

Names of Animals

Carded

CALIFORNIA CONDOR , INDIAN NAMES FOR

A.S.Taylor in his 'Indianology of California' published in the California Farmer, 1860-1863 gives the following notes on the California Condor:

May 18, 1860

"The entire tribes of the California Indiania appear to have had a great devotion and veneration for the Condor or Yellow-headed Vulture (Sarcor, Calif.); a word is always found for it in all their languages. Besides the Indian names noted for it in the California Farmer of July 1, 1859, we may here mention that those of Santa Cruz Missions (the Aulintacs), called it Cayas; those of San Diego called it Isci or Escey, and the Ukias or Yohios of Petaluma, etc. called it Kahey; this last Indian language seems to have extended far up into Mendocino county."--A.S.Taylor, Calif.Farmer, Vol.13, No.13, May 18, 1860.

NAMES OF ANIMALS

Fisher

ABNAKI:

Pogumk.... "the small animal of the weasel family  
commonly called Fisher (Mustela Cana-  
densis), also translated as Black Cat."--

G. Mallery: 10th Ann.Rept.Bur. Eth.for

1888-89: p.469, 1893.

NAMES OF ANIMALS

ESKIMO of POINT BARROW, ALASKA (List of Mammals known to Eskimo of Point Barrow; with brief statement of range and abundance of each; also equivalent name of each in Eskimo language).

John Murdoch: 9th Ann.Rept.Bur.Eth.for 1887-88:

p.55-56, 1892.

NAMES OF ANIMALS (Jack Rabbit)

APACHE OF SAN CARLOS RESERVATION, ARIZONA:

"'ka-chu' (great or jack rabbit)".--- J.G.Bourke:

9th Ann.Rept.Bur.Eth.for 1887-88: p.505.

## NEW (OLD) NAME FOR THE SAGE HEN

Fremont, in an account of his expedition across the Rocky Mountains and Great Basin in 1843, states that on Green River the Sage Hen was familiarly known as the Seeds-ke-dee-agie, "a name which it received from the Crows to whom its upper waters belong, and on which this bird is very abundant."

Fremont's Report Exploring Expedition to Rocky Mts. in 1842, and Oregon & Calif. in 1843-1844, p. 129, 1845.

[I got the name from the Crow (Absaroka) years ago as Tseets-ke-she. - ~~com.~~]

The Green & Colorado Rivers took their early name from that of the Sagehen -

Tseets-ke-she

GAME TOTEMS AMONG THE NORTHEASTERN ALGONKIANS

by Frank G. Speck

'American Anthropologist' vol. 19, no. 1,  
Jan.-March 1917. ¶ Contains lists of totem  
animals, mainly small mammals of the Malecite,  
Penobscot, and Mistassini tribes.

The use of the word 'game' in the title  
is a misnomer, since the only game animal  
enumerated is the wolf.

## WIYOT NAMES FOR MAMMALS

A list of Wiyot names for mammals are given by L. L. Loud in Ethnogeography & Archaeology of the Wiyot Territory, Univ. Calif. Pubs. in Am. Arch. & Ethn., Vol. 14, pp. 235-236, 1918.



NAVAHO NAMES OF ANIMALS

Franciscan Fathers. Ethnologic Dictionary of  
the Navaho Language, 138 - 178. Arizona, 1910

PIMA NAMES FOR MAMMALS

Peccary ( <u>Tayassu angulatum sonoriense</u> )	<u>Kâ'-âtcî</u> , or <u>Tâsi-ikâlt</u>
Badger ( <u>Taxidea taxus</u> )	<u>Kaf</u>
Rat	<u>Kâ'sôn</u>
Beaver ( <u>Castor canadensis frondator</u> )	<u>Kâvi</u>
Antelope ( <u>Antilocapra americana mexicana</u> )	<u>Ko'-ovĭk</u>
Puma ( <u>Felis hippotestes aztecus</u> )	<u>Mavĭt</u>
Ground Squirrel	<u>PsUĭk</u>
White-tail Deer ( <u>Odocoileus couesi</u> )	<u>Si'-ĭk</u>
Cottontail ( <u>Lepus arizonæ</u> )	<u>Tâpi</u>
Mountain Sheep ( <u>Ovis nelsoni</u> )	<u>Tcirsâny</u>
Hare ( <u>Lepus texianus</u> )	<u>Tcoĭ tcof</u>
" ( <u>Lepus alleni</u> )	<u>Toâ tcof</u>
Raccoon ( <u>Procyon lotor</u> )	<u>Vâowöĭk</u>
Gopher ( <u>Thomomys cervinus</u> )	<u>Vâprsa</u>
Black-tail Deer ( <u>Odocoileus hemionus</u> )	) <u>Whaĭ</u>

Frank Russell, The Pima Indians, 26th Ann. Rept.  
 Bureau Ethn. (for 1904-1905), pp. 80-81-82-83, 1908.

Names of Grizzly Bear in Languages of Various  
 Plains Tribes of Indians as given by Maximilian,  
 Prince of Wied, in his Reise in das innere  
 Nord-America, Vol. II, 1841.

<u>Name of Grizzly</u>	<u>Name of Tribe</u>	<u>Page</u>
Matóh	Teton Dakota	498
Uosse or Wosse (e very short)	Fall Indians or Grosventres des Prairies (Arrapaho)	500
Uapih-maskua'	Krih or Knistenaux	510
Ksaus	Kutana'	513
Mato'	Mandan	539
Lachpitzi'	Mönnitarris (=Grosventres)	586
Ktschi'-ayah' (when white) [Wabach-quah] [Wabah <sup>ch</sup> -kwah]	Ojibeua' (Chipewa)	598
Män-tchú	Omaha	611
Mántó	Oto	629
Mantó	Osage	644

(Always grizzly - never grisly)

(an as in French)

Indian names of Aplodontia.

John Keast Liard gives the following:

Au-ka-la.

Og-sol-lal, Chinook.

Shu-mal-lal, " applied exclusively to robe.

Shout'l, Nesqually of Puget's Sound.

Squal-lah, Yakama

Susk-la, Sumas

Gibbs in Suckley

Shout'l, Nesqually.

Squallah, Yakima.

O-gussol-lal, Chinook.

She-mal-lal, " "is their name for the robe made of its skins". XII, 126.

ALGONQUIAN NAMES FOR PICKEREL

Among the many somewhat remarkable explanations of Algonquian words given in the Natick Dictionary, recently published by the Bureau of American Ethnology, is that of the name of the pickerel, which Roger Williams erroneously wrote qunôsu for quunôseu. This word Dr Trumbull derives from gunni, 'long,' and -utchan, 'nose.' Even the learned Abbe Cuoq, in a foot-

note on page 51 of his *Lexique de la Langue Iroquoise*, after explaining that the Iroquois name for the pickerel means 'long snout,' states that "les nations algonquines nomment ce poisson *kinonje*, mot composé qui a le même sens." Such is not the case, however. If we go back to Cree, the most ancient group of Algonquian dialects, we find that *kinôseu* (written also *kinûseu*) is the name generic therein for 'fish.' This word is from the root *kino*, 'long,' and the intransitive verb suffix *-ôseu* or *-ûseu*, denoting the act of parturition; and the Cree name for fish therefore means, literally, 'it produces elongated offspring.' This suffix (and its cognates: Menomini *-ônshou*, Narragansett *-ôseu*, Abnaki and Pequot *-ûse*, Ojibwe *-o<sup>n</sup>je* or *-ôje*) never has any other meaning. Thus: Cree *nitdôseu*, = Ojibwe *nitdô<sup>n</sup>je*, 'she is capable of child-bearing'; Cree *peyakôseu*, = Ojibwe *bejigo<sup>n</sup>je*, 'she gives birth to one child'; Cree *ndpeôseu*, = Ojibwe *ndbeo<sup>n</sup>je*, 'she gives birth to a male child'; Cree *kinôseu*, 'she gives birth to long offspring,' = Ojibwe *kino<sup>n</sup>je*, = Narragansett *kwunôseu*, = Pequot *kwunûse*, = Abnaki *kun-ûse*, etc., all names for the pickerel.

Since the pickerel was the fish *par excellence* of the Algonquian Indians, the word for "fish," narrowed down from a general to a specific sense, was applied, in nearly all dialects except Cree, to this particular member of the "finny tribe." By the Prairie Crees it is called *iyini-kinôseu*, 'fish properly so called.'

Something like this obtains in Newfoundland, where more than half of the population of 220,000 is engaged in the cod-fishing industry. Here, when a person speaks of "fish" he is understood to mean the cod, the name for which is not used; and even the courts of the island have legally applied the term "fish" to the cod because of its great importance.

W. R. GERARD.

A PARTIAL LIST OF MOKI ANIMAL NAMES.—During a short stay at Keams Cañon, Arizona, in the summer of 1894, the writer was fortunate enough to secure the Moki names of a number of the mammals and birds which he collected in that interesting locality. Although the list is very incomplete, it is thought best to publish it, as it may stimulate others to continue the work.

The following table gives the scientific, popular, and Moki names of the mammals and birds:

*Mammals.*

Cynomys ludovicianus.....	Prairie dog.....	Dirk'-quar
Lepus arizonæ.....	Arizona cottontail.....	Dar'-bō
Lepus texianus.....	Jack rabbit.....	Sau'-wī
Neotoma.....	Woodrat.....	Kar'-la
Onychomys.....	Grasshopper mouse.....	Hō-ō-la
Perodipus ordii ..	Kangaroo rat.....	Bâr'-hū
Perognathus apache.....	Pocket mouse.....	Ho-mī'-chī
Peromyscus (several species).	White-footed mice.....	Bīr'-shō
Spermophilus leucurus cinna-		
momeus.....	Cinnamon ground squirrel...	Iung-yai-ya
Spermophilus grammurus....	Rock squirrel.....	Lar-cō'-na
Tamias gracilis.....	Chipmunk.....	Ko-win'-na
Thomomys.....	Pocket gopher.....	Mō'-yi
Vespertilio and other genera.	Bat.....	Sau-wī'-yah

*Birds.*

Geococcyx californianus.....	Roadrunner.....	Hōsh'-bō-ă
Harporhynchus bendirei.....	Bendire's thrasher.....	Kōt-tō'-zī
Phalænoptilus nuttalli.....	Poorwill.....	Hō-witz'-kō
Trochilus and other genera...	Hummingbird.....	Dōt'-sīr

A. K. FISHER, M. D.

Bird names of the  
Selish, Pah-uta  
ad Shashoni Indians  
By W. J. Hoffman, M.D.  
The Auk, II, 7-10, 1885.

Origin of Names

Raccoon, opossum, Skunk, Moose, & Chipmunk  
of Algonquin origin — see Dr. Florence Trethow in  
Pop. Sci. Monthly for Jan. 1907, pp. 64-65.

[~~Reed Dec. 22~~; Reed, Dec. 24, 1906. cam

Bird Names of Selish, Pah.nte, + Shoshoni Indians  
By W. J. Hoffman. - Auk, 11, 7-10, Jan. 1885.

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Navaho names of Animals

Ethnologic Dictionary of Navaho Language. By the  
Franciscan Fathers. 1910. (pp. 138-145.)  
Also passim in Vocabulary of the Navaho Language  
by Franciscan Fathers. 1912.



• Eskimo list of mammal & bird names in  
Sport & Travel in the Northland of Canada  
By David T. Hanbury - 1904 (p. 295)  
Hudson Bay District -

• The White Goose, called Ko'i by the Eskimo,  
" (Konkow) is a sacred bird -  
authority ?

Names of Plants

C. Hart Merriam  
Papers  
BANC MSS  
80/18 c

NAVAHO NAMES OF PLANTS

Franciscan Fathers. Ethnologic Dictionary of  
the Navaho Language, 179 - 204. . Arizona, 1910

NAMES OF PLANTS

CHEROKEE (Plant lore and plant names)---

J. Mooney: 19th Ann. Rept. Bur. Eth. for 1897-98:

pp. 420-427, 1900 [publ. 1903].

LUISEÑO NAMES OF PLANTS.

List of plants used by the Luisseños, with their Luisseño, botanical, and English names when known.-- Sparkman: Culture of Luisseño Indians. Univ. Calif. Publ. Am. Arch. & Ethn. Vol. 8, p. 228-234, Aug. 7, 1908. [The equivalent Cahuilla names in the list are from Dr. D. P. Barrows' Ethno-Botany of the Cahuilla Indians of Southern California.]

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~~DESCRIPTION AND INDIAN NAMES OF BERRIES~~

Lewis & Clark Expedition

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Footnote.- "[Memoranda by Clark on the inside <sup>of front</sup> cover and fly-leaf of Codex C:] The Mandans call a red berry common to the upper part of the Missouri ās-sáy. The red Berry is called by the Rees Nar-nis the engages call the same Berry Grease de Buff--grows in great abundance & makes a Delightfull Tart."

Original Journals of Lewis & Clark, Thwaites Ed., I. 161, 1904.

Names of Tribes

C. Hart Merriam  
Papers  
BANC MSS  
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## THE NAMING OF TRIBES

Among California Indians of various stocks--Wintoon, Pomoan, Mewuk, Midoo, and others--there has long been an tendency to name tribes after the dominant or ruling village--a tendency which <sup>in</sup> recent times seems to have been on the increase. Thus the village names Ko'-roo, Chen'-po-sel, Ki-yow'-bah<sup>ch</sup>, Lah-tā', Tu'-le-yó-me, Yo-ki'-ah, and many others have come to be used as tribal names by the Indians themselves and also in many cases by Ethnologists.

Inasmuch as the name selected by the Indians is almost certain to be that of their most important village and the one whose name they prefer to accept for themselves, it has the distinct advantage of affording a definite useable collective name, acceptable to the Indians for groups otherwise difficult to designate. And in many cases the name has been adopted and is in current use by adjacent tribes.

To be more specific: Koroo and Chenposel were originally



the names of villages of Wintoon tribes--the former at Colusa on Sacramento river; the latter on Little Indian Creek among the interior mountain ranges. Each was an important--probably the most important--village of its group or tribe, and the two tribes were enemies, at war with one another. The village names Koroo and Chenposel have long been accepted by the tribes they represent as the proper names for these tribes, and are in current use among their survivors and neighbors.

Another example is Tuleyome, formerly one of several Mewan villages south of Lower Lake <sup>and</sup> ~~but~~ now generally accepted as the tribal name of the group. Still another is Yokiah, the ruling village of a Pomoan tribe now well known by the same name. Many others might be cited.

## TRIBAL NAMES

The practice of anthropologists with regard to the naming of tribes is by no means uniform--tho' tending to follow a present-day leadership. The prevalent usage, so far as west American tribes are concerned, is a makeshift of Indian and Spanish-Mexican words.

Most writers prefer the name as spoken by members of the tribe itself, but if the author is not satisfied with this, that used by some other tribe is likely to be adopted.

For Southern California tribes--and even those as far north as San Francisco Bay--the designations employed by the Spanish-Mexican Padres--as Cupeño, Costanoan, Diegueño, Gabrieliño, Juaneño, Luiseño, Serreño--are unblushingly accepted, even by eminent anthropologists.

Equally objectionable are certain stock names--as Mariposan, the Spanish name for butterfly, now happily discarded for Mewan; Salinan, coined by Henshaw and Mooney in 1885 and still in use for the Salinas Valley Indians; and Wappo (a Spanish word meaning brave) for the Indians of Napa Valley and <sup>the</sup> Mt. St. Helena region.

Instead of Salinan I long ago adopted En'-ne-sen, the name of the Salinas Valley tribe as given me by two old Kah'-koon women at Monterey in 1906. For this I ~~claim~~ ~~no~~ claim no originality as it, in the form Ensenes, was pub-

lished by Alexander Taylor in 1860, and in the form Ensen  
by Bancroft in 1885.

Instead of Wappo I have for years used Miyakma, their  
name for themselves.

## INDIANS OF SAN BENITO CO.

In an article entitled Personal and Historical Reminiscences of San Benito Co. 'by a Pioneer', is the following statement in reference to some early records of San Juan Mission:

"From the census lists I copy the names of some of the tribes of Indians, as follows: Nopthrinthre, Cynlahuas, Copcha, Chausita, Genche, Paucho, Uthrocus, Notaliths, Cothsemejait, Thrayapthre, Achilia, Silclamne, Cucunum, Ausaymas, Paicines, Tructra.

This list is incomplete, as is evident from a foot-note, made by Fr. Arroyo, to one of the lists, stating that 21 tribes had been reclaimed and Christianized. From this list it will be found that two of the ranchos of San Benito Co. get their names from the Indians who inhabited the locality; they are the Cienega de los Paicines, and San Felipe y Ausaymas."

--History of Monterey Co. 146, San Francisco, 1881.

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Tribe + Stock unknown

"Sacantha vel. tribe" at  
Misión Dolores - Chos  
Oumpini

Umpin of Chamisso.

Siquirionals - Tulare foothills  
or Tulare-Texon region

TRIBES WITHIN 80 MILES OF THOMPSON PEAK

Athapaskan:

Bahnekokeah  
Cheteggēka  
Hawungkut  
Hoopa  
Lolankok  
Mattol  
Nekanni  
Nungahl  
Set'tenbi'den  
Tōchōbekéa  
Tokub'bekéa  
Tsanunghwa  
Tsen-nok'-an-nes'

Achomawean:

Achomawe  
Ilmahwe  
Modesse

Atsookean:

Atsookāe

Lutuamian:

Modok-Klamath

Shastan:

Shaste  
Konomeho  
Hahtokehewuk  
Ookwahnutsoo

Tlomtoi:

Tlōhōmtahhoi

Chemareko:

Chemareko

Karok:

Kahrok

Poliklan:

Polikla  
Nererner

Soclahteluk:

Pahtewat  
Wēke  
Wēyot

Winton:

Nī'iche  
Nōmlakke  
Norrelmuk  
Winton'

Yukean:

Oo-ko-nōm

TRIBES WITHIN 100 MILES OF WEAVERVILLE

Poliklan:

Polikla

Nererner

Kahrok:

Kahrok

Shastan:

Shaste

Konomeho

Hah tokehewuk

Ookwahnutsoo

Tlomtoi:

Tlohontahhoi

Chemarekan:

Chemareko

Lutuamian:

Klamath-Modok

Achomawan:

Modesse

Ilmahwe

Achomawe

Atwumwe

Atsookāan:

Atsookāe

Apwoorokāe

Yukean:

Ookunnom

Hoochnum

Tahtomah

Ookotontilka

Wetooknom

Onkalookunnom

Winton:

Winton

Wintu (or Numsoos)

Norrelmuk

Niiche

Dawpum

Wiekerrrel

Nomlakke

Dahchinchinne

Choohelmensel

Noema

Tehama

Nomeltekewe

Koroo



Soolahteluk:

Pahtewat

Weko

Weyot

Athapaskan:

Hawungkut

Hoopa

Tsanunghwa

Lolankok

Mattol

Nekanni

Nungahl

Settenbiden

Cheteggeka

Tochilpekeahang (Kahto)

Tochobekea

Tokubbekea

Tsennokannes

Bahnekokeh

Midoo:

Konkow

Kummowin

Mechopdo

Notokoiyo

Yahna:

Nosse

Pomoan:

Mahto pomah

Metomah

Shomul pomah

Shoteah

Bukkow pomah

Pomo (Potter Valley)

Dannoka

NOTES ON GIBBS' MAP OF NORTHERN CALIFORNIA 1851

Title: Sketch of the Northwestern part of CALIFORNIA.

accompanying a Journal of the expedition of Col. Redick McKee, U.S. Indian Agent, during the summer and fall of 1851. by George Gibbs.

---

..... designates McKee's trail.  
----- ordinary roads and trails.

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NAMES ON OR NEAR COAST [From north southward.]

<u>Gibbs' Name</u>	<u>Present Name</u>
Smith R.	Smith River
Pelican Bay	Pelican Bay
Pt. St. George	Point St. George
Klamath R.	Klamath River
Gold Bluff	Gold Bluff
Redwood Creek	Redwood Creek
Trinidad	Trinidad
Mad R.	Mad River
Union	Arcata
Eureka	Eureka
Bucksport	Bucksport
Humboldt	[Extinct]
Eel R.	Eel River
C. Mendocino	Cape Mendocino
Marons R.	Ten Mile River
Pt. Gordo	Point Gorda
Fort Ross	Fort Ross

Russian River  
or  
Slavianska

Russian River

Bodega Bay

Bodega Bay

Pt. Tomales

Tomales Point

Pt. Los Reyes

Point Reyes

Drake's Bay

Drakes Bay

San Francisco

San Francisco

Bays (inland)

Bay of San Francisco

San Francisco Bay

Bay of San Pablo

San Pablo Bay

Suisun Bay

Suisun Bay

NAMES ON SAN FRANCISCO AND SUISUN BAYS

Sonoma C.

Sonoma Creek

Napa C.

Napa River

Benicia

Benicia

Martinez

Martinez

NAMES OF RIVERS

On Coast from North Southward [Tributaries indented  
under main rivers.]

Smith R.

Smith River

Klamath R.

Klamath River

Blue C.

Blue Creek

Pekuan. C.

Pekwan Creek

Trinity R.

Trinity River

John's C.

