmations of planting in this eastern Basin region seem to be individual reflections of Plains practices. A Uintah Ute who had lived with the Pine Ridge Dakota gave such an account. Another Uintah denied planting. A Lemhi Shoshone, who had visited many tribes, planted tobacco near Yellowstone, but as a poor crop "brought on his death" the practice did not become tribal.

The denials are chiefly along the eastern edge of the Shoshonean area. The bulk of the Basin and the part nearer California burns almost solidly. There is no reference to sowing or tending; all the references are specifically to wild tobacco; it is merely recognized that this grows more abundantly after a fire, so fires are set. The practice is obviously part of the widespread one, followed also in most of California, of setting fires to promote the yield of food seeds: brush is destroyed, annuals thrive for a year or two.[31] Here then we have a custom which may have played a part in the development of the California sowing practice. All that was essentially needed to complete the development was the added deliberate sprinkling of seeds, instead of leaving this to the accidents of nature.[32] However, this addition might well have represented a long step, a difficult innovation--not indeed as we look back upon it from farming habits that have become taken for granted, but from the point of view of accustomed attitudes and established motor habits in nonfarming cultures. Therefore it remains at least possible that the impetus to make the innovating addition did come from some knowledge of food farming elsewhere.

4. SOUTHWEST. Finally we have tobacco growing in the area of agriculture. Here we must distinguish three types of practice:

(a). Wild tobacco was smoked by all Southwestern tribes. Some used only the wild. These are the Yuma, Cocopa, Walapai; westerly Navaho; Chiricahua, Mescalero, Jicarilla, and Lipan Apache; Zuni, Santa Ana, and San Ildefonso Pueblos; besides the nonfarming southern California Yumans and Shoshoneans.

(b). Certain tribes "planted" wild tobacco in the open country; that is, sprinkled its seeds where it volunteered, and nowhere else. These were the easterly Navaho ("where the seeds were found"), the Walpi Hopi ("wild seeds scattered in autumn"), 5 Western Apache groups ("where it grew, not on the farm").

(c). True farming, like that of corn, was limited to a few groups: the Mohave, Maricopa, Northeastern Yavapai, Pima, Papago; plus the Yaqui. The Mohave, Pima, and Yaqui planted in wetted-down "basins"; the Papago in "pits" in sand tanks, as for dry-season maize.[33] The Yaqui further transplanted. Here we evidently have a Pima-Papago or Sonoran type which has spread to a few adjacent Yumans: the tobacco is fully integrated into agricultural practices; it is completely farmed. However, all these tribes sometimes used wholly wild tobacco also. The Papago distinguished the two kinds and preferred the domesticated.

Origins of cultivation.--What is most interesting in this Southwestern region of agriculture is that, except in the vicinity of the Gila, tobacco was treated as a nonagricultural plant, and was either left wholly to nature to provide or was given the makeshift assistance provided by some of the California nonfarming groups. As regards tobacco, and tobacco alone, a Zuni had the attitude that we might expect from a Hupa or Karok, these the attitude expectable in a Zuni. The inevitable question arises, what, if anything, has tobacco to do with native American agriculture, either historically or functionally, in its associations?

To a degree this problem has been recognized heretofore, in the tobacco-planting addiction of the buffalo-hunting Crow, and in the Haida-Tlingit planting. But the mass of wider data now available through the element survey poses the question more sharply and insistently.

If we are to think at all of tobacco growing being historically associated with native food farming, the one patent linkage on United States soil is in the Gila area, among the Pima-Papago. Now these people are nothing but the northern frontiersmen, best preserved through recent historical events such as the Mexican War and Gadsden Purchase, of a large group or nationality that extended far into Sonora or beyond it. Here, in northwest Mexico, if our American Pima and Papago are fair representatives--and Drucker's Yaqui data suggest it--the association of tobacco with agriculture seems to have been a fact. And from here may have radiated two streams of influence: one to the Pueblos and Apaches, who took over tobacco usage without its farming associations; the other to California, where some idea of sowing penetrated and was retained. We are here entering the possibility of a chain of hypotheses which I prefer explicitly not to develop. It does appear to be sound to believe that if North American tobacco growing is to be derived from general agriculture, the association can only be worked out with reference to the Gila-Sonora region, or Mexico beyond it, as the critical area.

Chewing and eating.--The chewing or eating of tobacco was practiced, as has long been known, in two separate areas: part of the Northwest Coast, and central California (map 10). In both, tobacco or a substitute was mixed for chewing with burnt-shell lime. The two areas differ in that for the Northwest Coast it appears that the plant used was not tobacco, the mixture was chewed, and smoking was unknown. In California, true tobacco was

[31] For the Northern Paiute, O. Stewart directly associates burning for food seeds with burning for tobacco, but has burning for seeds affirmed by 4 fewer groups. The 50 Basin Shoshonean groups all smoked tobacco, by the way.