Capt. John Gulch

South Fork

South Fork

Trinity

New R.	New River
North Fork	North Fork Trinity
Bluff C.	Bluff Creek
Salmon R.	Salmon River
Clear C.	Clear Creek
Indian C.	Indian Creek
Scott's R.	Scott River
Humbug C.	Humbug Creek
Shasta R.	Shasta River
Cottonwood C.	[Non-existent now]
Willow C.	Willow Creek
Redwood Creek	Redwood Creek
Mad River	Mad River
Eel River	Eel River
Vandusen's Fork	Van Duzen River
Main Fork	[Main]Eel River
Kelsey's R.	South Fork Eel River
Marons R.	Ten Mile River
Russian River	Russian River
or	
Slavianska	Mill Creek [Walker Valley]
West Fork	East Fork Russian River
East Fork	
<u>On San Francisco and Suisun Bays</u>	
Sonoma C.	Sonoma Creek
Napa C.	Napa River
San Joaquin R.	San Joaquin River
Sacramento R.	Sacramento River
Putos Creek	Putu Creek
Cache Creek	Cache Creek
Feather R.	Feather River
Stone C.	Stony Creek
Cottonwood C.	Cottonwood Creek
Clear C.	Clear Creek

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### MOUNTAINS

Bald Hills. (1st mts. between coast and Redwood Creek. ✓)

Bear Butte (W. of So. Fk. Eel R.) Bear Buttes

✓The term Bald Hills is applied to the open treeless summits of the ridges between the coast and Hoopa Valley, on both sides of Redwood Creek.

Mount McKee [named for Col. Redick McKee, Indian Commr.] =  
Mount Konokti (sometimes known as Uncle Sam Mt.)

Mt. Diablo

Mount Diablo

Mt. Shaste

Mount Shasta

Mt. St. Helens

Mount St. Helena

Pilot Knob

Pilot Peak [in Siskiyou  
Mts. on Oregon line.]

Putos Mt.

Geyser Peak

Salt Mt. (Apparently near head So. Fk. Stony Creek.)

Seino's Peak. Apparently Red Mt. in Marble Mts.  
(Mts. W of middle part of Scott Valley, S W of  
Sheep rock.)

Sheep rock

Skookum Rock

#### VALLEYS

Batim-da-kia Valley

Long Valley [containing  
Laytonville.]

Betunki Valley

Little Lake or Willits  
Valley

[Outlet Creek (not named) rising here and flowing  
north to Eel River.]

Coyote Valley (on upper Putos Creek) Coyote Valley

Level Plains

Shasta Valley and Modoc  
Lava Beds

Petaloma Valley

Petaluma Valley

#### TOWNS AND RANCHES

Barisa's

apparently Cloverdale

Benicia

Benicia

Bestoil, in mts. at head Salmon River [apparently a ranch  
or mine.]

Big Bottom	Seiad Valley on Klamath River.
Bucksport	Bucksport on Humboldt Bay
Eureka	Eureka on Humboldt Bay
Feliz	Hopland
Ferry	
Fitch's	Healdsburg [Mt. Fitch indicated but not named]
Fort Ross	Fort Ross
Happy Camp	Happy Camp [on Klamath River]
Humboldt	[Non-existent]
Martinez	Martinez
Napa	Napa
Orleans Bar	Orleans
Parker's	apparently Ukiah
Pina's	apparently Geysersville
Red Cap's Bar	Red Cap Bar
Sacramento	Sacramento
San Francisco	San Francisco
Santa Rosa	Santa Rosa
Scott's Bar	Scott Bar
Shasta City	Shasta
Shasta Butte City	Yreka
Sonoma	Sonoma
Trinidad	Trinidad

Union

Arcata

West's

Mark West

Weitspeck

Weitchpec

Weaver

Weaverville

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LAKES

Clear Lake

Clear Lake, Lake Co.

Little Klamath

Lower Klamath Lake

Extract from "Remarks on Indian Tribal Names", Proc. Am. Philos. Soc., XXIII, 301, 1886, by W. J. Hoffman.

Kawia

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The numerous bands of Indians formerly scattered over the marshy country bordering on Tulare lake, the plains and western spurs of the Sierra Nevada and the tributaries to the head of the San Joaquin river, Calif. were known as the Tulareños, and later as the Tules. The most important band, being known as the Kawia, was located on "Kaweah" creek. [Various names of sub-division given by Powers, Tribes Calif.]

The term Yokut or Yokuts, previously employed to designate this tribe, as well as a distinctive term for a linguistic family, appears to be erroneous and inappropriate. To more clearly illustrate what may be stated below, it is necessary to present the subdivision of the Kawias linguistically. The entire group of sub-tribes comes at this date under two heads, the Kawia proper, or the Tule Indians, and the Tinliu or Tejon Indians, the latter being divided, a portion of the living near Tule Agency, and the remainder scattered along the various settlements as far southward as Tahachapi pass.

The Kawia are composed of the following bands or subdivisions:

Yawitshėnńi, the Tule Indians proper.

Wiktshėmńi

We-chummies. . Rep. Ind. Affrs. for 1857, 1858, 399

Wichummies. . Rep. Ind. Affrs. for 1872, p. 381.

Yoko

Bādwiśha

Bödėrwiűmńi

Bo<sup>n</sup>galaatshi

Yawėdmőńi

Tinliu, Tribal designation of Tejon Inds., [p. 301.

The word Tejon undoubtedly originated with the Spanish and is merely a translation of the Indian word Tinku, a badger hole; . . . Having allusion to their origin in peopling the country by coming out of the earth through badger holes, and consequently calling themselves Badger-Hole People.



# INDIAN NAMES IN THE TAMALPAIS REGION

By DR. C. HART MERRIAM.

The tribe of Indians formerly inhabiting the Tamalpais region called themselves **Hoo'-koo-e'-ko**. Their territory extended from the Golden Gate northerly to Valley Ford Creek, and from Point Reyes Peninsula easterly to the Petaluma marshes and San Pablo Bay, thus coinciding almost exactly with the boundaries of the present County of Marin.

It is of interest historically that of the numerous tribes of California, this was the first to be discovered by Europeans, for in the summer of 1579 Sir Francis Drake when overhauling his vessels in the broad bay that now bears his name, on the south side of Pt. Reyes Peninsula, spent several weeks in their country, and had much to say of their friendliness and singular customs.

Mount Tamalpais and the series of beautiful valleys by which it is surrounded, from Olema and the long fiord-like Tomales Bay on the west to San Rafael on the east, including Nicasio, Lagunitas, San Geronimo, Fairfax, and San Rafael valleys, all lie within the territory of the **Hoo'-koo-e'-ko**, and some of the most familiar geographic names in California were taken from the vocabulary of this tribe. Among these are Tamalpais, from **Tam'-mal** the bay country, and **pi'-es** a mountain—**Tam'-mal-pi-es** or **Tam-mal-pi's**, being their own name for the mountain; Tamales Bay, which they called **Tam-mal le-wah—le-wah**, salt water; Point Reyes, which they called **Tammal hoo-yah—hooyah** a point or projection; Tamales Point, called **Kal-loo'-pe tam-mal** in reference to the shape of the point, which from its length and slenderness suggests the bill of a hummingbird (**Kal-loo'-pis**). The people on Tamales Bay they called **Tam-mal'-ko—ko** meaning people. Olema and Olompale are place names still in use—the latter originally an Indian village on the west side of Petaluma marshes, now perpetuated for a district and schoolhouse; Marin County, as well known, was named for **Marin**, a great chief of the **Hoo-koo-e-ko** tribe, while Novato and Nicasio were names of other chiefs—though Nicasio is Spanish, not Indian.

Other geographic or place names in the native language of the **Hoo-koo-e'-ko**, but which have not been perpetuated on our maps are: **Etch'-a-tam'-mal**, Nicasio Valley; **Etch'-a-tam'-mal hawk**, Nicasio Creek; **Oo'-troo-mi'-ah**, vicinity of present town of Tomales; **O-la'-mah lo'-kah**, Olema Valley; **Wah-kah-te**, Petaluma Creek; **Ah-wan-we**, San Rafael; **Wal-lo ma-la-kum**, San Francisco Bay; **Sah-tah-ko**, San Geronimo Valley; **Lo-was**, Ross Valley; **Sho-tum-ko**, Gallinas Creek Valley; **Cho-ketch-ah**, Novato; **Le-wan-hel-o-wah**, coast at or near Sausalito.

## Names of Animals.

Bear—Koo'-leh	Sparrow hawk—He-le'-lek
Coon—Hoo-ma'-ka	Great horned owl—Too-koo-lis
Bob-cat—To-lo'-mah	Crow—Ah'-wetch
Gray fox—Ah-wah'-ke	Blue jay (without crest)—
Coyote—O'-yeh	Si'-etch
Deer—Ka'-sum	Valley quail—Hek-ek'-ki
Gray squirrel—Sam'-kow'	Rattlesnake—Oo-koo'-lis
Wood rat—Yu'-loo	Common lizard—Pet-tan-yah
Brush rabbit—No'-meh	Frog—Ko-to'-lah
Jack rabbit—Owl'-yeh	

## Trees and Other Plants.

Redwood—Cho'-la	Tanbark—Kah-tah'-me
Douglas fir—Hoo-toos'	Madrone—Kah-kas
Live oak—Sah'-tah	Buckeye—Ah'-te
Black oak—Ko'-tis	Poison oak—E'-tum
Brake fern or bracken—Oo'-tuk	

Forley

INDIANS AT TULE RIVER RESERVATION, JUNE 1932

C. Hart Merriam

Mostly descendants of Indians driven here from the Tejon and other places many years ago, and representing a number of tribes. Most of those now living are hybrids of two or more tribes. As the majority came originally from the Tejon it has come to pass that the Tejon-Bakersfield language--Yowel'-man'-ne--is spoken by all.

Nevertheless many still remember the talk of their fathers and mothers and are able to give fairly good vocabularies.

Those worked with by me are:

Yow'-lan-che. Philip Hunter (middle age). They were the people to whom this Tule River country belonged. They held both North and South Forks of Tule River from the high mountains down to or a little below the edge of the foothills, nearly or quite to Porterville and Lindsay. This main summer camp they say was at Painted Cave (=Painted Rock), which they called \_\_\_\_\_ But they disclaim any knowledge of the remarkable paintings on the rocks there.

The old wife of Jose Vera is a full blood Yow'-lan-che and the best of the living informants. But her knowledge of English is limited.

They call the Tubotelobela tribe of Kern Valley "Pitanisha."

21

North of Yow-lanche were Yō-kol; north of Yokol, Wiktchumne.

South of Yow-lanche were the Pahn-kā-lā-che of Deer Creek.

Yow-el-man-ne, the Tejon-Bakersfield tribe, preponderate to such an extent that their language is the one universally spoken here. They are frequently spoken of as "Tejones." Their territory extended from the mountains south of Tejon northerly to a little north of Bakersfield. Their village Woi-lo is covered by city of Bakersfield.

Pung-kā-lā-che or Pahn-kā-lā-che, the Deer Creek tribe, represented by Louisa, the full blood wife of old Dick Francesco (a Ko-yet-te). I got a fair vocabulary from her. Lived on upper Deer Creek and related to the Too-bot-e-lob'e-lay of Kern Valley. On lower Deer Creek were the Koy-yet-te (or Koy-ye-che). While the general vocabulary has a large proportion of words like Too-bot'e-lob'e-lay the animal and plant names are mostly same as Yokut Yowelmanne.

Pal-low-yam-me tribe. Headquarters apparently Poso Flat whence they extended both north and south along Poso Creek, reaching southerly to the Bakersfield Plain only a few miles northwest of Bakersfield. On the east they claimed the west slope of Greenhorn Mountains (the east slope of which belonged to the Too-bot'e-lob'e-lay). I obtained a fair vocabulary from old Steve Soto.

member of tribe. To cure pain they make a cut with an obsidian blade over the painful part and "suck" out the pain.

Ko-yet-te, represented by old Dick Francesco (husband of Louisa, a woman of the Pahn-kă-lă-che tribe of Upper Deer Creek--a tribe of a remote linguistic stock, the Tubotelobelay). The Ko-yă-te talk much like Yowel-manne. The Ko-yet-te lived on the lower part of Deer Creek and edge of the plain--in other words, in the foothills, below the Pahn-kă-lă-che. The principal village of the Ko-yet-te was Che-te-tik-no near or on the edge of the plain (only a few miles south of the southern bend of South Fork Tule River). The children of this rancheria used to "slide down hill" on a big sloping rock on the edge of the foothills.

My informant, old Dick Francesco, applies the following (Ko-yet-te) names to the tribes to be here mentioned:

To the Caliente-Piute Mt. New-oo-ah tribe,  
"Ko-me-ches-se."

To the Kern Valley Tu-bot-e-lob-e-la,  
"Pe-tan-is-sah."

To the Tehachapi  
"Kah-wă-sah."

To the Chu'-nut of Southeastern border of  
Tulare Lake, "Choo-no'-te-te."

To the Too-lol'-min of Buena Vista Lake,  
"Too-lol'-min-nah."

Was told that a tribe called Woo'-wah-wah'-le  
lived south of Tache Lake.

*C. H. W.*

## NATIONAL AND TRIBAL NAMES

The ancient Egyptians had no distinctive name for themselves, but proudly called themselves r o m i meaning men or people.--Ency. Brit., 11th Ed., Vol. 9, p 42, 1910.

The same is true of a number of California Indian tribes--as Midoo, Mewah, Mewuk, Nim, Newooah, Yokut, and Yahna.

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Name for man used as tribal name in Egypt and America

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*To be amplified*



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Nose Hole & Nose Stick

C. Hart Merriam  
Papers  
BANC MSS  
80/18 c

## NOSE STICK, MOKALUMNE

Leonard Kip in 1850 published a small pamphlet on his recollections of the gold mines of California, where he worked for some months the preceding year, in which he includes notes on the Indians near the mines on the Hoquelumne River.

He describes an Indian village through which he passed, which was mourning the death of a warrior which had occurred the same morning and says that one of the women "was adorned with a white pine stick, stuck through the nose, and projecting about 2 inches on each side."--Leonard Kip, California Sketches, p.44, 1850.

Piute Indians with Perforated Noses on Sevier  
River, Utah, in 1829

Antonio Armijo in his diary of a  
trading expedition from Santa Fe to  
San Gabriel, Calif. (1829-30)  
mentions finding a settlement of  
Indians with rings in their noses  
on Sevier River, Dec. 27, 1829.--

Antonio Armijo, Bull. Soc. Geog. Paris,  
Ser. 2, 3: 316-323, 1835 (from  
'Registro Oficial del Gobierno  
de los Estados-Unidos', Mexico  
1830).

# Numerals

C. Hart Merriam  
Papers  
BANC MSS  
80/18 c

# Numerals

Am. Philological Assoc. (Trans., 1874)

Trumbull on Numerals 41-46

also in Proc., 2<sup>nd</sup> Sess., 6<sup>th</sup> Session, 17-19.

UNIVERSITY OF CALIFORNIA  
DEPARTMENT OF ANTHROPOLOGY  
BERKELEY, CALIFORNIA 94720

Numerals

No-min

1. Chah
2. Kaw-on'
3. Ko-chan
4. Kal-ko-ton
5. Chow-shōn
6. T'had-dā-yen
7. T'cho-mah-lāh
8. Shet-low-we
9. Shet-low'-wich-ak-ko
10. Shet-low'mah-kah-tan

Pah-kan'-e-pul  
(Tā-lob-te-lob-e.Lā)

1. Cheech
2. Woh
3. Pai
4. Nā-now; Non-now; Hot-pun-ne
5. mi-i-jing-ah [mah-ja
6. Nah-pi
7. Num-chin
8. Na-bun-ching-ah
9. La-kee
10. Um-hi-chin-ah

New-oo-ah  
(New-ah)  
kelso Cr.

1. Soo-e-oo
2. Wah-hi-yu
3. Pā-hā'
4. Wat-tsu-yu
5. Mo-nov'-ēh (mo.no.ge-ah
6. Nov-a-hi-ah
7. No-mutz-e
8. No-a-too-e (Na-no-tsoo-yu)
9. So-kom'-mus
10. Mom-ma-soo-e

"Moot-soon" =  
Hoo-mon-twash

1. Kem-mitch-ah'
2. oo-chin      oo-treen
3. kahp-hahn
4. oo-jit      oo-tit
5. Par-doo-wis
6. Him-not-che
7. oo-tak-che
8. Ti-e'-tā-men
9. Wah'-too-oo
10. Mat'-too-oo      Tahn'-sah-te



- 1 Weelcum
- 2 Paynay
- 3 Sarfun
- 4 Tchuyum
- 5 Marctem
- 6 Suckanay
- 7 Penimbem
- 8 Peneem
- 9 Peleem
- 10 Marchecom

Indonesian numerals of  
Kor. Isl. Kiliue  
Shaw, 1879

- 1 Koo
- 2 Kah; kaw
- 3 Se-baw'
- 4 Me-chah'
- 5 Too-shaw'
- 6 Lan-chah'
- 7 Lat-kó'
- 8 Kóm chah'
- 9 Chah-cho
- 10 chah-sho-to'

- 1 Pah'-wah
- 2 Ho'-pe
- 3 Po'-kah
- 4 O'-lah
- 5 Kah'tah
- 6 Pot-tá now'k
- 7 Ko-pe'-ta now'k
- 8 Ho-pe-hahn
- 9 Pow'wah-lahk'
- 10 mah-hi's

Malay  
Kor. Isl.  
Shaw, 1879

- Hoo koo-e-ku
- 1 Ken-ni
  - 2 O'-lah
  - 3 Tel-la'-ko
  - 4 Hoo'-yah
  - 5 Ken-nek'-kos
  - 6 Pah'-che-tahk
  - 7 Sām-low'-e
  - 8 O-roo'-yah
  - 9 ũ-nũ'-tas
  - 10 Ke'-chis

Cahullo numerals from

Conant, Number Concept, 165,  
(Quoted in Bur. Eth. Rept. for 1897-98,  
Pt. 2, 868, "1900" (= 1903).

"Kechi (San Diego)" [!] Clarence, Melange  
15-17. Quoted as above, 870.

Wihinacht [same refs as Kechi above]  
p. 870

## Indians

Thomas, Cyrus

Numeral System of Mexico and Central America.--  
19th Ann.Rept.Bur.Eth.for 1897-98, Part 2: pp.853-955,  
1900 publ.1903 .

Read for all  
E.C. Apr. 1913

*W.H.M.*  
C.H.M.

## Indians

McGee, W J

Primitive Numbers.-- 19th Ann.Rept.Bur.Eth.for  
1897-98, Part 2: pp.823-851, 1900 [publ.1903].

Numerals of Louhataw Confederacy

Mooney, Am. Anthrop. vol. 9, p. 146. 1907.

Article in my misc. etc. files - *CSM*

## TAKELMA NUMERALS

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Takelma numerals from 1 to 20, with additional 10's to 100, and additional 100's to 2,000 are given by Sapir in his 'Notes on the Takelma Indians of Southwestern Oregon.'—  
~~p. 265, Vol. 9, No. 2,~~ American Anthropologist,  
1907. Vol. 9, 265, 1907.

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1907. Vol. 9, 265, 1907.

## NUMERALS

Numerals from 1 to 10 and also the words man, woman, and proper tribal name were published by Mooney in his report on 'The Indian Congress at Omaha' (Am. Anthropologist, Vol. 1 (N.S.), No. 1, pp. 148-149, 1899).

The tribes of which the numerals are given are arranged under stocks as follows:

### ALGONQUIAN:

Arapaho  
Cheyenne  
Blackfoot  
Sauk  
Potawatomi

### ATHAPASCAN:

Apache  
Kiowa Apache  
Lipán  
Santa Clara Pueblo  
Mohave

### CADDOAN:

Wichita  
Kichai  
Tonkawa  
Flathead

### SIOUAN:

Dakota  
Assiniboin  
Oto  
Omaha  
Winnebago  
Crow

James Mooney, Am. Anthropologist, Vol. 1 (N.S.),  
pp. 148-149, January 1899.

*Copy in Misc. Eth. file*

( 33 )

Words:	Spanish.	Meaning in English.
<i>Nucelù,</i>	La Caveza	Head
<i>Kejubè,</i>	El Pecho	Breast
<i>Huachajà,</i>	La Mano	Hand
<i>Chipucù,</i>	El Codo	Elbow
<i>Focholò,</i>	El Sobaco	Armpit
<i>Fononomò,</i>	El Muslo	Thigh
<i>Pistocù,</i>	La Rodilla	Knee
<i>Kippejuè,</i>	La Pierna	Leg
<i>Aclème,</i>	El Pie	Foot
<i>Tomol,</i>	Lancha, ò Canoa	Launch, or Canoe
<i>Apa,</i>	Rancheria	Hamlet
<i>Femi,</i>	Capitan, ò Principal	Captain, or Chief
<i>Amo,</i>	No.	No

## Numerical Words :

<i>Pacà,</i>	One
<i>Excò,</i>	Two
<i>Maseja,</i>	Three
<i>Scumu,</i>	Four
<i>Yiipaca,</i>	Five
<i>Yiixco,</i>	Six
<i>Ytimasge,</i>	Seven
<i>Malabua,</i>	Eight
<i>Upax,</i>	Nine
<i>Kerxco,</i>	Ten

From the Canal of *Santa Barbara* forward, the Country is not so much inhabited, nor the people so industrious, but they are equally affable and inoffensive.

K

The

From An Historical Journal of the Expeditions by Sea and Land to the North of California; in 1768, 1769, 1770; when Spanish Establishments were first made at San-Diego and Monte-Rey. From a Spanish MS. Translated by William Reveley, Esq. Published by A. Dalrymple, London, 1790

Reprinted in Costanso, Narrative of the Portola Expd. Pub. Acad. Pacific Coast Hist., Vol. I, No. 4, pp 50-51, March 1910.

**SAK and FOX Indians--Oklahoma**

Sept. 23, 1904. World's Fair Grounds, St. Louis, Missouri:

Met a couple of girls from Oklahoma belonging to the Sak and Fox tribe, whose proper name they gave me as Thahl-kee.

Their numerals up to ten are:

- 1 - - - Nā-koot
- 2 - - - Nee'sh
- 3 - - - Neth
- 4 - - - Ne-ār'
- 5 - - - Ne-ahn-nan
- 6 - - - Nik-koo-tosh'ik
- 7 - - - No-hik
- 8 - - - Nish-wash'ik
- 9 - - - Shah'k
- 10 - - - Met-tah'th



From Mr. Leland's vocabulary the following are similar to or connected with the Gaelic : —

*Muogh*, a pig = Gaelic *muc*, a sow ; *bord*, a table, is the Gaelic word. *Scree*, to write = Gaelic *scriobh* (pron. screeve).

The numerals quoted by Mr. Leland are really Gaelic : —

<i>hain</i> ,	one,	Gaelic, <i>aon</i> .
<i>da</i> ,	two,	" <i>dha</i> .
<i>tri</i> ,	three,	" <i>tri</i> .
<i>k'air</i> ,	four,	" <i>ceithir</i> (pron. <i>k'nir</i> ).
<i>cood</i> ,	five,	" <i>cuig</i> .
<i>shay</i> ,	six,	" <i>se</i> (pron. <i>shay</i> ).
<i>schaacht</i> ,	seven,	" <i>seachd</i> (pron. <i>schaacht</i> ).
<i>ocht</i> ,	eight,	" <i>ochd</i> .
<i>nai</i> ,	nine,	" <i>naoi</i> .
<i>djai</i> ,	ten,	" <i>deich</i> (pron. <i>djaich</i> ).

Nearly all these numerals are written by Mr. Leland as the Gaelic equivalents would be pronounced by an English-speaking person.

The word *sy* (a *sixpence*), which Mr. Leland includes among his examples of *Shelta*, is a common slang term with boys at Inverness.

G. ALICK WILSON.

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*Some Words from the Language of the Choctaws.* **By Lewis Brantz**  
**1785.**

Howbeck . . . . .	A horse.
Chickamaw . . . . .	That is good.
Ohkà . . . . .	Brandy.
Babashiela . . . . .	Salutation of welcome.
Tshiaffà . . . . .	One.
Toccolò . . . . .	Two.
Detchená . . . . .	Three.
Ostà . . . . .	Four.
Tashawè . . . . .	Five.
Annalè . . . . .	Six.
Ontocolò . . . . .	Seven.
Ondotchinà . . . . .	Eight.
Tschacalè . . . . .	Nine.
Toccolà . . . . .	Ten.
Awa tschiaffà . . . . .	Eleven.
Awa toccolò . . . . .	Twelve, and so on to nineteen.
Boccole toccolò . . . . .	Twenty.
Boccole detchenà . . . . .	Thirty, and so on to 100.

In the greater part of these words the accent is placed on the last syllable, which almost always terminates with a vowel.

Schoulercraft, Indian Tribes, Part III, 1853.  
1853.

The Numerals "Two" and "Three" in Certain Indian Languages of the

Southwest.—

LANGUAGE	RECORDER	"TWO"	"THREE"
Tepehuan	Charencey	gaok	baech
Tarahumare	Charencey	oka	baica
Cora	Conant	huapoa	huaeica
Cahita	Pimentel	uoi	vahi
Opata	Pimentel	gode	vaide
Pima	Charencey	houak	vaik
Seri	McGee	ghá'kum	pháum
Cochimi	Gabb	kūak	kabiak
Kiliwi	Gabb	hhu-ak	hhamiak
Cocopa	Harrington	ha-wō'k <sup>a</sup>	ha-mók <sup>a</sup>
Diegueno	Harrington	ha-wō'k <sup>a</sup>	ha-mók <sup>a</sup>
Maricopa	Harrington	ha-vík <sup>a</sup>	ha-mók <sup>a</sup>
Yuma	Harrington	ha-vík <sup>a</sup>	ha-mók <sup>a</sup>
Mohave	Harrington	ha-vík <sup>a</sup>	ha-mók <sup>a</sup>
Yavapai	Freire-Marreco	uak <sup>a</sup>	muk <sup>a</sup>
Tonto	Loew and White	uake	moke
Walapai	Harrington	ha-wák <sup>a</sup>	ha-mók <sup>a</sup>
Havasupai	Harrington	ha-wō'k <sup>a</sup>	ha-mók <sup>a</sup>
Ute	Harrington	wáijüinī	páijüinī
Paiute	Gatschet	vay	pay
Chemehuevi	Harrington	wai	pai
Pavant	Gatschet	wyune	piune
Shoshone	Gatschet	waii	pahi
Comanche	Charencey	waha	pahu
Hopi	Harrington	léjō' <sup>o</sup>	pájo' <sup>o</sup>
Kern River	McGee	wo	pai
San Luis Rey	Gatschet	whii	paa
Kauvuya	Gatschet	vuy	pa
Gaitchaim	Gatschet	vue	pahe
Cahuilla	Conant	mewi	mepai
Taos	Harrington	wiina	pajüä
Isleta	Harrington	wisi	patso
Isleta del Sur	Harrington	wisi	patso
Piro	Bartlett	wi-yú	môn-tu
Jemez	Harrington	wiŝ	ta <sup>1</sup>

<sup>1</sup> Is the Jemez numeral for three borrowed from the Navaho language?

Vol. 9, No. 6, June 1896

## BOOK REVIEWS

*The Number Concept, its Origin and Development.* By Levi L. Conant, Ph. D.  
New York, Macmillan & Co., 1896. 218 pp., 12°, \$2.00.

The title of this work might lead the reader to suppose that it is principally mathematical, but the treatment adopted by the author is anthropological. It is a study of the evolution of the idea of number in primitive conditions and the survivals of early forms in later stages of culture.

Beginning with the methods of counting which prevail in savage tribes and, by way of comparison, among children, the author passes to the limits of numeral systems. In the former he finds the fingers to be the usual natural tallies. With regard to limits, the widest variation occurs. The author judiciously observes: "The high limit to which some savage races carry their numeration is far more worthy of remark than the entire absence of the number sense exhibited by others of apparently equal intelligence."

Two chapters are occupied with the origin of number words. While he does not concede that all numeral words are derived from digital sources, "that all above 2, 3, or at most 4, are almost universally of digital origin we must admit." This seems too positive a statement, especially as the author does not appear to have considered the origin of the derivation of the Indo-Germanic and Semitic numerals. He says of the former, "all traces of their origin seem to have been lost." This is not the opinion of such Aryan students as Lepsius, Scherer, and Rumpelt, and the interesting identification of *one* and *two* with *I* and *thou* deserved at least a mention. On page 99 he offers a list of the meanings of the lower number-words, assigning "the probable meaning of any one of the units." It is suggestive, but does not contain either the origins from the personal pronouns or from adverbs of place (*here, there*), which are almost certainly at the root of some of the terms for the first and second units.

The chapter on "miscellaneous number bases" discusses the binary, ternary, senary, octonary, and duodecimal scales. He refuses to believe that the octonary is to be regarded as, in the Aryan race, the predecessor of the decimal base. He is inclined to favor the duodecimal scale. "It is the scale of civilization, just as the quinary, decimal, and vigesimal scales are the scales

with rawhide; to discover that  
y replace disks of pretty shell,  
7. Therefore, by the aid of the  
ne ancient may be restored. It  
rule that each addition of Iron-  
ace of something made of stone,  
seeds, feathers, wood, etc, in pre-  
nose who study intensively any  
stinctly new looks like a stranger,  
ch on an old garment.  
seems to me to have arrived for a  
g those who have in charge public  
im who lives, week in and week  
rmer cultures their voices become  
d of instinct in him to distinguish  
e same way that must be a very  
ontain one genuine old piece. The  
acquainted; to establish a clear-  
them. I would plead for frater-  
cal establishments. Many of our  
absence of knowledge concerning  
e elsewhere. I would also plead  
ng active workers. As the great  
sult of many special minds organ-  
it, so shall we solve the problem of

Abel Hovelacque, the distinguished  
se death occurred February 22, was  
1843. In 1876 he became professor  
sor of the School of Anthropology,  
a director in 1890. In 1886-'87 he  
cipal council of Paris; in 1890 was  
of the Society of Anthropology of  
94 was a deputy of the Seine.

of nature." He quotes only one, and that a doubtful instance of the duodecimal scale, among savage tribes. On page 207 he makes the observation: "It must not be forgotten that no races save those using the base of 10 have ever attained any great degree of civilization, except the ancient Aztecs and their neighbors;" yet the Babylonian sexagesimal base, 60, to which he occasionally alludes, is considered by most students to have been duodecimal—that is,  $5 \times 12$ , not  $6 \times 10$ —and such was the civilization of the Babylonians of nine thousand years ago that our methods of dividing time and space, our religion and our laws, we owe in large part to them. The book closes with special chapters on the quinary and vigesimal systems.

Professor Conant's pages testify everywhere to the methods of a conscientious, unbiased, and accurate student. He has limited his investigations to the cardinal numbers only. In some future edition we hope he will include the remaining numeral series, the ordinals, iteratives, multiplicatives, partitives, distributives, and specificatives, as they have been classified by grammarians. The origin of sacred number series is also worthy his attention.

D. G. BRINTON.

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*John Eliot's First Indian Teacher and Interpreter. Cockenoe-de-Long Island and the Story of his Career from the Early Records. / By William Wallace Tooker. New York, Francis P. Harper, 1896. 60 pp., 2 pl., 8°. \$2.00.*

Cockenoe-de-Long Island is the queer-sounding polyglot name of a Long Island Indian who was captured while fighting with the Pequots against the British colonists. According to his biographer, William Wallace Tooker, of Sag Harbor, Cockenoe was so called from the Massachusetts Indian verb *kukkinneau*, "he interprets." Cockenoe became prominent through the fact that the missionary John Eliot, who in 1646 began to deliver sermons in the Indian vernacular, made his acquaintance about that time; he then acted as the famous apostle's first Indian teacher and interpreter. The last mention we find of him is in a Montauk deed of conveyance to the inhabitants of East Hampton, Long Island, dated August 3, 1687.

The little volume is of such interest to the ethnologist and historian that it seems a pity the edition of the work is limited to 215 copies. It is a beautiful specimen of book-making.

A. S. GATSCHET.

**THE VIGESIMAL SYSTEM OF ENUMERATION**

CYRUS THOMAS

As the vigesimal system is a factor of considerable importance in the study of the ancient civilization of Mexico and Central America, especially in regard to the native calendar of those regions, it is interesting to know to what extent this system of enumeration has prevailed in other parts of the world. As a step toward bringing together the data on this subject, the writer presents the following notes:

Although, as is well known, the people of Malaysia and southeastern Asia use the decimal system, yet there are some indications that the vigesimal system was formerly in use, at least at one point, in the latter region. Aymonier discovered, by an examination of the inscriptions at Bakou and Loley in Cambodia, an account of which is published in the *Journal Asiatique* for 1883, evidence of two systems of enumeration; one of these, which appeared to be the most recent and generally used, the decimal system; the other and more ancient, the vigesimal system. The examples he gives in the original characters make this so clear as to leave no doubt on the point. There are characters for each of the nine digits, for 20 and for 100. The character for 20 is distinct, and not two tens. In order to indicate 37, there is, first, the character for 20, then for 10, and last for 7. The 40 is two twenties; 50, two twenties and ten; 60, three twenties; 80, four twenties; 98 is four twenties, ten, and eight; for 384, three hundreds, four twenties, and four. A mingling of the two systems is apparent in some of the examples given by Aymonier, but the evidence of the ancient vigesimal system is too clear and distinct to permit of doubt.

Whether further evidence on this point has been obtained from the ruins of Cambodia the writer is unable to say, as he has not had access to the most recent publications on this subject. There are, however, a few facts which indicate the use of the vigesimal system in ancient times in Malaysia or southeastern Asia, or both.

Although the Malayo-Polynesian question is still considerably tangled, it is generally admitted that both the language and

the people of Polynesia were derived from the region of Malaysia and Farther India. It is therefore legitimate to look to Polynesia for echoes of the customs of the pristine home. According to A. Featherman (*Oceano-Melanesians*), the Marquesans, although using the decimal system, denoted "twenty" by a specific word, all the rest of the numbers being "compounded from ten and twenty with a multiple unit." The Nukahivahs, of the New Marquesas group, "have specific words for the units and ten, for twenty, for forty, for four hundred, and four thousand; all the other numerals are compounded of these with the aid of ten and the units." Thus *tekau-onohuu*, 20 plus 10 equal 30; *etahi-touha*, 1 by 40; *ua-touha*, 2 by 40 equal 80; *tou-ao'*, 3 by 400 equal 1,200, etc. According to the same authority the Hawaiian system of numeration is decimal, but "progresses by forties. There are specific words for the units and ten; eleven is expressed by ten and one over; for 76 they would say 40, 20, 10, and 6, and thus the numbers are counted by forties to four hundred, for which there exists a specific word. In this manner the numbers are expressed by the addition of intervening fractional numbers as high as four thousand and four hundred thousand, each of which is denoted by a specific word."<sup>1</sup> These facts apparently indicate a primary vigesimal system. John Crawford also came to the conclusion that there was an older numeral system once in use in Polynesia.

The Maya method of enumeration was very similar to that of the Polynesian nations mentioned. The numbers from one to eleven had specific names, but from twelve to nineteen by the addition of units to ten. There was a specific name for twenty, for four hundred, and for eight thousand. The intermediate numbers from twenty to four hundred are formed mostly by twenty as the multiple, and units, though there was not entire uniformity in this respect; from four hundred to eight thousand progress was made by four hundred as the multiple; yet there is evidence in several places of the use of ten as a multiple. It is apparent, however, in the codices that the count was by units to five, and then by fives to twenty, precisely as stated by Landa.

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<sup>1</sup> See also Transactions American Ethnological Society, vol. II, 229.

*Am. Anthropologist, Vol. 9, No. 12, Dec. 1896*

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<sup>1</sup> See also Transactions American Ethnological Society, vol. II, 229.

This metal has already been applied in a number of cases to commercial devices for this purpose, one of which is being manufactured at the present time by the Central Scientific Company.

Any increase of sensitiveness, or any reasonable amount of force on a given temperature change may be obtained by manipulation of the length, width and thickness of the metal. By using very thin sections extreme sensitivity may be obtained, deflections as great as one fourth inch per degree Centigrade being possible. On the other hand, by materially increasing the thickness great force can be created, in one instance approximately one fourth pound per degree Centigrade.

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G. E. Thermostatic Metal, as it is known to the trade, is produced regularly in thicknesses from .015 to .25 inch; widths up to 6 inches and lengths up to 36 inches. In special cases it may be obtained in thickness as small as .005.

I feel sure that a knowledge of the characteristics and adaptability of this material will enable many experimenters to solve problems of temperature control or indication with much greater ease and accuracy than heretofore.

CHESTER I. HALL

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#### COMMON NUMERALS

THE origin of our common number symbols has never been clearly established, but until recently all writers on this subject agreed that these symbols were transmitted to Europe by the Arabs who had obtained them from India. This is the view expressed in the general encyclopedias and in our mathematical histories which consider this question. For example, in the eleventh edition of the *Britannica* under the word "numeral" there appears the following statement:

The areas designated by states appear in the following table:

What is quite certain is that our present decimal system, in its complete form, with the zero which enables us to do without the ruled columns of the abacus, is of Indian origin. From the Indians it passed to the Arabians, probably along with the astronomical tables brought to Bagdad by an Indian ambassador in 773 A.D.

In view of these facts it is very interesting to note that during recent years available data relating to the origin of our common number symbols have been carefully reexamined by Carra de Vaux, who published in volume 21 of *Scientia* a brief summary of his results. Among the most surprising of these results are the following: Our common number symbols originated in Europe and from there were transmitted to the Persians. Both India and Arabia received them from Persia, so that the common term *Hindu-Arabic numerals* is decidedly misleading. The common numerals did not come from letters of the alphabet, but were formed directly for the purpose of representing numbers.

It does not appear likely that all of these conclusions reached by Carra de Vaux, who has made an extensive study of the intellectual life among the Mohammedans, will be at once accepted, but they tend to exhibit the weak foundation upon which the history of our common numerals has thus far rested. In fact, the nature of this question is such that it seems likely that general agreement as regards the origin of our numerals can result only from that attitude of mind (known as philosophy) which would rather accept as facts what can not be proved than acknowledge ignorance. Conclusions similar to those of Carra de Vaux were also expressed in a Russian work by N. Bubnow (1908), which was translated into German and published in Berlin in 1914.

G. A. MILLER

#### PSYCHOLOGICAL RESEARCH FOR AVIATORS

TO THE EDITOR OF SCIENCE: In his article on "Psychological Research for Aviators" in SCIENCE of January 24 Dr. Dunlap inadvertently neglects some of the most important

Vol. 7, No. 2, April 1894

**THE ORIGIN OF SACRED NUMBERS.\***

BY DANIEL G. BRINTON, M.D., LL.D., D.SC.

An investigation into the origin of sacred or holy numbers should exclude the consideration of numbers used in merely classificatory and conventional relations, as those which naturally flow from the quinary, decimal, duodecimal, and vigesimal systems of numeration; and also the cabalistic, occult or mystic employment of numbers, so common in the secret philosophies, as these were conscious fabrications or adaptations, in a social condition far removed from that of primitive thought.

Confining the study to holy or sacred numbers as observed in the early civilizations and among tribes living in what we call primitive conditions, where the culture status still bears a distinct ethnic character because largely indigenous and spontaneous, I have reached certain conclusions which, so far as I know, have not heretofore been stated, at least neither so fully nor so definitely, by any of the numerous writers on this subject.

I shall present these in categorical form and then proceed to defend them.

1. The sacred numbers are preëminently 3 and 4, or derived from these.
2. These numbers represent contrasting or antithetic symbolic notions, and arise from wholly opposite mental perceptions.
3. The number 3 derives its sacredness from abstract, subjective operations of the intelligence, and has its main application in the imaginary and non-phenomenal world.
4. The number 4 derives its sacredness from concrete and material relations, from external perceptions, and has its application in the objective and phenomenal world.
5. The associations which attach sacredness to these numbers arise in the human mind, of the same character, everywhere and

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\* Abstract of a paper read before the Oriental Club of Philadelphia, February, 1894.

pure Tanoan out of sixty-two, the complete enumeration. There are only six families in which the father and mother are both Tanoan. The mother of one family which has three of the six children is older than the child-bearing period, and by the restriction which forbids marriage within gentes the probability of pure-blooded Tanoan offspring from these children, when of age, is very much limited. It is not too much to say that in the next generation the percentage of pure Tanoan blood will be so small that we cannot regard the stock as Tanoan.

Of the adults it will be noticed that less than one-half the men and a little above this proportion of the women are Tanoan, and out of one hundred and twelve adults it will be seen that only fifty-four are pure bloods. Taken in connection with the small number of children of pure blood the modification in two generations is very significant.

The presence of twenty-three husbands of Tanoan women who do not belong to Tanoan gentes is a fact full of meaning. This condition has had a most important influence in determining the consanguinity of the stock.

The data in regard to extinct gentes simply means that the female line of these families has died out, although male descendants may still exist in Hano.

It seems legitimate to conclude from the summaries which have been given that the inhabitants of Hano are only in part Tanoan in their consanguinity, although speaking a Tanoan tongue. They seem to be more closely allied to the Hopi than to the Tanoan people of the Rio Grande, although both have differentiated from a common ancestral stock.

The persistence of the language of their forefathers, notwithstanding the changes in their blood kinship, illustrates in a striking manner a liability to error in supposing in all cases that two peoples speaking the same tongue are necessarily more closely related racially than those which are linguistically different. It is believed that in some cases, as a result of the rigid adherence to the matriarchal law, language may survive after racial kinship has changed. These possibilities are of profound importance in speculations as to the kinship of the Hopi themselves, as I shall try to show in subsequent articles.

at all times, so that no theory of borrowing is needed to explain identities or similarities in this respect.

6. Ethnic character, however, tends potently to develop especially either the one or the other, either the abstract symbolism of the 3 and its derivatives, or the concrete symbolism of the 4 and its derivatives; and, conversely, the preponderant development of the one or the other of these reveals, with instructive precision, the ethnic character of tribes and nations.

#### I. The "Three" Series.

All operations of the mind, all acts of intelligence, necessarily proceed in accordance with the three fundamental laws of thought, expressed in logic as the laws of Identity, Diversity, and Excluded Middle. These ever-present laws, though obscurely recognized, constantly exert their power in impressing a triple form on reasoning. Witness the form of the syllogism, or the logic of Hegel with its two antitheses reconciled by a higher synthesis, or the trilogies of the philosophy of Auguste Comte.

When, as in the mathematical logic of Boole, the syllogism is expressed in algebraic terms it is found to be represented invariably by an equation of three members, to wit,  $x = x \times x$ , or  $x = x^2$ , a symbolic notation which proves the triune nature of all subjective operations of the intelligence.