[32] That in timbered northern California and Oregon the burning usually centered around a log or stump instead of extending over a field is natural enough.

[33] The Yavapai, who are the only nonfarming or scantily farming tribe of the six, sowed broadcast "in ashes," which suggests type (b) rather than true farm-planting.

employed, it was eaten rather than chewed, and smoking was in vogue alongside of eating. The principal facts follow:

According to Drucker's list and notes, the Northwest Coast plant was probably not tobacco, is said by the Indians not to grow wild, and is therefore no longer determinable. It was chewed, by both men and women, among the Haida, Tlingit, and Tsimshian-Gitskyan. The Tsimshian traded it from the Tlingit and Haida. These two groups grew it; but the Tlingit imported Haida seed. The "tobacco" was ground in a mortar and mixed with burned shell. The Chilkat sometimes substituted ashes; the southern Tlingit, crabapple leaves; the Gitskyan, dried salmon eggs. Among all Kwakiutl, Bella Coola, and Nutka divisions the chewing habit did not obtain. The Skidegate Haida informant affirmed that the cultivated "tobacco" was also smoked; the China Hat Kwakiutl one, that yew leaves were smoked in wooden tubes. Drucker doubts both statements; but in view of yew being smoked by some of the Gulf of Georgia Salish, the Kwakiutl statement may be correct.

In California, eating with lime was practiced by all groups reported on by Harrington and Driver, namely the Costano, Salinan, Chumash, Fernandeño-Gabrielino on the coast, the Mono, Yokuts, Tübatulabal, Kawaiisu, Kitanemuk, Owens Valley Paiute, and Panamint-Shoshone in the interior. J. Steward confirms for Owens Valley and the Shoshone of Death Valley, and adds the Shoshone of near-by Beatty and Lida. Aginsky adds two local groups of Miwok. This makes a solid block of tribes from the Sierra Nevada to the sea and from San Francisco and Merced River on the northwest to Los Angeles, Tehachapi, and Death Valley on the southeast. Outside this area, the practice is consistently denied: as by the Pomo, Maidu-Nisenan, Northern Paiute, Shoshone (except the southern bands mentioned), Southern Paiute, Serrano, Cahuilla, and other southern Californians.

The only denial within the area is by the Bankalachi Tübatulabal, probably an error of memory; and for the San Joaquin Mono at Auberry. Aginsky gives the following distribution along the northern border. Chukchansi Yokuts, tobacco eaten "with shell" and also unmixed. San Joaquin Yokuts now at Friant, eaten unmixed. Northfork Mono, eaten with lime. Southern Miwok of Ahwahnee, same as Chukchansi. Southern Miwok of Groveland, tobacco eaten unmixed. Six groups of Central, Northern, and Plains Miwok, all eating denied, or not reacted to. This would affiliate the Southern Miwok with the eaters, all the other Miwok with the noneaters.

To the rule that the eating tribes also smoked, there is no significant exception.

Some accounts from the notes follow:

Aginsky, Southern Miwok of Ahwahnee. Tobacco ground in a special mortar. Shells from San Joaquin Valley burned until soft, ground with the tobacco, water added, the mixture dried till hard and kept. A sickish person might grind and dissolve and eat a piece. Usually four or five men and women gathered in evening, prepared sufficient mixture, and tasted it by licking off a partly immersed round-ended cylindrical stone. Some vomited from this, others only hiccoughed. Then host covered whole stone by dipping and smearing with fingers, licked it off, repeating as often as he wished, and went off to vomit; the rest followed; then all went home to sleep. A nightly practice by some.--This accords excellently with Garcés's account of 1776 for the Kitanemuk.

Driver, Mono, Yokuts, etc., generally. Lime from burned fresh-water mussel; mixed in tobacco mortar; taken to feel good; also at vision quest. Among 2 Owens Valley Paiute and 3 Panamint Shoshone groups, women chewed without swallowing; men not mentioned.

J. Steward, 2 Owens Valley groups and 3 Shoshone (Death Valley, Beatty, Lida). Practice called chewing; eating not mentioned; primarily women chew. Admixture: lime (1 inft.: burned shell), burned rock (limestone ?), or wood ash. (Shells are scarce in this desert tract.)

It appears from the preceding two accounts that in the small extension district east of the Sierra Nevada the practice was usual only among women and was weakened from swallowing to chewing; men seem to have smoked in this subarea, except when they specifically wanted an emetic.

Historic relations of chewing.--Are the Northwest and California customs connected historically? The question must be left open. Connection can certainly not be proved at present. The geographical gap is great--half the length of California, Oregon, Washington, most of British Columbia. The practices are really far from alike: tobacco as against an unknown plant, swallowing as against chewing, smoking also present as against absent. The common elements are only three: sowing of a plant, mixing with lime, and taking into the mouth.

In this connection, it must be remembered that the California areas of planting and eating overlap but do not coincide. All the northern planting tribes--in a full half of the area--did not chew. Of the chewing tribes, none of the coastal ones planted.

If we knew more about the process of cultural loss, the abandonment of arts and customs--an event that appears to have occurred thousands of times in history, and usually silently--we might formulate an answer to the problem of connection of Northwest and California. Planting, eating, and smoking are associated in the San Joaquin Valley. If we are ready to assume these as having once been an actual, historical, functioning unit, two of the elements--planting and smoking--carry us to the Columbia, and one--smoking, of yew and arbutus in a tobaccoless region--extends to the northern Salish, leaving only modern Kwakiutl territory to be crossed before the planting-chewing tribes of the north are reached. With a few

minor tribal shifts invoked during a thousand years, we have complete connection established. The trouble is that we have made two assumptions: first, of a one-time unit complex; and second, of a series of varying partial losses. As against this, the explanation of separate origins makes only one assumption: that of the abundantly documented strength and variety of the cultural impulses toward experimentation, innovation, and fashion change. In the present case, as in so many others, we are simply left helpless in the choice between the alternatives.

Ritual use of tobacco.--The ceremonial use of tobacco was widespread in North America, and of course found expression in many connections. For our western area, two points only will be examined: the use of tobacco as an offering, and shamanistic associations. Offerings and shamanism are universal in the area; particular rituals are likely to be local, so that an association or nonassociation of tobacco with the former is likely to be more significant than with the latter.

Offerings.--There are two principal forms in which tobacco can be offered: either the material itself or the smoke.

Anyone who has dealt with the northwest Californians must have been impressed by the frequency with which they offer tobacco to the kihunnai, woge, or ikhareya spirits. A pinch is tossed into the air, or blown off the palm, with appropriate words of gift and request. Harrington has pointed out how with characteristic stinginess the Karok generally give the spirits crumbled tobacco stalks but smoke the leaves themselves.

Driver's lists add to the three classic tribes the Wiyot and Tolowa as blowing or throwing tobacco; also the Kato; and the Chimariko, Nongatl, and Sinkyone as making offerings other than by smoke. Putting of tobacco into the fire he records for the Tolowa, Yurok, Hupa; and at a distance the Kato; the other tribes denied this.

To the north, on the Oregon coast, Barnett found all tribes making offerings by tossing into the air.

To the south, Essene did not inquire into the element among Lassik and Yuki. Gifford got 9 cases of tobacco offering among 16 Pomo groups; also Lake Miwok and Hill Patwin.[34] Six Pomo groups specify burning; a seventh, Yokaia, the most northerly, threw it about.

To the east, offering tribes are: Shasta, Modoc, Atsugewi, Eastern Achomawi, Mountain and Foothill Maidu and Nisenan. O. Stewart confirms the Eastern Achomawi and adds the Washo. The Wintu, Wintun, Valley Patwin and Maidu, and Yana did not offer.

Aginsky reports offerings only from 2 Northern Miwok groups, and from the San Joaquin Yokuts; Driver positively only from the Tachi, Choinimni, Kocheyali, Paleuyami, and Bankalachi, with contradictory statements (elements 1212, 2297) from 7 other Yokuts and Shoshonean groups. Harrington adds Iñezeño, Barbareño, and Ventureño Chumash, Kitanemuk, and Gabrielino.

Drucker does not have the element except as "offering for hunting luck" (no. 1972), with affirmatives limited to Cahuilla (3 groups) and Chemehuevi. His Yuman-Piman lists also do not contain the abstract element. There are the following: 2008, preserved scalp fed tobacco and meal, Papago; 2544, mourning-ceremony ramada has tobacco offering put in post-holes, Akwa'ala; 3233, food, tobacco, or arrows put on trailside offering places, Pima, Papago, Mohave. This is an area of smoke rather than tobacco being offered. The same holds for the Apache and Pueblo for whom Gifford's lists are silent on the point. Throughout the Basin, too, offerings are reported very sporadically: one Southern Ute group; the San Juan Navaho; the Ash Meadows Southern Paiute and Beatty Shoshone, both close to California; and three Northern Paiute bands, one near Winnemucca, Nevada, and two in Oregon, on Malheur and Owyhee rivers.