The two universal categories of the understanding (or modes of perception), Space and Time, invariably present themselves in a threefold aspect: Time as the Past, the Present, the Future, as expressed in the grammar of every language; Space, as Length, Breadth, and Thickness; or, with reference to position, Above, Beneath, and Here. The primitive perceptions of matter are likewise threefold: as solid, the earth; fluid, the water; gaseous, the air or wind.

The applications of these conceptions in mythology are most marked.

Time, as the past, the present, and the future, is represented by the three Norns of Teutonic myth, Urdhr (die Gewordene), Verdhandi (die Werdende), and Skuld (die Kommensollende). The three Fates of the Greeks correspond to these.

As the effects of Time conceived under this threefold aspect, we have the mythical concept of the threefold energy of the

gods. For example, the Indian Trīmurti, Brahma, creating; Viṣṇu, preserving; Śiva, destroying; and the Egyptian triad, Isis, Horus, Osiris—birth, life, death. These are what the Vedas call "the three paths of Being." To this also we must attach the division of the year into three seasons, Spring, Summer, Winter, etc.

From the necessary threefold relation of Space and Position come such expressions as "Indra, Lord of the Three Worlds;" "Creator of the Three Worlds;" the "Threefold World," and the like; and in the Latin poets, "mundus triformis," "mundus triplex," "Jovis regnum triplex," etc.; also the division into the Upper World, the Under World, and the Earth Plane, which we find a primitive conception in every continent.

The Christian trinity will occur to all, as well as the trinities of Buddhism and many less important faiths. Indeed, we may almost agree with Mr. Westcott when he says: "It is impossible to study any single system of worship throughout the world without being struck with the peculiar persistence of the triple number in regard to divinity."

*The Nine.*—A development from the 3 is the 9—thrice 3. The 3 worlds, for instance, are again divided into three each, making 9, as we find in the nine worlds of Teutonic myth, in the cosmic notions of the Aztecs, in the "novem spheræ celestes" of the Latins, and in the *tridiva*, threefold heaven of Indra. The body in Sanscrit is called "the 9 mouthed" or "the 9 doored," from its nine openings, through which the soul goes in and out in its nine forms of ether or spirit.

*The Thirty-three.*—A further development is 33. Eternity, Aditi, Unendlichkeit, is said in the Vedas to have 33 sons. The gods who lived with Indra in the upper heavens were 33. They were the Maruts, the Winds, sons of Indra. The ancient Persians, in the Vendidad, reckoned the total number of divine beings at 33.

## II. The "Four" Series.

The sacredness of the number 4 is derived directly from the relations of the human body to the external world about it, as I showed years ago in "The Myths of the New World." To a man, standing, space is distributed in front and behind him, to his

right hand and to his left. The body itself is regarded as of four sides. The Persian Vendidad speaks of man as built "with four walls;" so the French say, "un homme carré" for a thick-built, strong man, and we speak of such an one as "square-built." Space being thus divided, the known world was spoken of as "the 4 quarters of the World," and the sunrise—that most important of events to man—marking one quarter, the others were counted from it, to give the 4 Cardinal Points. These were generally identified with the winds that came from them, regarded as gods, mighty powers, bringers of rain and fair weather, of heat and cold, of the life and death of vegetation; hence of the seasons, of fertility and of food.

Thus in ancient Rome Janus, the year god, was represented with four faces, "Janus quadriformis," and, as I have amply shown, throughout America the tribal mythologies, rites, ceremonies, beliefs, are constantly and profoundly governed and moulded by this sacred number. It was almost as prominent in many of the early nations of the Old World.

*The Seven.*—The sacredness of the number 7 is a direct development of the number 4, not a combination of the 4 and the 3, as might be imagined, nor yet independently suggested by external objects, as is generally supposed; such as the 7 planets, the constellation of the 7 stars, the 7 colors of the rainbow, etc. These were coincidences which doubtless strengthened its holiness, but that it originally arose from the four spatial relations is clear from its development in America and India.

These spatial relations are not exhausted by the four cardinal directions and the areas they embrace. That is horizontal space only; to be complete, we must add the three conceptions of vertical space, Above, Below, and Here. This gives the sacred 7, the type of completeness and perfection. To express this graphically on a plane surface requires a figure of 7 parts. Such a ceremonial diagram of the 7 "Ancient Spaces," or primeval cosmogonic areas, as understood by the Zuñi priests, has been shown by Cushing. It represents the North, South, East, and West, and the Zenith, Nadir, and Middle, thus exhausting the visible world. The observer is always supposed, wherever he is, to stand in the center of the middle space; there, in the sacred buildings planned in accordance with this view stood the altar;

there, in the distribution of the population, was located the house or town of the holiest and highest priesthood (as in the "7 cities of Cibola," and the "7 caves" of Aztec legend).

*The Thirteen.*—This was also a derivative from the four, and carried with it the like associations of ideas. I have explained it fully, after Cushing, in my "Native Calendar of Central America" It arises from the addition of the celestial to the terrestrial notion of space. Both are supposed to have the same seven spaces or areas, but the middle of each is at one and the same spot—there, where the individual himself is. This, therefore, is counted but once, and the number 13 results. The steps of this process are perfectly demonstrable, and that they were precisely the same among the Sanscrit-speaking Indians of India as among the Zūñi Indians of our own land the following sentence from one of Prof. A. F. Potts' learned articles shows:

In the cosmogonical system of the natives of India, the earth consists of either 4, or 7, or 13 "islands," *dvipa*, disposed around Mt. Meru as a center, like the petals of the lotus flower around its stamen. The central space or island is always India itself, regarded as the middle region of the earth, its navel, as were also esteemed by their own inhabitants, China, the Middle Kingdom; Delphi, the home of the oracle; Tibet, Jerusalem, and in America, Cuzco, etc.

This interesting extract is sufficient to prove conclusively not only the relationship of these three numbers, the 4, the 7, and the 13, but also that the process of their development one from the other was entirely parallel in the East and the West Indies. Our week of 7 days was simply a distribution of the time of a lunation as nearly equally as possible to the 4 quarters of the world, and to the gods or genii identified with them. Rather from such associations than from observation, must we explain the fact that many north Asiatic peoples and probably also the primitive Aryans counted 13 and not 12 lunar months to the solar year.

### III. *The Sacred Numbers as Ethnic Criteria.*

As the 4 and its derivatives sprang from and remained connected with terrestrial and material relations, while the 3 and its derivatives arose from psychical and subjective sources, the predominance of one series or the other in the mythological

symbolism of a nation becomes a criterion of its general tendencies, either toward a material or a spiritual life.

In the American and Mongolian races the 4 and its derivatives are almost exclusively the ruling holy numbers, whereas the numerous triads and trilogies of the white race, as represented by the Egyptians, Greeks, ancient Germans, Kelts, Slavs, and Aryan Indians, are familiar to all scholars, and have been pointed out in ample detail by Simrock, Potts, and a host of other writers.

The ancient Babylonians, whoever they were, seem to have had a decided preference for the 4 and its derivatives, and from them probably the early Semites drew the superior sacredness which, as we see in the Old Testament, they so pointedly assign to that series. This profound ethnic contrast, original or derived, prevented them, when the religious sentiment reached a high development, from accepting the doctrine of the trinity, though as an abstraction of speculative thought, it is quite as elevated as the concept of unity. The latter is inconceivable except by the laws of identity, contrast, and exclusion, which forces it at once

into a triology.

In some primitive nations both series were developed side by side, though rarely with equal vigor, while in the symbolism of the most advanced cultures there is visible a blending of both, owing to borrowing and to the adoption of foreign ideas. Philosophers like Pythagoras and Heraclitu very early taught the mystic or occult powers of numbers, and this rapidly diverted their significance from their original intent in myth and art. To find what this was we must overlook all such later suggestion and go back, as I have endeavored to do in this paper, to man in his primitive condition and study the laws of his native psychical faculties and his unavoidable and universal environment.

NUMERAL SYSTEMS OF THE COSTA RICAN INDIANS

By H. PITTIER DE FÁBREGA

In the *Nineteenth Annual Report* of the Bureau of American Ethnology there appears an extensive memoir on the "Numeral Systems of Mexico and Central America," by Dr Cyrus Thomas. This work contains many facts and interesting suggestions, and it may be regarded as exhaustive in so far as it relates to the numeral systems of Mexico and the adjacent parts of Central America. We regret, however, to find several errors, some of which would indicate that the author was not familiar with all the literature pertaining to the languages of southern Central America.

In the present paper I desire to offer what I hope will prove to be a better explanation of the numeral systems of the several Costa Rican tribes; but first I wish to call attention to a few points in Dr Thomas's memoir. On page 882, we read: "The four following lists are from R. F. Guardia (*Lenguas indígenas Cent. Am. Siglo*, pages 101 and 110). The tribes are classed with the Chibcha group, a South American stock, but are, or were, located in Guatemala and Porto Rico." Then follow the lists, which include three Costa Rican languages and the Lean y Mulia. As the Cabécara, Viceyta, and Lean y Mulia appear under the same head, it will be natural for the casual reader to regard them as belonging to a single stock. But I do not see how such an investigator as Dr Thomas, who may be considered an authority on the distribution of the languages and tribes of Central America, could overlook the identity of the Lean y Mulia numerals with those of the Jicaque de Yoró (Honduras), published on page 915 of his memoir:

1.	<i>pani</i>	<i>pani</i>
2.	<i>matiaa</i>	<i>mata</i>
3.	<i>contias</i>	<i>condo</i>
4.	<i>chiquitia</i>	<i>diurupana</i>
5.	<i>cumasopni</i>	<i>comasopeni</i>
	etc.	etc.



A comparison of the vocabularies published by Fernández y Ferráz and Membreño<sup>1</sup> illustrates better still the identity, so that it is easy to understand that the Lean y Mulia were families of the Jicaque stock and were placed next to our two Costa Rican languages simply because the monk who understood these was also acquainted with the first ones. The Jicaque stock is situated in Honduras and not in Guatemala or "Porto Rico," as Costa Rica is called in Dr Thomas's paper.

On page 914 are found the numerals of the "Morenos" of Honduras. As explained by Membreño in his *Hondureñismos* (p. 193 et seq.), the Morenos are Caribs, brought to the mainland from the island of St Vincent, and their numerals are intermixed with French, not with Spanish as Dr Thomas asserts.

	MORENO	FRENCH	SPANISH
4	<i>gadri</i>	<i>quatre</i>	<i>cuatro</i>
5	<i>senc</i>	<i>cing</i>	<i>cinco</i>
6	<i>sis</i>	<i>six</i>	<i>seis</i>
7	<i>set</i>	<i>sept</i>	<i>siete</i>
8	<i>vit</i>	<i>huit</i>	<i>ocho</i>
9	<i>nef</i>	<i>neuf</i>	<i>nueve</i>
10	<i>dis</i>	<i>dix</i>	<i>diez</i>

I fear, moreover, that the *cinca* of the Sumos, and especially the *aunqui* of the Payas, have nothing to do with the Spanish *cinco*, notwithstanding their apparent likeness.

Now, to return to the numeral systems of Costa Rica, I would first state that Dr Thomas seems to have overlooked the two very important publications of Thiel<sup>2</sup> and Gabb,<sup>3</sup> and also the essays of Gagini and Pittier.<sup>4</sup> The first two are fundamental to the study of Bribri, or Viceyta, and to that of several other dialects; and in the

<sup>1</sup> Alberto Membreño, *Hondureñismos: Vocabulario de los provincialismos de Honduras*, 2ª edición, Tegucigalpa, 1897.

<sup>2</sup> Dr Bernardo Augusto Thiel, *Apuntes lexicográficos de las lenguas y dialectos de los Indios de Costa Rica*, San José de Costa Rica, 1882.

<sup>3</sup> Williams M. Gabb, *On the Indian Tribes and Languages of Costa Rica*, Proceedings Amer. Philosophical Society, Philadelphia, 1875.

<sup>4</sup> H. Pittier and C. Gagini, *Ensayo lexicográfico sobre la lengua de Térraba*, San José de Costa Rica, 1892. H. Pittier de Fábrega, *Die Sprache der Bribri Indianer in Costa Rica, herausgegeben und mit einer Vorrede versehen von Dr. Friedrich Müller*. Mit einer Karte. Wien, 1898.

latter the numeral systems are explained at length, at least for the Bribri and Térraba. In recent years I have been enabled to make a partial investigation of most of the other native languages still spoken in Costa Rica, the results of which, in relation to the numerals, I shall here endeavor to give.

#### I. BRIBRI

As already shown by Gabb, the Bribri have six distinct modes of counting, dependent on the shape or nature of the objects to be counted. In explanation of these methods, it will suffice to reproduce the examples given in my *Sprache der Bribri*:

#### BRIBRI MODES OF COUNTING

##### (a) For People

<i>Sē ekur</i>	1	person (lit. us one, or our one)
<i>sē biúr</i>	2	persons
<i>sē mñor</i>	3	"
<i>sē kur</i>	4	"
<i>sē sker</i>	5	"
<i>sē terul</i>	6	"
<i>sē kuúr</i>	7	"
<i>sē pagul</i>	8	"
<i>sē suri-tu</i>	9	"
<i>sē dábop</i>	10	"
<i>sē dabop ki ekur</i>	11	" (lit. ten upon one)
<i>sē dabop ki buúr</i>	12	"
<i>sē dēbop buu djuk</i>	20	" (lit. to do two, or twice ten)
<i>sē dēbop buu djuk ki ekur</i>	21	"
<i>sē dēbop mña djuk</i>	30	"
<i>sē dēbop kie djuk</i>	40	"
<i>sē dēbop ske djuk</i>	50	"
<i>sē dēbop ker djuk</i>	60	"
<i>sē dēbop kuúr djuk</i>	70	"
<i>sē dēbop par djuk</i>	80	"
<i>sē dēbop suri-tu</i>	90	"
<i>sē dēbop djuk dēbop</i>	100	" (lit. to do ten times ten)

In this case the expression corresponding to the number is preceded by the pronoun *sē*, we, us; *Sē ekur*, *sē biúr*, etc., should be translated 'one of us,' 'two of us,' etc.

## (b) Round Objects

<i>áx ek</i>	1 orange
<i>áx buúk</i>	2 oranges
<i>áx mñor</i>	3 "

and so on, as for people. Here, as in every other case, the name of the objects to be counted precedes the numeral, and the only distinguishing feature is a slight variation in the form of the latter.

## (c) Small Animals

<i>du etk</i>	1 bird
<i>du butk</i>	2 birds
<i>du mñatk</i>	3 "
<i>du kir</i>	4 "

and so on. Same observations as for round objects.

## (d) Long Objects and Large Animals

<i>stsa é-tub</i>	1 rope
<i>stsa bu-tub</i>	2 ropes
<i>stsa mña-tub</i>	3 "
<i>stsa ki-tub</i>	4 "
<i>stsa ske-tub</i>	5 "
<i>stsa tek-tub</i>	6 "
<i>stsa tuk-tub</i>	7 "
<i>stsa pak-tub</i>	8 "
<i>stsa suri-tub</i>	9 "
<i>stsa dēbop-tub</i>	10 "
<i>stsa dēbop ki e-tub</i>	11 "

The numeral is followed by the particle *tub*, the meaning of which I have not as yet been able to ascertain.

## (e) Trees and Plants

<i>tsirú iré kar</i>	1 cacao tree
<i>tsirú bur kar</i>	2 cacao trees
<i>tsirú mñor kar</i>	3 " "
<i>tsirú kir kar</i>	4 " "
<i>tsirú sker kar</i>	5 " "
<i>tsirú tērul kar</i>	6 " "
<i>tsirú kur kar</i>	7 " "
<i>tsirú pagur kar</i>	8 " "

<i>tsirú suri-tu kar</i>	9 cacao trees
<i>tsirú dēbop kar</i>	10 " "
<i>tsirú dēbop ki er-kar</i>	11 " "

and so on, as for the first series. In counting trees, the name of the special tree (here *tsirú*, cacao) precedes the numeral, which is followed by the generic name *kar*, tree.

## (f) Houses

<i>hú etk ué</i>	1 house
<i>hú butk ué</i>	2 houses
<i>hú mñatk ué</i>	3 "
<i>hú kir ué</i>	4 "
<i>hú sker ué</i>	5 "
<i>hú terur ué</i>	6 "
<i>hú kur ué</i>	7 "
<i>hú pagur ué</i>	8 "
<i>hú suri-tu ué</i>	9 "
<i>hú dēbop ué</i>	10 "
<i>hú dēbop ki etk ué</i>	11 "

and so on. The mode of counting houses is analogous to that for trees, except that the suffix is *ué*.

## 2. CABÉCARA

In the Cabécará language the first five numerals are *é-kra*, *boor*, *mēnar*, *kir*, and *sker*, with the following variations:

<i>é-tka hú tré</i>	1 house
<i>boor hú tré</i>	2 houses, etc.
<i>gsa djuri é-tba</i>	1 rope
<i>gsa djuri bo-tbú</i>	2 ropes
<i>gsa djuri mña tbú</i>	3 "
<i>gsa djuri tki-tbú</i>	4 "
<i>gsa djuri sker-tbú</i>	5 "
<i>tsirú-kurú er-ka-ri</i>	1 cacao tree
<i>tsirú-kurú bor-ka-ri</i>	2 cacao trees, etc.

For people, round objects, and birds or other small animals, the Cabécará use the ordinary numerals, preceded by the name of the

object counted and without a suffix. The Cabécará have also ordinal numbers, as follows:

<i>i-sē-kētū</i>	first
<i>i-tú-ki</i>	second
<i>i-bē-ta</i>	third
<i>i-xā-na</i>	fourth

In comparing the four dialects of the Cabécará language, a few slight variations are observed. The examples given are from the Coen dialect, which I have studied at length. One and two, *é-kra* and *bo-or*, remain the same; *mēñar* differs only in its terminal vowel being more or less open, i. e., it passes gradually through *a*, *â*, and *o*. *Kir* takes a *b* initial in the Chirripó and Tucurrique dialects (*e-kir*), and sometimes a *t* (*t-kir-i*) in Cabécará. In Chirripó, *sker*, five, becomes *skun-grē*.

The Tucurrique count only to five in their language, and thence onward employ the Spanish numerals. For numerals six to nine the Coen repeat the count from one to five, adding the prefix *ki*, 'upon': *ki-e-kra* upon one, *ki-boor* upon two, etc. The Estrella and Chirripó have special terms, viz., *ter-lu* or *ter-ē-re* six, *kur* seven, *pa-gr* eight, *tēne-grē* nine. In the four dialects ten is *dē-bop* or *dē-bom*, and none of them seems to extend beyond this. On asking a Cabécará why he did not count like the Estrella people, he answered, "Because *this* is the only right way," and at the same time put his left thumb against his right thumb and said, "*ki-é-kra*"; then he placed his left index against his right index and said, "*ki-boor*," etc.

### 3. TÉRRABA

The Térraba language seems in many ways to have been systematized, probably at the instance of Franciscan missionaries. For example, there are two definite series of numerals, characterized by the prefixes *kró* and *kuó*, the first of which is employed in counting long objects, the other in counting rounded ones. In fact, *kró* means 'tree,' and *kuó* 'round.' The Brurán people can count up to one thousand, although I doubt whether there is among them any one who can conceive such a quantity.

1. <i>kua-rá</i>	<i>kra-rá</i>
2. <i>kuú-bú</i>	<i>kru-bú</i>

3. <i>kuo-miá</i>	<i>kro-miá</i>
4. <i>kuo-bkin</i>	<i>kro-bkin</i>
5. <i>kuo-xkin</i>	<i>kro-xkin</i>
6. <i>kuo-terrē</i>	<i>kro-terrē</i>
7. <i>kuo-kok</i>	<i>kro-kok</i>
8. <i>kuo-kuong</i>	<i>kro-kuong</i>
9. <i>kuo-xkup</i>	<i>kro-xkup</i> ( <i>u</i> = French <i>eu</i> )
10. <i>kuo-rubóp</i>	<i>kro-rbóp</i>

Ten is also *sak-kuarā*, and this term is used in forming the numerals from 11 to 19.

11. <i>sak kua-rá kinxó kua-rá</i>	<i>sak kua-rá kinxó kra-rá</i>
12. <i>sak kua-rá kuú-bú</i>	<i>sak kua-rá kru-bú</i>
13. <i>sak kua-rá kuo-miá</i>	<i>sak kua-rá kro-miá.</i>
20. <i>sak puk</i>	
21. <i>sak puk kinxó kua-rá</i>	<i>sak puk kinxó kra-rá</i>
22. <i>sak puk kinxó kuú-bú</i>	<i>sak puk kinxó kru-bú</i>
30. <i>sak mia</i>	
31. <i>sak mia kinxó kua-rá</i> (etc.)	
40. <i>sap kin</i>	
50. <i>sak xkin</i>	
60. <i>sak terrē</i>	
70. <i>sak kok</i>	
80. <i>sak kuong</i>	
90. <i>sak xkop</i>	
100. <i>sak dēbop</i>	
101. <i>sak dēbop kinxó kua-rá</i>	
110. <i>sak dēbop kinxó sak kua-rá</i>	
120. <i>sak dēbop kinxó sak puk</i>	
130. <i>sak dēbop kinxó sak mia</i>	
200. <i>sak dēbop krin kuú-bú</i>	
210. <i>sak dēbop krin kuú-bú kinxó sak kua-rá</i>	
300. <i>sak dēbop krin kuo-miá</i>	
400. <i>sak dēbop krin kuo-bkin</i>	
1000. <i>sak dēbop krin kuo-ru bop.</i>	

*Sak* or *sap* means the fingers, that is, the ten fingers of both hands. One finger is *sapkuó*; ten, or *sak-kua-rá*, means the (ten) fingers once. In *sak-puk*, twenty, or twice ten, we find the Tirub *puk* or *pug*, instead of *bú*. In counting the whole series of numbers,

the tens are not expressed, i. e., 11 is *kin-xó kua-rá* or *kin-xó kra-rá*, 16 is *kin-xó kuo-tërre* or *kin-xó kro-tërre*; and similarly 21, 31, or 26, 36, etc. But an isolated number must express itself completely: *hú sak-mia kin-xo kua-rá*, 31 houses, etc.