To sum up, the ritual offering of tobacco as a substance crops up sporadically almost anywhere, but is definitely rare except in one area which stretches from the Oregon coast to Los Angeles (map 11). This is also the area of tobacco planting by nonfarming tribes; or, more exactly, this plus most of the additional territory in which tobacco was eaten. Moreover, the region in which offerings are most abundantly mentioned, and in which the manipulation of blowing or tossing into the air is specified, namely northwest California and the Oregon coast, is also the region in which all local groups plant and sometimes tend their crop with definite care. Where the planting habit has a more tenuous hold as shown by local practice varying, as along the flank of the Sierra Nevada, the offering habit has an equally variable occurrence and hold. The immediate Sacramento Valley neither plants nor offers. We are therefore justified in construing the two practices as linked functionally and historically. The patterns for both are either decisive and specific, or informal and unreinforced by much emotional sanction, or limited and rare in their application, or totally absent, in very nearly the same array of societies.

It is not difficult to see the common factor in attitude where the double pattern is strong. Tobacco is obtained in a special and formal way, it is offered in a special and formal way, it is prescribed to be smoked in almost every formalized, elaborate religious activity.

[34] This is not a scattering distribution: the northern and coastal Pomo do not offer, the central, southern, and eastern do, and the Lake Miwok and Hill Patwin adjoin these. However, the Kato are now left isolated and under a bit of suspicion.

Tobacco in shamanism.--A strong and widespread association of tobacco-smoking with shamanism is evident in the lists. It is virtually universal south and east of the Columbia.[35] North of that stream, in the interior, the practice extends as far as the upper Fraser. Among tribes here that had no tobacco, the shamans smoked kinnikinnick; thus the Klikitat, Tenino, Umatilla, Kalispel, Coeur d'Alene.[36]

In general, the list entry is simply: "shaman smokes," the context indicating that he smoked while acting as shaman, not merely that shamans as well as laymen smoked. As no further items are added in any northern list, it can be assumed that the doctor smoked during a cure, or in preparation for it, to strengthen his power.

In the San Joaquin Valley, Driver and Aginsky have the entry "doctor blows tobacco smoke." The occurrences are: Plains Miwok; 1 of 4 Northern Miwok groups, 1 of 2 Southern; Auberry and Woponuch Mono; Chukchansi, San Joaquin, Nutunutu, Yaudanchi, Yauelmani, Paleuyami (6 out of 12 Yokuts bands); Bankalachi; Owens Valley Paiute of Independence and Bishop (Steward does not have the entry in his lists for Owens Valley). This is definitely scattering; but it must be admitted that the item is vague: one can hardly smoke without blowing smoke.

In southern California, the custom of the doctor's blowing smoke specifically over the patient appears. Two Mountain Diegueño groups denied the practice. All other informants in southern California affirmed it. So do the Chemehuevi and Yuma. In Drucker's Arizona list, the item is multiple: "sucking doctor blows smoke on patient"; "curing by exorcising: smokes over patient"; "general doctor smokes to diagnose"; "blows smoke over patient." Every tribe in the area admitted one or several of these. They are the Mexican Diegueño, Akwa'ala, Cocopa, Mohave, Walapai, Yavapai, Maricopa, Pima, Papago, Yaqui; also the Shivwits Paiute. What varies is the purpose of the smoke-blowing, or the stage of treatment at which it is introduced.

This means that curing by smoke blowing is standard practice among the southern California Shoshoneans, all Yumans, a few Southern Paiute bands adjacent to the Yumans, the Piman-Sonoran peoples. This is also more or less the area in which blowing of breath or saliva on the patient has previously been reported. The basis of the pattern evidently is blowing as such; tobacco smoke was presumably included secondarily, smoking being already a part of shamanistic performance.[37]

With Gifford's Apache-Pueblo list the shaman's smoke-blowing on the patient drops out, not through oversight, since his note 2907 mentions it for the Papago, but evidently because the Athabascans did not have the practice. Instead there appears "tobacco in shaman's equipment." This was affirmed by 7 Apache bands, denied by 2 (San Carlos and Ollero), not asked of the Tonto and Navaho. Cibecue, White Mountain, Warm Springs, Huachuca, Llanero smoked variously before "singing," "curing," or "treating"; the Southern Ute "before sucking"; blowing was mentioned only by the Papago informant.

In the Great Basin, Steward and Stewart found shamans smoking in curing everywhere.

In brief, then, wherever tobacco is smoked, the shaman smokes it as part of his curing treatment; and the practice even extends a little beyond the occurrence of true tobacco, substitute materials being used. The only notable specific variant is the addition of smoke being blown over the patient among Southern Californians, Yumans, Pimans, and Sonorans.

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[35]The Kalapuya doctor smoked; for the Chinook, the entry is blank.

[36]The Kittitas, Sanpoil, Flathead, Kutenay, Lillooet, and probably the Wenatchi, Thompson, and Shuswap shamans smoked tobacco.

[37]The Pima and Papago also blew smoke to purify the warrior who had slain a foe.