## 4. TÍRUB

The Tirub, on the headwaters of Tararia river, are partly the ancestors of the Térraba of Diquis valley. They seem to count up to seven only:

- |                    |                     |
|--------------------|---------------------|
| 1. <i>fra-da</i>   | 4. <i>b-keng-de</i> |
| 2. <i>pug-da</i>   | 5. <i>x-keng-de</i> |
| 3. <i>mia-re</i>   | 6. <i>ter-de</i>    |
| 7. <i>ko-gu-de</i> |                     |

But their language has not yet been thoroughly investigated, and further research may bring to light a more comprehensive numeral system.

## 5. BRUNKA

The Brunka Indians certainly do not count beyond eight, and this is much the more to be wondered at, inasmuch as they are by far the most intellectual and civilized of all the Costa Rican aborigines. Their numerals are:

- |                    |                     |
|--------------------|---------------------|
| 1. <i>cé-tse</i>   | 5. <i>kxi-xkang</i> |
| 2. <i>boók</i>     | 6. <i>téx-hang</i>  |
| 3. <i>ma-ang</i>   | 7. <i>kuú qkú</i>   |
| 4. <i>ba-qkang</i> | 8. <i>ut-ang</i>    |

Beyond eight they employ the Spanish numerals.

## 6. GUATUSO

The numeral system of the Guatusos is still more poverty-stricken, extending only to five; but they have also a word for ten, the root of which evidently means two:

- |                   |                     |
|-------------------|---------------------|
| 1. <i>doo-ka</i>  | 4. <i>po-quái</i>   |
| 2. <i>ppán-gi</i> | 5. <i>o-ti-ni</i>   |
| 3. <i>poó-se</i>  | 10. <i>pa-un-ka</i> |

## THE COSTA RICAN LANGUAGES IN GENERAL

In 1898, not having knowledge at that time of Dr Adolf Uhle's paper, presented ten years before, on the relations and migrations

of the Chibcha,<sup>1</sup> I appended to my grammar of the Bribri<sup>2</sup> the following conclusions, the result of personal investigations on the subject:

(1) With but few and possibly casual exceptions there is no close connection between the languages of Costa Rica and those formerly spoken northward from that country.

(2) San Juan river and Lake Nicaragua form the true ethnic boundary between Central America and South America, excepting about the western slope, where northern migrations penetrated as far as the peninsula of Nicoya.

(3) The Costa Rican languages undoubtedly bear closest resemblance to those spoken toward the southeast, in Chiriquí and Veragua, and analogy can be traced to the Cuna, Chibcha, Tule, and the languages of more distant tribes in the northern part of South America.

(4) The Nicaragua depression forms a chorographic limit to the dispersion of the two great ethnic groups of Central America as well as to the distribution of plants and animals.

A further study of the subject has satisfied me that the second and fourth of these conclusions are too absolute in their assertion, since it has been found that the southern migration has gone beyond the San Juan river as far as Honduras, in the same way that, on the western side, the Chorotegas have penetrated far beyond the lake of Granada, to the end of the peninsula of Nicoya. For there is no doubt that the Ramas and Sumos of Nicaragua and the Payas of Honduras belong to the same linguistic stock as the Costa Rican Indians, as a comparison of the numerals in the table which follows quite clearly shows.

In 1888 Dr Uhle endeavored to prove the existence of a parental bond between the Isthmian Indians and the Chibcha, by comparing their numerals and an extended series of selected words. But at that time he did not have at his disposal very complete data on the languages of the former, so that a repetition of the experiment will give results far more conclusive.

An examination of the Guaymi and Dorasque dialects will show

<sup>1</sup> Adolf Uhle, *Verwandtschaften und Wanderungen der Tschibtscha* (*Compte-Rendu du Congrès International des Américanistes*, 7<sup>e</sup> session, Berlin, 1888, pub. Berlin, 1890).

<sup>2</sup> *Loc. cit.*, p. 51.

at once their analogy with the Térraba; they have the prefixes *kuo* and *kra*, more or less altered; and similar lexical devices are traceable in the Cuna and even in the Chibcha. In order to facilitate these comparisons, the first thing to be done is to eliminate the affixes, so as to have before us the numerical expressions only. Also, in the cases where there are several variations of a single idiom, the simplest root should be chosen as a standard. We have taken into account these details in forming the following tables, in which are compared the numerals of all the Central American tribes that may possibly belong to a single linguistic stock:

## COMPARISON OF NUMERALS IN CENTRAL AMERICAN LANGUAGES

	1	2	3	4
Chibcha	<i>at-a</i>	<i>bo-za</i>	<i>mi-(ka)</i>	<i>mui-hi-(ka)</i>
Cuna	<i>(kué<sup>n</sup>)-tai-ke</i>	<i>po-kua</i>	<i>pa-(gua)</i>	<i>pa-ke-(gua)</i>
Dorasque	<i>ku-é</i>	<i>mat, mo</i>	<i>mas, bak</i>	<i>pa-ki, pa-ka</i>
Guaymi	<i>ti, da</i>	<i>bu</i>	<i>mo</i>	<i>bo-ko</i>
Térraba	<i>ra</i>	<i>bu</i>	<i>mia</i>	<i>b-kin</i>
Tirub	<i>ra</i>	<i>pug</i>	<i>mia</i>	<i>b-keng</i>
Cabécara	<i>ek</i>	<i>be</i>	<i>mē-ñar</i>	<i>b-kir</i>
Bribri	<i>ek, et</i>	<i>bu</i>	<i>mē-ñar</i>	<i>kir</i>
Brunka	<i>et</i>	<i>bo</i>	<i>ma-ang</i>	<i>ba-qkang</i>
Guatuso	<i>doó-ka</i>	<i>pan</i>	<i>poó-se</i>	<i>po-qai</i>
Rama	<i>sai-ming</i>	<i>puk</i>	<i>pang-(sak)</i>	<i>kun-kun</i>
Sumo	<i>as</i>	<i>bo, bu</i>	<i>bas</i>	<i>arun-ka</i>
Paya	<i>as</i>	<i>pok</i>	<i>ma-i</i>	<i>ka</i>

	5	6	7
Chibcha	<i>hiz-(ka)</i>	<i>ta</i>	<i>ku-kup(ka)</i>
Cuna	<i>a-ta-le</i>	<i>ner-kua</i>	<i>ku-(ble-ge)</i>
Dorasque	<i>ma-le</i>	<i>pa-ka, ta-ka</i>	
Guaymi	<i>ri-ge</i>	<i>ti</i>	<i>ku-gu</i>
Térraba	<i>x-kin</i>	<i>tërre</i>	<i>kok</i>
Tirub	<i>x-keng</i>	<i>ter</i>	<i>ko-gu</i>
Cabécara	<i>s-ker</i>	<i>ter, ted</i>	<i>kur</i>
Bribri	<i>s-ker</i>	<i>ter</i>	<i>kur</i>
Brunka	<i>xki-xkang</i>	<i>tex-hang</i>	<i>ku-u-qku</i>
Guatuso	<i>o-ti-ni</i>		
Rama	<i>kuik-as-tar</i>		
Sumo	<i>cin-ka</i>		
Paya	<i>aun-ki</i>	<i>se-ra</i>	<i>ta-uá</i>

	8	9	10
Chibcha	<i>su-hu(za)</i>	<i>a-ka</i>	<i>ub-chi-hi-ka</i>
Cuna	<i>pa-ba-ka</i>	<i>pa-ke-ba-ge</i>	<i>am-be-gi</i>
Dorasque			
Guaymi	<i>kuó</i>	<i>kon-kon, é, kon</i>	<i>jó-to</i>
Térraba	<i>kuón</i>	<i>xkup</i>	<i>s-bop</i>
Tirub			
Cabécara	<i>pa-grē</i>	<i>tē-ne-grē</i>	<i>dē-bom, do-bob</i>
Bribri	<i>pa-gul</i>	<i>su-ri-ti</i>	<i>dēbop</i>
Brunka	<i>ut-ang</i>		
Guatuso			<i>pa-un-ka<sup>1</sup></i>
Rama			
Sumo			<i>sa-lap</i>
Paya	<i>o-uá</i>	<i>tax</i>	<i>u-ka</i>

## MODES OF COUNTING

It is not for me to decide whether the variation according to the class of the objects to be counted, observed in the numerals of several of the languages referred to in this paper, is a peculiar and original feature of these languages, or whether it has been transmitted from a more highly developed linguistic system. With reference to the use of the fingers in primitive numeration and to the origin of the words expressing numbers, I may be allowed to mention that the Costa Rican Indians have a double mode of counting, i. e., they use their fingers in current oral computations, and grains of corn whenever they wish to keep a record of of any number. In my expeditions across the southern part of the country, my men used grains of corn to keep an account of their days of labor; and in Talamanca, a Bribri, who had collected beetles and land shells for me at the rate of ten for five cents, presented me with a number of grains corresponding to the groups of ten collected. The custom of counting by means of seeds was transmitted from the aborigines to the Spanish invaders, but instead of corn they used cacao beans, and these even acquired sometimes a monetary value. A popular expression still in vogue in Costa Rica, in speaking of a worthless thing, is "*No vale dos cacaos*"; that is to say, "It is not worth two cacao beans."

<sup>1</sup> *Pa, pan* is two in Guatuso, *aun-ki* is five in Paya. It is not unlikely then, that, given the relation between the two languages, *pa-un-ka* is "two-five."

Now, the numeral expressions bear a well-defined correlation with the custom just described. In Bribri, *i-kuo* means a grain of corn, and *e-kra* means one (originally, without doubt, to count long things, *e-kuo* having fallen into disuse; compare the T erraba numerals). In Br unka *e-e-tsi* and *e-e-tse* have the same relative signification, and the *as* (= one) of the Sumos and Payas is found to correspond again with corn in *as-ka*, a corn-field. This seems to indicate that several, if not all, of the tribes of southern Central America counted by means of grains of corn, one grain finally becoming the symbol of unity.

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## NUMERAL SYSTEMS OF THE LANGUAGES OF CALIFORNIA

BY ROLAND B. DIXON AND A. L. KROEBER

In examining the tables of numerals from Californian languages which constitute this contribution, it must be borne in mind that they belong to more than twenty different linguistic families. After this fact is taken into consideration as regards their lack of uniformity, there still remain great discrepancies between the numerals of dialects and languages belonging to one family. It is especially striking that these differences within a family are often not so much phonetic or dialectic as due to a different radical derivation of the numerals. When it is remembered how uniformly the same radicals appear, throughout the great Indo-European family, in languages that are not only mutually unintelligible, but so different that their common origin would not be suspected but for study, the frequency with which, in California, languages that the Indians recognize as akin and which are in part mutually intelligible, show three or four or more radical differences in their first ten numerals, is a remarkable feature of these numeral systems.

This diversity is due to the nature of the formation of the numerals. In the languages of civilization the radicals of numeral words up to ten are meaningless save for their numerical significance; the same is true of the higher units of counting, and all the remaining words are formed directly from combinations of these without the use of nouns or verbs. In the languages of the California Indians most of the numerals above ten, and many of those above five, are not radicals but derivative words. These derivative words are partly arithmetical, as two-two for four; partly composite words, like fin-

ished-hand for five, denoting objects or actions expressive of the process of counting. The expression by numerals of an arithmetical process is not foreign to Indo-European, and obviously can be absent from no language; thirteen, seventy-one, two hundred and five, as much as undeviginti, and quatre-vingt-dix-sept, are based altogether on a few primary radicals and on mathematical processes. The difference between our languages and those of the California Indians is that we restrict such descriptive terms to the numbers above ten and do not in the formation of the derived words depart from abstract mathematical processes; whereas they begin mathematical operations not infrequently with so low a number as four, and in many cases cling to concrete arithmetical operations in their counting.

While both these characteristics, compound numerals for very low numbers, and the use of words denoting visible things or acts to express them, are often accompanied by an unpracticed counting sense, this is not the case among the California Indians. The Australians and South Americans who count 1, 2, 2-1, 2-2, 2-2-1, or 1, 2, 3, 2-2, 3-2, for obvious reasons do not continue this method very far. Every Californian language of which anything can as yet be positively said in this respect, counted into the hundreds when desired, though it does not follow from this, as Conant has pointed out as a general fact among primitive people, that such ability to form and use comparatively high numbers carries with it a very definite idea of these numbers as such. However primitive numerical processes were in California, they were not rudimentary.

The following are the processes that exist in the numeral systems of California:

*Quinary.*—This fundamental process is common in California, but cannot be said to predominate. Two phases of it must be distinguished. First, and less distinctive, the quinary process below ten only, the numerals from six to nine being formed on a quinary basis, but those from ten to twenty being formed from those below ten added directly to the word for ten or an equivalent; so that from ten on a decimal method replaces the quinary. Second is a form of the quinary process continued to twenty, or even above; five, ten, fifteen, and twenty serving as the bases from which the

intervening numerals are formed either by addition or subtraction. This method, which is shown by Nahuatl and Eskimo, is the most complete type of quinary numeration. In cases where the numbers

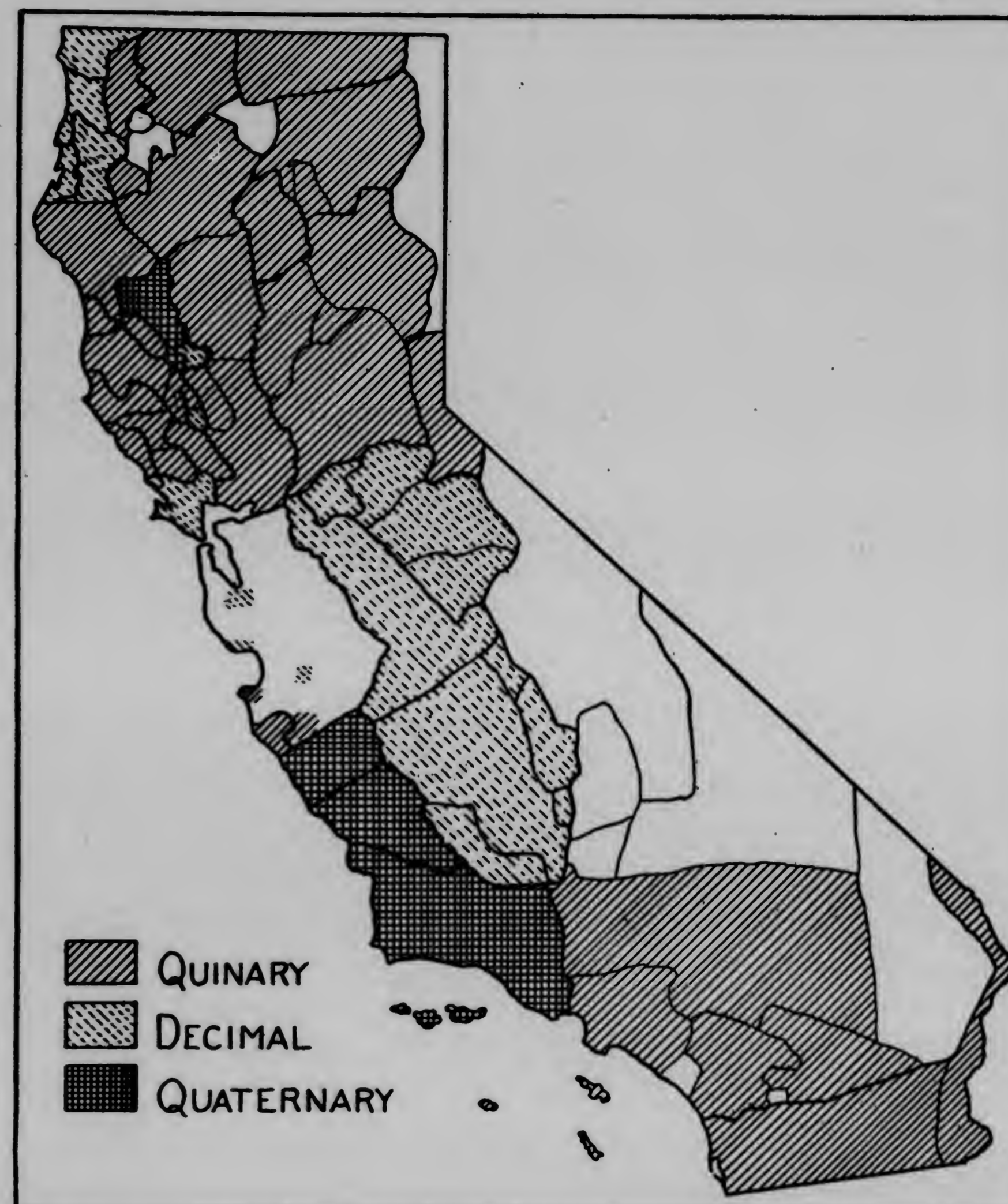


FIG. 40. — Distribution of Methods of Counting from One to Ten in California.

above twenty appear not to have been much used, or where other causes were operative, as in certain Californian languages, the method of counting by fives is carried on indefinitely until it becomes too cumbersome; but more frequently twenty is taken as the unit of the



next higher order and the well-known quinary-vigesimal system results.

*Decimal.* — From the nature of things the decimal system is farther removed from concrete groupings, or other tangible or dynamic operations in counting, than the quinary. It must not be supposed however, from analogy with our own tongues, that the numerals of Californian decimal systems are always irresolvable radicals. There are enough other mathematical processes besides the quinary used by the California Indians to make it possible for many of the numerals below ten to be derivative words with ascertainable meaning. Even where no mathematical process is employed, the numerals may be descriptive of some circumstance attending the habitual method of counting. Thus in Yurok seven, which would fall on the index finger as the Indians count on their fingers, is derived from the verbal root denoting pointing, which gives name to the index finger; and eight from the word long, from which the middle finger is named.

As in the case of the quinary system, the decimal method must be separately considered below ten, from ten to twenty, and above twenty. A few Californian languages show a decimal system throughout, even to being based on hundreds from one hundred up; but not infrequently an otherwise decimal system is quinary below ten. Sometimes a decimal system changes above twenty to a vigesimal one, for which an analogy is not far distant in French. That a system whose numerals to ten are purely decimal — unanalyzable — should from ten to twenty follow the quinary method, seems almost incredible; yet such is the case in certain Miwok or Moquelumnan dialects, though it is fair to add that the quinary method is so far crystallized in these higher numerals that the etymology of the words can scarcely be evident to the Indians without deliberate reflection.

*Vigesimal.* — Counting by twenties from twenty to one hundred is rarer in California than counting by tens. Sometimes it appears as a continuation of a quinary method, sometimes it is imposed on a decimal system. It should be noted that the tens between the twenties may be formed by two methods, either by addition to the preceding twenty, or by subtraction from the following one: fifty

being forty-plus-ten or sixty-less-ten. The method by subtraction is confined to a small continuous area, occupied by parts of three different linguistic stocks in the north-central part of the state, Northwestern Maidu, Southern Wintun, and several Pomo divisions.

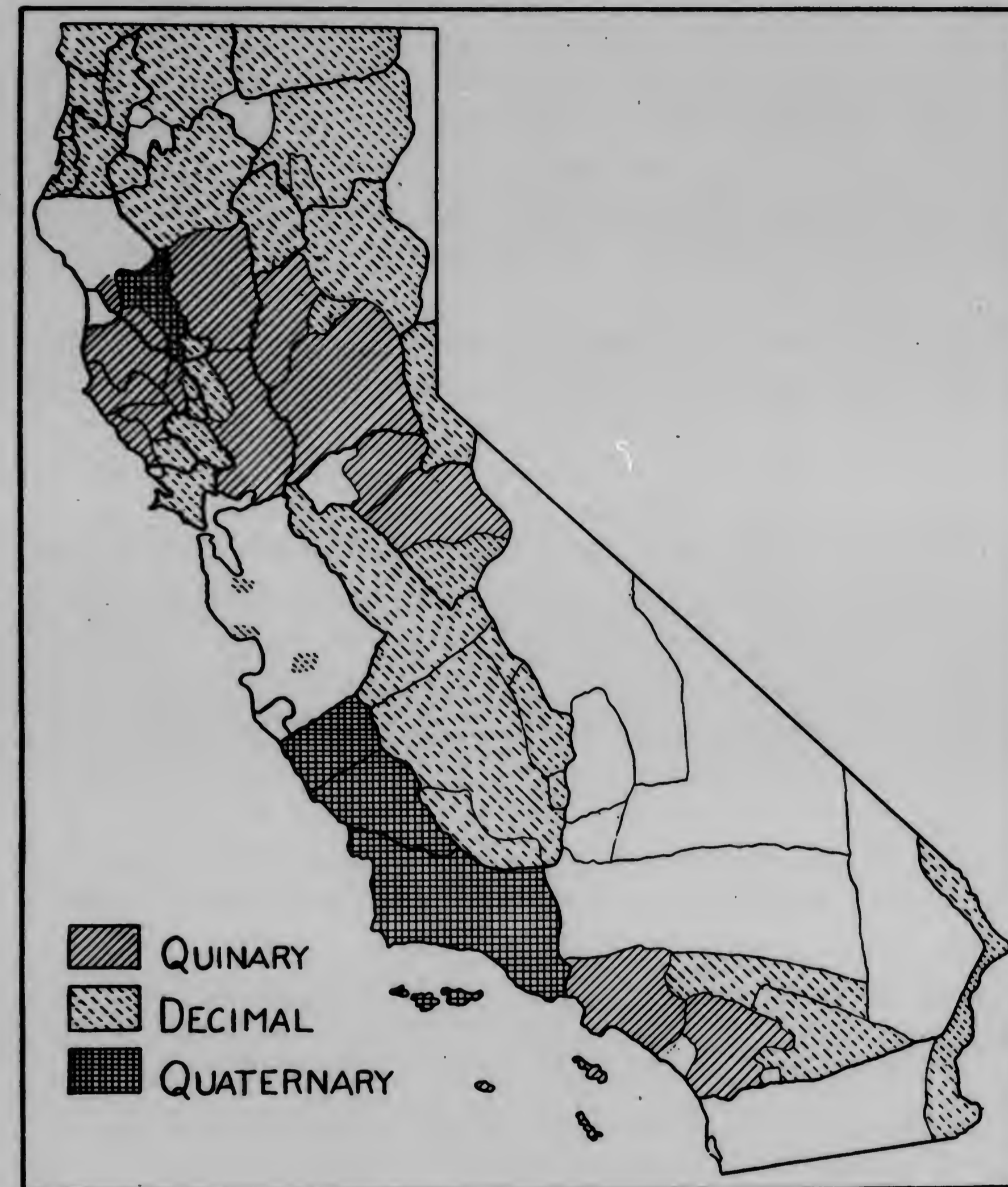


FIG. 41. — Distribution of Methods of Counting from Ten to Twenty in California.

*Quaternary.* — Counting by fours is a striking feature of Californian languages, which was already commented on by Duflot de Mofras. It is probably not connected to any extent with ritualism,

for while four is the ceremonial number of a great part of the state, the California Indians are distinctly unritualistic. Some trace of this method is found in many of the linguistic families in the state. Often it takes only the form of a derivation of eight from four, which may be regarded as due either to a multiplicative process or a quaternary one. Two groups however show this process in fuller form: Chumash and Salinan, and one dialect of Yuki. The latter is absolutely quaternary, there being no trace of any quinary, decimal, or vigesimal method in any part of the system.

This extreme quaternary system will be found in the table under the heading Yuki proper. The old man from whom the numerals were mainly obtained was asked if he knew how many fingers he had. He answered without hesitation, *hutcamopesul*, ten. He was asked how many fingers and toes he had, and said he did not know. Two pairs of hands were spread on the ground in front of him and he was asked to count the fingers on them. He proceeded to push the fingers aside one by one, grouping them by fours, and pausing after eight and sixteen. One thumb having been overlooked, he made the total *molmihuipei*, nineteen, and announced that as the result. This incident is told not to show the feeble arithmetical powers of the Yuki, for the old man's error was due no doubt to his being unaccustomed to count other people's fingers, and had he been allowed to operate, as habitually, with sticks, the mistake would probably not have occurred; but to illustrate how completely this system, many of whose terms do have reference to the fingers, departs from the common primitive quinary-vigesimal finger-and-toe counting method, and is purely quaternary. It does not follow that because people count by their fingers they count by fives.

*Multiplication.*—The most common form of this method of making numerals is the duplicative. Six is occasionally formed from three, as in Wintun, Yana, and Salinan; four more frequently from two; and eight in many cases from four or two. Many families show one of these phenomena in one or more of their dialects. Duplication is not however the only multiplicative method. Three-four for twelve, and three-five for fifteen are found in certain Wintun, Salinan, Chumash, and Shoshonean dialects.

*Addition and Subtraction.*—In a measure a cross-classification is made by the introduction of these methods (as by that of the multiplicative), since no system can be built up to reach any higher designations without them, and as quinary systems mainly depend

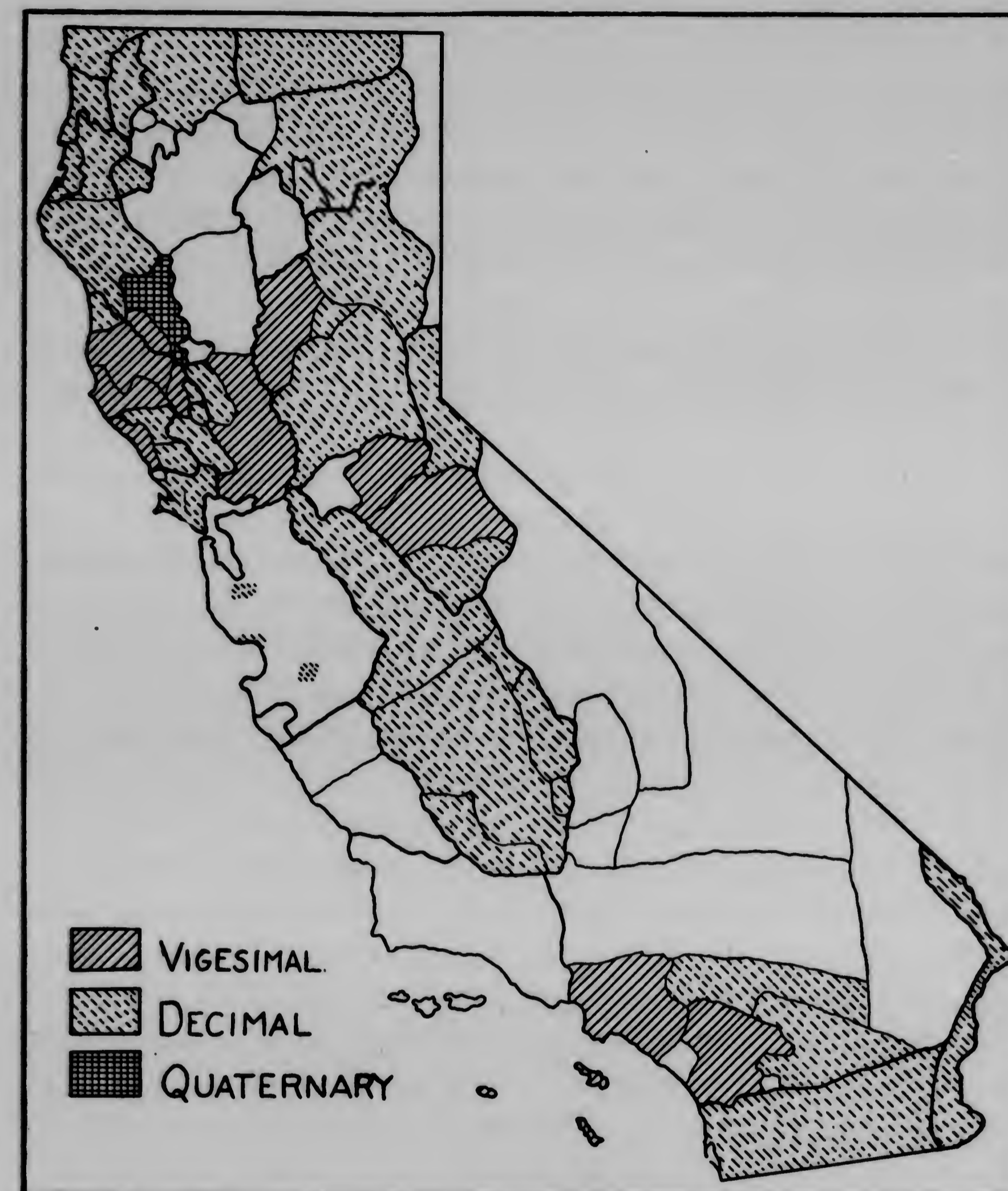


FIG. 42. — Distribution of Methods of Counting from Twenty up in California.

on addition and subtraction for the numbers between six and nine. These methods are mentioned here only to call attention to the fact that both of them occur, subtraction naturally most frequently in the case of nine, fourteen, and nineteen.

*Analogy.*—A principle which by itself can scarcely be considered as formative of numeral words, but which undoubtedly influences them, is that of phonetic analogy. It is to be expected that succeeding numerals will be similar in sound even more often among uncivilized people where consecutive counting is frequent, than under conditions of culture where mathematical operations have largely supplanted this. In California phonetic analogy is very frequent. Both the beginning and end of words exhibit the phenomenon. In the great majority of cases the analogy occurs between two and three, to which circumstance parallels can be found in other American languages, and in fact in those which people of European civilization speak. Shoshonean, Yurok, Shastan, Chimariko, Pomo, Wishosk, Washo, Esselen, Wappo Yuki, Athabaskan, Yuman, and Wintun each shows a resemblance between its forms for two and three.

The nature and causes of the diversity of the numeral systems are shown plainly in the table of four Yuki dialects. With one exception the numerals up to three are sprung from the same radicals in the several Yuki dialects. From four on they differ completely and are all obviously composite. In many cases the meaning of the compositions is clear, though their force or origin may not always be so evident; in other cases it is at least certain that the words are composite, practically all Yuki radicals being monosyllabic. While one of the four systems is quaternary, two others are quinary-decimal, and the fourth is quinary-vigesimal. In addition to the difference in general method, the actual significance of each of the numerals, the actions or objects referred to, are almost invariably different through the four dialects.

It has sometimes been assumed that there exist on the one hand a quinary-vigesimal method of counting and on the other a decimal one. Some authors have not hesitated to class certain languages, of which only the numerals up to ten were known, as "quinary-vigesimal," because up to ten they are quinary. The material presented in the accompanying tables, as well as the maps, show that such an assumption cannot be made too cautiously. Decimal systems change to vigesimal above twenty (Miwok) and to quinary between ten and twenty (Miwok), and quinary systems fre-

quently are purely decimal from ten up (Shasta, Yana, etc.). In the material here presented there are more cases of a quinary system changing to a decimal or a decimal to a vigesimal, than of a quinary becoming vigesimal or a decimal remaining decimal. To be sure these facts relate only to California, and it can scarcely be doubted that, the world over, for reasons that are obvious, the quinary and vigesimal methods are probably more often associated with each other than with the decimal. But it is clear that such an association must be regarded as at most a general tendency, never as an a priori fact.

The accompanying maps showing the geographical distribution by linguistic families of the various methods of numeral formation, sum up the material collected and the generalizations stated. They are in no need of a commentary beyond a notice of the extent to which the principle of territorial continuity of characteristics obtains. While diversity and irregularity seem the chief features of the maps, yet the areas in which similar numeral methods occur are not randomly scattered, but with few exceptions are geographically continuous. This makes it clear that, with but little borrowing of specific words distinct families have considerably influenced each other as regards their processes of numeral formation.

The numerical systems of North America as a whole may also be briefly referred to. For the numerals below ten, the various linguistic stocks are about evenly divided territorially, roughly half the area of the continent being characterized by the use of the decimal method, and half by the use of the quinary system, although in a number of cases where the decimal system prevails it is not pure, but shows more or less multiplication and subtraction. For numerals above ten, on the other hand, the decimal system, generally pretty pure, occurs in the enormous majority of cases, covering the entire continent with the exception of parts of California and Mexico, the Eskimo area, and the sections occupied by the various members of the Caddoan stock. Only in these few areas does no trace of the decimal system exist above ten. At a number of points on the Northwest coast a quinary system somewhat mixed with decimal occurs.

Mexico is noteworthy for practically not possessing a single native language showing the decimal system either below or above ten.

Consistent or thorough decimal systems, where all the numerals, both below and above ten, are on this basis, cover very large areas, including the regions occupied by the large and important Siouan, Athabascan, Shoshonean, Iroquoian, and Salish stocks. This area is in the main that of the central portion of the continent, and it extends to the Pacific coast in only one or two places.

As contrasted with the wide extension of thorough decimal systems, consistent quinary-vigesimal systems occur but rarely. Outside of Mexico, they are to be found only among the Caddoan tribes, the Eskimo, and in parts of California.

It follows then that the decimal system is, in whole or in part, the predominant system throughout most of North America. The strength of the general tendency toward the decimal basis is shown by the fact that not only do systems which start decimally continue on that basis throughout, but also that those which initially are quinary, in most cases shift above ten to the decimal method. In this connection lies one of the most striking evidences of the variety which obtains in California, for not only do there occur within the area of the state all the general variations in numeral systems which are to be found in the entire remainder of the continent, but there exist also systems found nowhere else in North America, namely those initially decimal but changing in the higher numbers to quinary, and those quaternary throughout.

Altogether it would appear that numerals occupy a very different place in Californian languages from their philological position in Indo-European and other great linguistic families of the old world, and that on the whole they cannot be given the importance in comparison and in questions of determination of genetic relationship, that they occupy in these languages.

	<i>Lutuami</i> <sup>9</sup>	<i>Athabascan</i> <sup>3</sup> <i>Tolowa</i>	<i>Athabascan</i> <i>Hupa</i>	<i>Athabascan</i> <i>Kato</i>
1	nac, nas	La	La	Laxa
2	lap	nax	nax	naka
3	ndan	tak	tak	tak
4	unip	dintce	dink	naka-naka
5	tunip	cwela	twola	lasane
6	nas-ksapt	kostanne	xostan	bûn-Laxa
7	lap-ksapt	tcete	xokit	bûn-naka
8	ndan-ksap	lanisût	kenim	bûn-tak
9	nas-xeks	La-ûndui	mûkkostan	bûn-nakanaka
10	te-unip	nesûn	miniûn	laL-baûn
11	taunep-anta nas <sup>9</sup>	La-tcata	miniûn muwa na-La	laLbaûn-bil-Laxa
12	taunep-anta lap	nax-a-tcata	miniûn muwa na-nax	laLbaûn-bil-naka
13	etc. regularly to 19	tak-tcata		laLbaûn-bil-tak
14		dintce-tcata		laLbaûn-bil-nakanaka
15		cwela-tcata		laLbaûn-bil-lasane
16		kostanne-tcata		laLsane-bil-Laxa
17		istcete-tcata		laLsane-bil-naka
18		nax duxonni-tcata		laLsane-bil-tak
19		Laundui-tcata		laLsane-bil-nakanaka
20	lap-eni taunep <sup>9</sup>	na-de-nesûn	na-dim miniûn	naka-dûn-lal-baûn
21	lap-'ni taunep-anta lap	na-de-nesûn-La-tcata	tak-ûtdim-min Lûn	naka-dûn-lal-baûn-bil-Laxa
30	nda-ni taunep	tak-nesûn	dink-itdim-miniûn	tak-dûn-lal-baûn
40	wunep-ni taunep	dintce-nesûn	twola-dim-miniûn	nakanaka-dûn-lal-baûn
50	etc. regularly to 90	cwela-nesûn	xokit-dim-miniûn	lasane-dûn-lal-baûn
60			kenim-dim-miniûn	bûnLa-dûn-lal-baûn
70			mûkkosta-dim-miniûn	
80			La-it-dikkin	
90			nax-ût-dikkin	
100	taunep-ni taunep	La-atcûn		
200	lap-eni taunep-ni taunep	na-din-La-atcûn		

## Chimariko

p'un  
xoku  
xodai  
kuigu  
tsanehe  
p'un-tcibum  
xoku-cbum  
xodai-tcibum  
p'un-tcigu  
saan-p'un  
p'un-rasut  
xoko-risut  
xodai-risut  
kuigu-rsut  
tsanehe-risut  
p'un-tcibum-arsut  
xokocbum-arsut  
xodaicibum-arsut  
p'un-tcigu-rsut  
xoku-mtun saanp'un  
xoda-mtun saanp'un  
kuigu-mtun saanp'un  
tsanehe-mtun saanp'un

## Wishok

kotser  
riter  
riker  
riaower  
wesak-elel  
tekleluk-elel  
halow-elel  
hiowitaw-elel  
mercerokw-elel  
rulok-heler  
me-kotser  
me-riter  
ritava-helel  
hikwa-helel  
rama-helel  
wesohela-weler  
teklelukhele-weler  
haluhele-weler  
hiowitahela-weler  
mercerokwhele-weler  
kotses-wani-heler

Yurok<sup>3</sup>

qore<sup>a</sup>  
niil  
naxkceil  
tsoneL  
merotsamel, meru  
qoxtseu  
tserucek  
knewetek  
qretermeq  
werlerweril  
werlerwi nemi qo  
werlerwi nemi naain  
werlerwi nemi naxkceil  
werlerwi nemi tsonel  
meru nemi tsam  
qoxtseu nemi tsam  
tserucek nemi tsam  
knewetek nemi tsam  
qretermeq nemi tsam  
nemi-werL  
nemi-werL nemit qoor  
naxkeemi-werL  
tsoneL-werL  
merutsi-werL  
qoxtseutsi-werL  
tserucektsi-werL  
knewetektsi-werL  
qretermeqtsi-werL  
werlerwitsi-werL

Karak<sup>1</sup>

1 yisa  
2 axak  
3 kwirak  
4 pis  
5 trop  
6 kirivkir  
7 axak-anivkir  
8 kwirak-anivkir  
9 trop-atitram  
10 trailhar  
11 trailhar karu yisa  
12 trailhar karu axak  
13 trailhar karu kwirak  
14 trailhar karu pis  
15 trailhar karu trop  
16 trailhar haru kirivkir  
17 trailhar karu axakanivkir  
18 trailhar karu kwirakanivkir  
19 trailhar karu tropatitram  
20 axak-a-trailhar  
21 axak-a trailhar karu yisa  
30 kwirak-a-trailhar  
40 pis-a-trailhar  
50 trop-a-trailhar  
60 kirivkir-a-trailhar  
70 axakanivkir-a-trailhar  
80 kwirakanivkir-a-trailhar  
90 tropatitram-a-trailhar  
100 yisa patcis  
200 axak patcis

Wintun  
Northern

ketem  
palet  
panol  
Lawi  
tsansem  
sere-panol  
loloqi  
se-Lawi  
ketem-ilis  
tiqelis  
tiqelis ketem-Lomi  
tiqelis pa-Lomi  
tiqelis pano-Lomi  
tiqelis Lawi-Lomi  
tiqelis tsane-Lomi  
tiqelis sere-pano-Lomi  
tiqelis loloqi-Lomi  
tiqelis se-Lawi-Lomi  
tiqelis ketem-ilis-Lomi  
kete wintun  
kete wintun ketem-Lomi  
panol tiqelis  
pal wintun  
tsanse tiqelis  
panol wintun  
kete semhanot  
pal semhanot

Wintun  
Central

ketet  
palel  
panol  
Lawit  
tcancem  
se-panol  
tumil  
tse-Lawit  
cema-ketet [sic]  
cema  
cema-palel [sic]  
= 3 [sic]  
= 4 [sic]  
= 5 [sic]  
panol-tcancem  
atc-ketet  
= 2  
= 3  
= 4  
ketet-tcak  
= 5 [sic]

Wintun  
Southern

ete-ta  
pampa-ta  
punul-ta  
emus-ta  
ete-sem-ta  
sere-pul-ta  
serp-ete-ta  
pan-emux-ta  
panem-ete-ta  
pampa-sem-ta  
lum-eteta  
panL-omi  
panLomi-tela  
Loti  
punu-sem-ta  
pos-eteta  
pos-e-pano  
pan-ueli  
yaig-ueli  
ete-kai  
etekai-La-etela  
ponL-ara-xsla  
pampa-kai  
Lematin-postLai  
pos-Lai  
Lematin-emukai  
emu-kai  
Lematin-etesemkai  
etesemkai

Wintun<sup>6</sup>  
Southern, Cache Creek

1 ete-ta  
2 pampu-ta  
3 punul-ta  
4 emus-ta  
5 ete-sem-ta  
6 ser-pul-ta  
7 serp-uteta  
8 pan-emus-ta  
9 pan-emus-teta  
10 pampa-sem-ta  
11 papu-sem-eteta  
12 panL-omi  
13 panpu-sem-punulta  
14 panpu-sem-emus-ta  
15 panpu-sem-ete-sem-ta  
16 etc. to 19  
17  
18  
19  
20  
21  
30 punL-ada  
40 emus-pampusemta  
50 etesen-pampusemta  
60 serpul-pampusemta  
70 serpute-pampusemta  
80 panemus-pampusemta  
90 panamusteta-pampusemta  
100  
200

Whi from ?

	Pomo <sup>5</sup> Northern	Pomo Central	Pomo Eastern	Pomo Southwestern	Pomo Southern	Pomo Southeastern	Pomo Northeastern
1	tca	tato	kali	ku	t'ca	dan	tcaki
2	ko	ko	xotc	ko	ako	xos	kon
3	subu	sibo	xomka	sibo	misibo	xoxat	kutc'aka
4	tak	duo-ko	dol	mitca	mi'tca	dako	kalkoton
5	cal	natsui	lema	tucu	tucu	talko	tc'a-ucon
6	tsadi	tsadi	kula-xotc	lan' tca	lan-tca	xowaloxat	tca deika
7	koba	koina	koka-dol	lan' ko	lat-ko	sebaita, serpateta	tcumalan
8	koko-dol	koko-dol	hadagal-com	komtca	komtca	panamusta, dan-widi	celawi-tca
9	kowal-com	namilka-com	hadagal-tek	tcato	tcato	xut-pacem	na'kata
10	kowal-tek	namilka-tek	hadagal-na-kali	tca-coto	tca-cuto	pacem	celawi-tcaki
11	kowal-na-tca	namilka-na-tato	hadagal-na-xotc	nan-tca	nan-tca	pacem-ke-dan	kat-tcaki
12	kowal-na-ko	namilka-na-ko	hadagal-na-xomka	na-ko	na'ko	pacem-ke-xos	kat-kokai
13	kowal-na-subu	namilka-na-sibo	xomka-mar-na-xomka	na-sibo	nan-sibo	pacem-ke-xoxat	kat-kutcaika
14	komat-com	komat-com	xomka-mar-na-xomka	si-hma-con	si-hma-con	pacem-ke-dako	kat-kalkoto
15	komat-tek	komat-tek	xomka-mar-na-xomka	si-hma-tek	si-hma-tik	pacem-ke-talko	
16	komat-na-tca	komat-na-tat	xomka-mar-na-xotc	si-hma-nan-tca	si-hma-nan-tca	pacem-ke-xowaloxat	
17	komat-na-ko	komat-na-ko	xomka-mar-na-xomka	si-hma-na-ko	si-hma-na'ko	pacem-ke-sebaita	
18	komat-na-subu	komat-na-sibo	xomka-mar-na-xomka	si-hma-na-sibo	si-hma-nan-sibo	pacem-ke-panamusta	
19	tca-hma-com	tca-hma-com	xai-di-lema-com	tca-hma-con	tca-ham-con	pacem-ke-xutpacem	
20	tca-hma-tek	tca-hma-tek	xai-di-lema-tek	tca-hma	tca-hma-tik	ete-kai	
21	tca-hma-na-tat	tca-hma-na-tat	xai-di-lema-tek	tca-hma-nan-tca	tch-hma-nan-tca	ete-kai-ke-dan	
30	na-na-kowal-tek	na-namilka-tek	na-hadagal	lantca-hma	lantca-hma	xoxolo-mai	
40	ko-te	ko-te	xotsa-xai	ku-hai	tca-hai	dan axots	
50	kowal-subu-te	namilka-wi-sibo-te	hadagal-e-xomka-xai	coto-hma	tucu-hai	talko-tal-pacem	
60	subu-te	sibo-te	xomka-xai	si-hmak-teidu	tucu-hai	xowalka-tal-pacem	
70	na-kowal-i-ta-te	namilka-wi-duoko-hai	hadagal-ai-dola-xai	si-hmak-teidu	lantca-cuto	caba-tal-pacem	
80	ta-te, tak-hai	duoko-hai	dol-a-xai	si-hmak-teidu-tcacoto	latko-cuto	dan-wi-tal-pacem	
90	na-kowal-cal-hai	namilka-wi-natsui-hai	hadagal-ai-lema-xai	ko-hai	komitca-cuto	xut-pacem-tal-pacem	
100	cal-te, cal-hai	natsui-hai-tek	lema-xai	ko-hai-tcacoto-ko	tcato-cuto		
200	kowal-hai	namilka-tek-hai	hadagal-a-xai	ko-hai-teahma-ko	teacuto-hai		
					ako-hai		

	Round Valley	Yuki <sup>4</sup>	Yuki Coast	Yuki Huchnom	Yuki Wappo	Washo
1	pa <sup>n</sup> -wi	pow-ik	pow-ik	pu-we	pawe	lak'a
2	op-i	op-ik	op-ik	op-e	hopi	heske-ñ
3	molm-i	molm-ik	molm-ik	molm-e	hoboka	helmi-ñ
4	o-maha <sup>n</sup> t, op-maha <sup>n</sup> t	hilkil-opik	hilkil-opik	kes-ope	ola	hawa
5	hui-ko	pou-pat	pou-pat	pu-putc	gada	tubaldi-ñ
6	mikas-tcil-ki	pou-tit	pou-tit	pu-tal	pa-tenauk	tubaldi-lak
7	mikas-ko	ope-tot	ope-tot	opi-nun	hopi-tenauk	tubaldi-hesken
8	paum-pat, mipat-al-a-wa	molme-tit	molme-tit	kina-ss-nun	hopi-han	hawaawa
9	hutcam-pa <sup>n</sup> -wi-pan	hilkil ope-tit	hilkil ope-tit	helpiso-pu-tal	paw-alak	tubaldi ida hawa
10	hutcam-opi-sul	popate-tit	popate-tit	helpiso-humate	mahaic	laka mutsumi
11	molmi-sul	op-keckeneclak	op-keckeneclak	helpiso-ope-tik	mahaic-bawa-len	laka mutsumi ida lak
12	omaha <sup>n</sup> t-sul	mol-keckeneclak	mol-keckeneclak	helpiso-molme-tik	mahaic-hopi-len	laka mutsumi ida heske-ñ
13	huiko-sul	hilkil op-keckeneclak	hilkil op-keckeneclak	a'la-pu-tan	mahaic-ola-len	
14	mikas-cilki-sul	poupat-keckeneclak	poupat-keckeneclak	a'lau'	mahaic-patenauc-len	
15	mikasko-sul	hilkil op-keckeneclak	hilkil op-keckeneclak	a'la'-ope-tik	mahaic-paalak-len	
16	hui-co(t), or 'eight'	poupat-keckeneclak	poupat-keckeneclak	a'la'-ope-tik	mahaic-paalak-len	
17	pa <sup>n</sup> -wi-hui-luk, or 'nine'	op-keckeneclak	op-keckeneclak	a'la'-kinaanun-tik	mahaic-paalak-len	
18	opi-hui-luk, or 'ten'	mol-keckeneclak	mol-keckeneclak	pu-al-yak pu-tan	mahaic-paalak-len	
19	molmi-hui-poi, or 'eleven'	hilkil op-keckeneclak	hilkil op-keckeneclak	pu-al-yak	mahaic-paalak-len	
20	omaha <sup>n</sup> t-hui-poi, or 'twelve'	poupat-keckeneclak	poupat-keckeneclak	pu-al-yak	mahaic-paalak-len	
21		mol-keckeneclak	mol-keckeneclak	misau op'-alya	hopi-hol	heske mutsumi
30		hilkil op-keckeneclak	hilkil op-keckeneclak	op'-alya	hopi-hol paa-len	helmi mutsumi
40		poupat-keckeneclak	poupat-keckeneclak	misau mom-alya	boko-hol	
50		op-keckeneclak	op-keckeneclak	mom-alya	ol-hol	
60		mol-keckeneclak	mol-keckeneclak	misau kinasanun-alya	gada-hol	
70		hilkil op-keckeneclak	hilkil op-keckeneclak	kinasanun-alya	patenauc-hol	
80		poupat-keckeneclak	poupat-keckeneclak	misau kinasanun-alya	hopitenauc-hol	
90		op-keckeneclak	op-keckeneclak	kinasanun-alya	hopihan-hol	
100		mol-keckeneclak	mol-keckeneclak	pu-al	paalak-hol	
200		op-keckeneclak	op-keckeneclak	ope-al	mahaic-hol	la' mutsumutsumi

	<i>Shastan</i> <i>Achomawi</i>	<i>Shastan</i> <i>Atsugewi</i>	<i>Shastan</i> <sup>30</sup> <i>Shasta</i>	<i>Yana</i> <sup>8</sup>
1	hamis	tsutsatsisi	ts'amo	pai-ku
2	haq	hoki	xokwa	o'-mitci
3	tsasdi	kiski	xatski	pul-mitci
4	hadama	haq'-kau	irahaya, idahaya	tau-mi
5	latu	harapakina	e' tsa	tcim-an, tcimani
6	mas-uts	tcu-put-saki	tso-wateha	pur-han, bun-hari <sup>8</sup>
7	haq-uts	hoki-put-saki	xokwa-wateha	tcumini
8	hadame-lilp	kiski-put-saki	xatski-wateha	taum-hari, u'tesa <sup>8</sup>
9	malusi-dudjiku hamis-antji	tcwi-put-saki	irahaya-wateha	pai-itca-tenna, pai-itca <sup>9</sup>
10	malusi	tcuw-iksii	e'tse-hewi	hats-er'i, hats-an
11	malusi hamis-atumi	tcuwiksii tcu-i wawi	e'tsehewi-tok tsea keheha	pai-mamii, pai-iwa
12	malusi ede-haq-atumi	hoki-i wawi	e'tsehewi-tok xokwa keheha	o'-mamii, ow-h-iwa
13	malusi ede-tsasd-atumi	kiski-i wawi	etc. regularly to 19	pul-mamii, pul-iwa
14	malusi ede-hadam-atumi	haqau-i wawi		taumi-mamii, taum-iwa
15	malusi ede-lad-atumi	harapakina-i wawi		tciman-mamii, tciman-iwa
16	malusi ede-masuts-atumi	tciriputsaki-i wawi		purha-mamii
17	malusi ede-haquats-atumi	hokiputsaki-i wawi		tcumini-mamii
18	malusi ede-hadamelil-atumi	kiskiputsaki-i wawi		taumhari-mamii
19		tcwirapsaki-i wawi		paicatunna-mamii
20	haq-el-malusi, masis	hok'-ne tcuwiksii	xokwa-id e'tsehewi	uciwaii
21	haq-el-malusi hamis-atumi	hok'-ne tcuwiksii tcw-i wawi		uciwaii hatsermamii
30	tsasd-il malusi	kiks-ne tcuwiksii		
40	hatam-il malusi		xatski-dai e'tsehewi	
50	lat-il malusi		irahaya-idu e'tsehewi	
60	masutj-il malusi		e'ts-idu e'tsehewi	
70	masuts-wade hamisatumi malusi		tsuwad-iru e'tsehewi	
80	masuts-haq-ilatumi malusi		xokwawad-idu e'tsehewi	
90			xatskiwad-iru e'tsehewi	
100	malus-el malusi		irahayawad-idu e'tsehewi	
200			e'ts-idu-wad-idu e'tsehewi	

	<i>Maidu</i> <i>Northwestern</i> <sup>18</sup> — <i>Konkau</i>	<i>Maidu</i> <i>Northwestern</i> <sup>18</sup> — <i>Mooritorun</i>	<i>Maidu</i> <i>Northeastern</i> — <i>Genese</i>	<i>Maidu</i> <i>Southern</i> <sup>18</sup> — <i>Spanish Flat</i> <sup>18</sup>
1	wikte	wikte	suti	wite
2	pene	pene	pene	pen
3	sapu	sapwi	sapu	sapwi
4	tsöye	tsöye	tsöye	tsöye
5	ma-tsani <sup>14</sup>	ma-wika <sup>15</sup>	ma-wika	ma-wik
6	sai-tsoko	sai-tsoko	sai-tsoko	tombo
7	matsan-pene	topwi	topwi	topwi
8	tsöye-tsoko	pen-tcoi	pen-tcoi	pen-tcoi
9	tsöye-ni-masoko <sup>10</sup>	peliom	peliom	pen-lio
10	ma-tsoko	ma-tsoko	ma-tsoko	ma-tsani <sup>14</sup>
11	wikem-noko <sup>11 12</sup>	wikte-ni wikem-noko <sup>11</sup>	masok-na sutim <sup>16</sup>	hi-woto
12	peni-wikem-noko	wökem-noko	wökem-noko <sup>11</sup>	pen-woto
13	sapwi-ni-hiwali <sup>10</sup>	sapwim botam	masok-na sapwi <sup>10</sup>	sapwi-ni-al
14	tsöye-ni-hiwali	tsöyem botam	masok-na tsöyem	tsöi-ni-al
15	hiwali	matsokom mawikom	masok-na mawikem	hiwal
16	wök-ni-maiduk-wökö <sup>10</sup>	matsokom saitsokom		oiseto
17	peni-maiduk-wökö	etc.		penem maiduk
18	sapwi-ni-maiduk-wökö			sapwi-nim maiduk
19	tsöye-ni-maiduk-wökö			tsöi-nim maiduk
20	maidu-k-wökö			kom maiduk <sup>17</sup>
21		penim nokom	penem masoko	
30	matsok-ni pene-ma	sapwim matsoko	sapwim masoko	sapwim matsan
40	peni-ma	etc., regularly	etc., regularly	tsöim matsan
50	matsok-ni sapwi-ma			
60	sapwi-ma			
70	matsok-ni tsöye-ma			
80	tsöye-ma			
90	matsok-ni matseni-ma			
100	matseni-ma			
200				

	Moquelumnan Plains	Moquelumnan Amador	Moquelumnan Tholumne	Moquelumnan Mariposa	Moquelumnan Coast—Western and Southern Coast—Northern
1	kenatl	luti	keñe	keñe	kene
2	oyoko	otiko	otiko	otiko	ota
3	teloko	tolokocu	tolokocu	tolokot	teleka
4	oicoko	oyisa	oyisa	oyisa	otota
5	kacoko	macoka	macoka	mahoka	kedeko
6	temepu	temoka	temoka	temoka	patsadat
7	kenekak	kenekaku	kenekaku	titawa	semlawi <sup>20</sup>
8	kawinta	kawinta	kawinta	kawinta	otaya
9	woe	wo'e	woe	eliwa	kenen-helak
10	ekuke	naatca	naatca	naatca	ukukutsi
11		lu-cakena	keñ-hateaku	naatca keñe hateuni	kene-walik
12		otik-cakena	otik-sakenu	naatca otiko-i hateuni	ota-walik
13		toloti-aku	tolok-sakenu	naatca tolokot-ui hateuni	etc. regularly
14		kolok-aku	kolok-aku	naatca oyisa hateuni	patsada-ko-walik
15		yuali	yuali	naatca mahoka hateuni	
16		oy-ota	oyoto	etc. to 19	
17		otiko-maiazo	naatca m <sup>11</sup> kenekaku		
18		tak-cakena	naatca m <sup>11</sup> kawinta		
19		minimi	naatca m <sup>11</sup> woc		
20		naa	naa	oti-ak naatca	kenenhela-ko-walik
21		naa-ima luti	naa m <sup>11</sup> keñe	oti-ak naatca keñe hateuni	ota-tumai
30		naa tomeaki <sup>19</sup> naatcai	naa m <sup>11</sup> naatca	tolo-yak naatca	ota-tumai-to-kene
40		otik-mama <sup>19</sup>	otik-m <sup>11</sup> m <sup>11</sup>	oyis-iaak naatca	teleka-tomai
50		otikmama tomeaki <sup>19</sup> naatcai	otik-m <sup>11</sup> m <sup>11</sup> naatca heyi	maho-yak naatca	etc. regularly
60		tolok-momo <sup>19</sup>	tolok-m <sup>11</sup> m <sup>11</sup>	temo-yak naatca	
70		tolokmomo tomeaki <sup>19</sup> naatcai	tolok-m <sup>11</sup> m <sup>11</sup> naatca heyi	titawa-yak naatca	
80		oyis-momo	oyis-m <sup>11</sup> m <sup>11</sup>	kawita-yak naatca	
90		oyis-momo tomeaki <sup>19</sup> naatcai	oyis-m <sup>11</sup> m <sup>11</sup> naatca heyi	eliw-iaak naatca	
100		macok-mumu <sup>19</sup>	macok-m <sup>11</sup> m <sup>11</sup>	keñe nenu, naatc-iaak naatca	ukukutsi-tomai
200				gicis gicis	

	Yokuts Valley	Yokuts Foothills	Yokuts Kern Lake	Shoshonean Gabrielino	Shoshonean Cahuilla	Shoshonean Serrano
1	yet	yet	yit	puku	supli	haukup
2	ponoi	poñoi	puñi	wehe	wi	wor
3	copin	copin	cop	pabe	pa	pahi
4	hotponoi	hatpañi	tapañi	watsa	witcuw	watca
5	yitcinil	yitciñud	yitciñul	mahar	nama-qwan-añ	maha <sup>19</sup> tc
6	tc'olipi	tc'odipi	ts'olipi	pabahe	qwan-supli	pawahai
7	nomtc'il	nomtc'in	numts'in	watsa kazia	qon-wi	watc'-kuwik
8	mun'oc	mun'oc	mu'nas	wehe-s watsa	qon-witcuw	wa'-wutc
9	coponhot	nonip	wutcat	mahar kazia	qon-tcumi	ma'-kuzik
10	t'ieu	t'ieu	t'ieu	wehe-s mahar	nama-tcumi	wor-maha <sup>19</sup> tc
11	yetc-am	yetc-am	dōwap	wehe-s mahar koi puku	peta-supli	pu'pa-haukup
12	pated-om	cuyukai	culokai	wehe-s mahar koi wehe	peta-wi	pu'pa-wor
13	copi-om	copi-om	t'ieu ya cop <sup>21</sup>		peta-pa	pu'pa-pahi
14	hotcp-om	hatcp-am	t'ieu ya tapani		peta-witcuw	pu'pa-watca
15	yitc-am	yitc-am	t'ieu ya yitciñul		peta-namaqwanañ	pu'pa-maha <sup>19</sup> tc
16	tc'olp-om	tc'oap-om	t'ieu ya ts'olipi		peta-qwansupli	
17	nomtc'-om	nomtc'-om	t'ieu ya numts'in		peta-qonwi	
18	mun'c-am	mun'c-am	t'ieu ya mu'nas		peta-qonpa	
19	coponhot-min	nonp-om	t'ieu ya wutcat		peta-qonwiticu	
20	ponoi t'ieu	poñoi t'ieu	puñi t'ieu	wehe-s wehe-s mahar	wis namitcumi	wōho-wormaha <sup>19</sup> tc
21		poñoi t'ieu yet			wis namitcumi petasupli	
30	copin t'ieu	copin t'ieu	cop t'ieu	pabe-s wehe-s mahar	pas namitcumi	pohi-wormaha <sup>19</sup> tc
40	hotponoi t'ieu	hatpañi t'ieu	tapañi t'ieu	watsa-hes wehe-s mahar	witcius namitcumi	watca-wormaha <sup>19</sup> tc
50	yitcinil t'ieu	yitciñud t'ieu	yitciñul t'ieu	mahar-es wehe-s mahar	namaqwanahes namitcumi	
60	etc.	etc.	etc.		qwan-suplis namitcumi	
70					qonwis namitcumi	
80					qonpas namitcumi	
90					qonwiticus namitcumi	
100	yet pitc	yet pitc	yit demenitc	wehe-s mahar-es wehe-s mahar	supli pisetiwenit	
200	ponoi pitc	poñoi pitc				



<i>Chumash</i> <i>San Luis Obispo</i>	<i>Chumash</i> <i>Santa Cruz Island</i>	<i>Chumash</i> <i>Santa Barbara</i>	<i>Chumash</i> <i>Santa Ynes</i>
1 tsxumu <sup>23</sup>	ismala	paka <sup>24</sup>	paka <sup>24</sup>
2 ecin	isxum	ickomo	ickom
3 mica	masex	masex	masõx
4 paksi <sup>23</sup>	ckumu	ckumu	ckumu
5 tiyewi	sit-isma	yiti-paka	yiti-pakas
6 ksua-sya	sit-isxum	yiti-ckom	yiti-ckom
7 kqua-mice	sit-masex	yiti-masex	yiti-masõx
8 ckomo <sup>23</sup>	malawa	malawa	malawa
9 cumo-tcimaxe	spa	tspa	ts'pa
10 tuyimili	ka-ckum	kel-ckomo	tciya
11 tiwapa	telu	tulu	na-paka <sup>25</sup>
12 takotia	masex-pa-ckumu	masex-eskumu	na-ickom
13 wak-cumu		kel-paka	na-masõx
14 wakl-esin		kel-icko	na-ckumu
15 wakl-mice		kel-masex	na-yitipakas
16 peusi		peta	na-yitickom
17			etc.
18			
19			
20			
21			
30			
40			
50			
60			
70			
80			
90			
100			
200			
	isxum-pas-kackum <sup>25</sup>	ickom-c-kelckomo <sup>25</sup>	ickom-a-tciya <sup>25</sup>
	masex-e-pas-kackum	mase-c-kelckomo	masõx-a-tciya
	ckumu-pas-kackum	cumu-c-kelckomo	ckumu-a-tciya
		yitipake-c-kelckomo	yitipakas-a-tciya
			etc.
	kackum-pas-kackum		

<i>Costanoan</i> <i>San Juan Bautista</i>	<i>Costanoan</i> <i>Monterey</i>	<i>Costanoan</i> <i>Santa Cruz</i>	<i>Costanoan</i> <i>Santa Clara</i>	<i>Esselen</i>	<i>Salinan</i> <sup>28</sup> <i>San Antonio</i>	<i>Yuman</i> <sup>29</sup> <i>Mohave</i>
1 hem-etca	im-xala	im-hetc	im-hen	pek	.ki-tol	seto
2 utsxin	ut'is	ut'in	utin	xulax	kakice	hazik
3 kapxan	kapes	kaphan	kapan	xulep	Lapai	kamok
4 utit, karuac	ut'itim	katuac	katuac	xamaxus	ki-ca	tcimbapik
5 parue	hale-is	micur	mucur	pe-maxala	ult-ao	carapak
6 na-kitci	hale-caken	caken	caken	pek-walanai	pai-nel	siinta, maisentik
7 tsa-kitci	ut-xomai-caken	tupuituk	kenetc <sup>26</sup>	xulax-walanai	te	ziika, maikoviika
8 taitimin	kap-xai-cak	usatis	osatis	xulep-walanai	ca-nel	muuka, maikomuuka
9 paki	pak	iecu	telectic <sup>27</sup>	xamax-walanai	teta-tsoi	payi, paya
10 tansa-xte	tantsa	iecu	wec	tomolla	tsoe	arrapa, raphazik
11 tansa-xte hemetca hatcitcos		imhec-waka-uc	imhen-ay	pek-kelenai	tso-sok-tol	raphazik asenkenik
12		ut'in-uc	utin-ay	xulax-kelenai	Lapai-ka	raphazik hazik niðauk
13					Lapaikca-t-ek-tol	raphazik hamok niðauk
14					wococo	etc.
15					Lapai-ult-ao	
16					kpec	
17						
18						
19						
20 utsxin-tanats		ut'in-iwec	utin-wic			(raphazik) dakaðutcze hazik
21						
30		kaphan-iwec	kapan-wic			(raphazik) dakaðutcze hamok
40 utit-tanats		katuac-iwec				(raphazik) dakaðutcze tcimbapik
50		micur-iwec				(raphazik) dakaðutcze carapak
60		caken-iwec				
70						
80						
90						
100 tansa-xte tanat		tapan				(raphazik) dakaðutcze raphavik
200						

## NOTES TO THE LISTS OF NUMERALS

(1) Thanks are due the following for contributions to these lists: Professor P. E. Goddard, the Athabascan tables; Mr S. A. Barrett, all the Pomo, the Central and Cache Creek Wintun, the Coast and Tuolumne Moquelumnan, and Wappo Yuki; Dr A. M. Tozzer, part of the Amador Moquelumnan; Mr H. B. Wilson, part of the Southern Wintun. The Lutuami is taken from A. S. Gatschet's work on the Klamath language. Hale, in volume II of *Transactions of the American Ethnological Society*, has furnished San Antonio Salinan, San Luis Obispo Chumash, and, with Loew (Appendix to volume VII of the *Wheeler Survey*), the Santa Barbara Chumash. The Gabrielino list is mainly from Ried's account of the Los Angeles Indians, reprinted by Taylor in the *California Farmer*. The following are from the various sources drawn upon in the linguistic appendix of Powers' *Tribes of California: Wishosk* (part), Costanoan except Monterey, Santa Cruz Island Chumash. Esselen is from a compilation in a paper in volume II of the *University of California Publications in American Archaeology and Ethnology*.

(2) The normal Athabascan numeral system is decimal. Hupa 11 is translated by Professor Goddard 10 by-its-side again-1. Kato, the southernmost dialect in the state, in territorial contact with Yuki and Pomo, is quinary as far as 20.

(3) The Yurok numerals show many forms according as they refer to different classes of objects. The forms here given are used in counting. From 6 to 9 the ending *-tsameL*, found also in 5, may be added. The words for 7, 8, and 9 are the names of the three middle fingers of the hand. *Tserucek*, 7, means pointer, the index finger, from *tserwerc*, to point; *knewetek*, 8, means long one, the middle finger. From 11 to 14, *werLerwi*, 10, may be omitted.

(4) The interesting Yuki numerals are given in translation in the accompanying table. In the Round Valley or Yuki proper dialect, which alone is quaternary, but is strictly so, a number of variant forms have been obtained. 8 may be *mipat-op-kitc*; 9, *hutcam-pan*, or *pa<sup>wi</sup>-pan*, both reductions of the full form *hutcam-pa<sup>wi</sup>-pan*; 10, likewise by omitting *hutcam*, *opi-sul*; 18, *opi-hui-poi*. 24 = 8, 26 = 10, 35 = 19, 51 = 19, 64 is *omaha<sup>t</sup>-tc-am-op*. The elements entering into the higher compound descriptive numerals appear, from comparison with other Yuki words and phrases, to have the following meanings: *sul*, body (Indian's translation, hang); *luk*, project (Indian's translation, in); *coi*, stuff (Indian's translation, in); *al-a-wa*, stick-wide, with inserted phonetic *-a-*; *kitc*, cut; *poi*, in; *pat*, flat; *pan*, hang; *pa*, lift; *hutcam*, Indian's translation, over, beyond; *mikas*, Indian's translation, even. It will be seen that none of the dialects, except Wappo, shows simple stems, that is, pure numeral roots, above 3; and that the stems for 1 and 2, *paw* and *op*, are the only words common to the counting of the four dialects.

## ANALYSIS OF YUKI NUMERALS

	<i>Yuki proper</i>	<i>Coast</i>	<i>Huchnom</i>	<i>Wappo</i>
1	1	1	1	1
2	2	2	2	2
3	3	3	3	hoboka
4	2-forks	hilkil-2	kes-2	ola
5	middle-in	1-flat (?)	1-putc	gada
6	mikas-tcilki	1-tit	1-tal	1-tenauk
7	mikas-in	2-tit	2-nun	2-tenauk
8	1-flat, hand-stick-flat, hand-on-cut	3-tit	kinasa-nun	3-han
9	beyond-1-hang, beyond-hang, 1-hang	4-tit	helpiso-1-tal	1-put-out (?), 1-stick-ak(?)
10	beyond-2-body, 2-body	5-tit	helpiso-straight	mahaic
11	3-body		helpiso-1-tik	mahaic-1-and
12	2-forks-body		helpiso-2-tik	mahaic-2-and
13	middle-in-body		helpiso-3-tik	
14	mikas-tcilki-body		stick(?) - 1-tan	mahaic-4-and
15	mikas-in-body		stick(?)	
16	middle-none, 8		stick(?) - 1-tik	mahaic-6-and
17	1-middle-project, 9		stick(?) - 2-tik	
18	2-middle-project, 10		stick(?) - 8-tik	
19	3-middle-project, 11		1-stick-stand-1-tan	mahaic-9-and
20	4-middle-project, 12	2-keckeneclak	1-stick-stand	2-hol
30		3-keckeneclak	finger-2-stick-stand	3-hol
40		4-keckeneclak	2-stick-stand	4-hol
50		5-keckeneclak	finger-3-stick-stand	5-hol
60			3-stick-stand	6-hol
64	2-fork-pile(?) - at			[6-hol-4-and]
100		1-stick	1-stick	10-hol
200		2-stick	2-stick	

Yuki proper 8, hand-on-cut, may also be translated hand-2-cut, or hand-2-only.

(5) The composition of the Pomo numerals in the several dialects is shown in the following table. Italicized words are connotive, not etymological translations. They give the meaning which the Indian part of the word must have, as shown by the remainder of the word. It will be seen that all the systems are entirely quinary-vigesimal, except the Southeastern, which while decimal above ten is largely borrowed from the neighboring Wintun, and the Southern dialect, which is decimal from forty up. There is some subdialectic difference within this latter dialect. A southern subdialect differs from that given here in being decimal between ten and thirty. The numbers from eleven to nineteen are formed from *wi*, a conjunction, and the numbers from one to nine. Twenty in this southern subdialect is two ten. In the Northern, Central, and Eastern dialects the word for ten may be omitted in the numbers from eleven up, though this is unusual. The same holds true in the Southeastern dialect. In the Southern and Southwestern dialects, on

the other hand, the numbers from eleven to thirteen are usually spoken simply and one, and two, and three, without prefixed ten, although this ten is occasionally used.

## ANALYSIS OF POMO NUMERALS

	Northern	Central	Eastern	Southwestern	Southern	Southeastern
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	duo-2	4	4	4	4
5	5	5	5	5	5	5
6	1-di	1-di	1-di	lan-1	lan-1	6
7	2-ba	2-ina	kula-2	lan-2	lat-2	7 [Wintun]
8	2-ko-4	2-ko-4	2-ka-4	kom-4 (?)	kom-4 (?)	1-widi, or 8 [Wintun]
9	10-less	10-less	10-less	1-tco	1-tco	xut-10
10	10-full	10-full	10-full	1-10	1-10	10 [Wintun]
11	10+ -1	10+ -1	10+ -1	+ -1	+ -1	10+ -1
12	10+ -2	10+ -2	10+ -2	+ -2	+ -2	10+ -2
13	10+ -3	10+ -3	10+ -3	+ -3	+ -3	10+ -3
14	15-less	15-less	3-mar-less	3-hma-less	3-hma-less	10+ -4
15	15-full	15-full	3-mar-full	3-hma-full	3-hma-full	10+ -5
16	15+ -1	15+ -1	3-mar+ -1	3-hma+ -1	3-hma+ -1	10+ -6
17	15+ -2	15+ -2	3-mar+ -2	3-hma+ -2	3-hma+ -2	10+ -7
18	15+ -3	15+ -3	3-mar+ -3	3-hma+ -3	3-hma+ -3	10+ -8
19	1-hma-less	1-hma-less	stick-di-5-less	4-hma-less	4-hma-less	10+ -9
20	1-hma-full	1-hma-full	stick-di-5-full	4-hma-full	4-hma-full	1-stick [1=Wintun]
21	1-hma+ -1	1-hma+ -1	stick-di-5-full+ -1	4-hma+ -1	4-hma+ -1	1-stick+ -1
30	na-na-10-full	na-10-full	na-10	6-hma	6-hma	6-mai
40	2-stick	2-stick	2-stick	1-stick	1-stick (4-stick?)	1-axots
50	10-i-3-stick	10-at-3-stick	10-e-3-stick	10-hma	5-stick	5-tal-10
60	3-stick	3-stick-full	3-stick	3-hma-tcidu	6-10	6-tal-10
70	na-10-4-stick	10-at-4-stick	10-ai-4-stick	3-hma-tcidu-10	7-10	7-tal-10
80	4-stick	4-stick	4-stick	2-stick	8-10	8-tal-10
90	1-10-5-stick	10-at-5-stick	10-ai-5-stick	2-stick-10-ko	9-10	9-tal-10
100	5-stick	5-stick-full	5-stick	2-stick-1-hma-ko	10-stick	
200	10-stick	10-full-stick	10-stick		2-stick	

(6) Northern Wintun 6 and 8 are derived from 3 and 4 by the prefixion of multiplicative *sere-* or *se-*. 20 is 1 person. 40 and 60 are respectively 2 and 3 persons, but 30 and 50 are 3-10 and 5-10. The method of counting above 20 is thus alternately vigesimal and decimal.

Multiplication is also found in Central Wintun *panol-tcancem*, 15, = 3-5, and in Southern *panlomi*, 12, which appears to be *panol-lawi*, 3-4. The Southern dialect is vigesimal from 20 up, except for *ponl-araxsla* thirty; *ponl*, = *panol*, 3, shows this to be a decimal form.

(7) Achomawi 70 and 80 are not decimal, but formed from 60 as a base.

(8) Yana *bun-hari* and *taum-hari*, 6 and 8, are from *pul-mitci* and *taumi*, 3 and 4. 9 contains the stem of 1.

(9) Lutuami *-anta*, on 11-19, is a locative case ending; *-ni*, on 20-90, is a suffix making adjectives of numerals.

(10) The frequent *-ni*, 'with,' in the Maidu lists is to be taken as equivalent to 'toward,' counting from the last preceding basis. 1-with-man = 1 toward a man = 1 toward 20, i. e. 1 toward 20 from 15, the last basis. Somewhat analogously, the suffix *-na*, 'from,' is in the Northeastern dialect used in a sense the opposite of that which we should attach to it. *Masok-na sapwi*, 10-from 3, is not 3 from 10, 7, as we should read it, but 3 counting onward from 10, i. e. 13.

(11) It is interesting that the word *noko*, arrow, varies in numerical significance between 10, 11, and 12:

10, Northwestern, Mooretown, *penim nokom*, 2 arrows, = 20.

11, Northwestern, Konkau, *wikem nokom*, 1 arrow, = 10; but: *pe-ni-wikem-noko*, two-with-one-arrow, or, as we should say, two beyond [the last unit (10) toward] 1 arrow (11), = 12 (*sic*).

12, Northwestern, Mooretown, and Northeastern, Genesee, *wokem noko*, 1 arrow, = 12.

(12) The Northwestern Maidu near Chico counted from 1 to 20 like the Konkau, with the exception of:

11 *wik-ni hiwali*, 1-with 15. 13 *sapwi-ni hiwali*, 3-with 15.

12 *pe-ni hiwali*, 2-with 15. 14 *tsöye-ni hiwali*, 4-with 15.

(13) The following variations have been observed within the Southern Maidu dialect:

At Swede's Flat:

9 *peliom*, as in Northeastern and Northwestern dialects.

11 *wikte-ni wikem-noko*, as in Northwestern dialect at Mooretown.

At Twelve Mile:

9 *peliom*.

12 *matsan pen*, ten two.

11 *matsan witte*, ten one. 13 *matsan sapwi*, ten three, etc.

At Sacramento:

16 *hial-t-aka*.

30 *matsa-ni pen*, ten-with forty.

17 *hiwal-ban-aka*.

40 *peni-wie*, 2-wie.

18 *hiwa-sp-aka*.

50 *matsa-ni sapwie*, ten-with sixty.

19 *tsöi-ni maiduk*, four-with man.

60 *sap-uye*, 3-wie.

20 *kum maiduk*, whole man.

(14) Compare Northwestern Maidu 5 and Southern Maidu 10: *ma-tsani*.

(15) Compare Maidu 5, *ma-wika*, with Miwok *ma-hoka*, *masoka*, 5.

(16) Northeastern Maidu:

11 10-from 1.	14 10-from 4.
12 1-arrow.	15 10-from 5.
13 10-from 3.	

(17) For 20, Southern Maidu, Spanish Flat, uses also

*witem maiduk*, 1 man; *pen-pai matcam*, 2-times ten.

(18) An analysis of the Northwestern and Southern Maidu numerals is given in the following table:

## ANALYSIS OF MAIDU NUMERALS

	Northwestern Konkau	Northwestern Mooretown	Southern Spanish Flat
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	hand-tsani (?)	hand-1 (?)	hand-1 (?)
6	3-double	3-double	to-mbo
7	5-2	[7=topwi, 3=sapwi]	to-pwi
8	4-double	2-4	2-4
9	4-with-10	2-liom	2-lio
10	hand-double	hand-double	hand-tsani
11	1-arrow	1-with 1-arrow	hi-woto
12	2-with-1-arrow	1-arrow	2-woto
13	3-with-15	3 botam	3-with-al
14	4-with-15	4 botam	4-with-al
15	15=hiwali	10 5	15=hiwal
16	1-with-man-1	10 6	oiseto
17	2-with-man-1	etc.	2-with-man
18	3-with-man-1		3-with-man
19	4-with-man-1		4-with-man
20	man-1	2 arrow	whole-man, 1-man, or 2-times-10
21			
30	10-with 2-man	3 ten	3-10
40	2-man		4-10
50	10-with 3-man		
60	3-man		

(19) For *-mama*, *-momo*, *-mumu*, or *-mimu*, a form *-muyu* has also been obtained.

(20) Cf. Wintun 8, *seLawi*.

(21) It is not unlikely that this method of counting from 11 to 19 by expressed addition to 10 is recent. A similar method is followed in

most Valley and Foothill dialects today, yet the older people generally use or remember the shorter derivative forms here given.

(22) The Shoshonean dialects of Southern California appear to develop their higher numerals from a few simple elements by very transparent methods. This is evident in the Gabrielino table given, which is taken from Ried's list in the *California Farmer* (xiv, 146, January 11, 1861). *Wehe-s* is twice, *pahe-s* is thrice, etc. The Luiseño, according to the late Mr P. S. Sparkman, follows methods that are even more primitive and variable. There are simple numerals only to five. Every higher number is denoted by a phrase which is nothing but the expression of an arithmetical operation. The choice of expressions used is particularly interesting. Six may be expressed by 'again one,' or by 'another besides one,' or by 'five one upon,' or by 'besides my-hand one finger.' Eight is expressed in the same way, with the substitution of 'three' for 'one.' Ten is again the same, with 'five' instead of 'one.' Or, to denote ten, it is possible to say 'my-hand finished both,' or 'all my-hand finished.' The following are terms for higher numbers:

- 10, my-hand finished both.
- 20, another finished my-foot the-side.
- 10, all my-hand finished.
- 15, all my-hand finished and one my-foot.
- 25, all my-hand my-foot finished and another five.
- 40, all my-hand my-foot finished again all my-hand my-foot finished.
- 40, twice my-hand my-foot finished.
- 80, four-times all my-hand my-foot finished.
- 100, five-times all my-hand my-foot finished.
- 200, again five-times all my-hand my-foot finished.
- 11, besides other my-hand one finger.
- 16, besides my-foot one finger (= toe).
- 21, besides other my-foot one finger (= toe).
- 11, twice five one upon.
- 16, thrice five one upon.
- 20, four-times five.
- 30, five-times five, five upon.
- 71, five-times five, another five-times five, and four-times five, one upon.

While multiplication is freely used for the formation of higher numbers, the highest multiplier used is five. With this, higher units of twenty-five are formed, which are added together to express the numbers below one hundred; or a unit of twenty is formed by some phrase such as 'all my-hand my-foot finished,' and this is raised by multiplication to one hundred, or, by the use of a phrase such as 'again five,' to two hundred. What is most interesting is that these numbers are reached without the use of a numeral higher than five.

(23) San Luis Obispo Chumash for 1 and 4 resemble 4 and 1 respectively in other dialects; *ckomo*, 8, occurring only in this dialect, is from the common root for 2 and 4.

(24) This Chumash form for 1, *paka*, is probably related to Esselen *pek*, and to the *puku* which neighboring Gabrielino alone shows for 1 among all the Shoshonean dialects.

(25) The aboriginal way of counting was evidently the same in Chumash as in Salinan: to 16 as the first higher unit, and then presumably by multiplying this unit and adding to it. It is likely that the decimal forms from 20 up are due to white contact and influence; the same is very probable for the Santa Ynez forms from 11 to 19, which were recorded many years after the corresponding forms in the other dialects.

(26) Compare Miwok 7, *kenekak*.

(27) Compare Miwok 3, *teloko*.

(28) The very interesting Salinan system is at once quaternary and multiplicative in method. The highest unit-term obtained is 16, as in the neighboring Chumash languages. *Pai-nel* and *ca-nel*, 6 and 8, are derived from *La-pai* and *ki-ca*, 3 and 4; *ki-* is evidently not part of the stem (though it appears in *ka-ki-ce*, 2), for Sitjar gives *tol* for 1 (Hale *ki-tol*), and *ke-te* for 7 (Hale *te*). The *t* in *ult'ao*, 5, is nearly *tr*. 9, *teta-tsoi*, appears to contain 1, *tol*, and 10, *tsoe*. 12, *Lapai-kca*, is 3-4, and 15 is 3-5; 11 and 13 are 10 and 1 and 12 and 1; 14, like 7, is unanalyzable. The simple numeral stems would therefore seem to be: *tol*, 1; *ca*, 2 or 4; *pai*, 3; *ult'ao*, 5; *te*, 7; *tsoe*, 10; *wococo*, 14; *kpec*, 16.

(29) In *Wheeler Survey*, VII, 457, vocabulary 28, the Diegueño numerals are thus given:

- |                              |  |
|------------------------------|--|
| 1, <i>khink</i> .            | 8, <i>niok-hamuk</i> (cf. 3).            |
| 2, <i>oak</i> .              | 9, <i>ni-tchibab</i> (cf. 4).            |
| 3, <i>hamok</i> .            | 10, <i>selgh-iamat</i> .                 |
| 4, <i>tchibabk</i> .         | 11, <i>nie-khin</i> .                    |
| 5, <i>selkh-akai</i> .       | 12, <i>niekhvab gushbaib</i> (twice 6?). |
| 6, <i>niu-gushbai</i> .      | 20, <i>selgh-hoak</i> (10-2).            |
| 7, <i>niok-hoak</i> (cf. 2). |  |

(30) The Shasta also use the following system in counting above twenty: 20, *tsec*, one-man; 30, *tsectsim etsehewi*, one-man-tsim-ten; 40, *xoka-hic*, two-man; 50, *xoka-hic etsehewi*, two-man-ten; 60, *xatsk-ic*, three-man; 70, *xatsk-ic etsehewi*, three-man-ten; 80, *iraha-ic*, four-man; 90, *iraha-ic etsehewi*, four-man-ten; 100, *aitsa-ic*, aitsa-man.

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### LARGE NUMBERS USED BEFORE THE CHRISTIAN ERA

FOREIGN missionaries and others have frequently called attention to the very limited number developments among some of the uncivilized tribes of recent times. In many cases it has been reported that such tribes could not count as far as ten, and that members thereof frequently referred to even very small numbers by means of such general terms as many or infinite. As people advance in civilization they naturally use the latter of these terms for larger and larger numbers. Hence it may be of interest to note here a few instances where very large numbers were used before the Christian era, especially since some statements in recent American histories of mathematics convey decidedly incorrect impressions along this line.

Even in our day we meet with expressions which imply that the grains of sand on the seashore can not be numbered. It is therefore of interest to recall that Archimedes, who is commonly regarded as the greatest mathematician of antiquity, wrote a work called "The Sand-reckoner" in which he developed a system of numeration which is not only amply extensive to provide different numbers for every pair of grains of sand on earth, but which provides such a vast number of numbers that those required for the enumeration of these grains of sand is a comparatively insignificant part of the available total. The multitude represented by "the sand of the sea" is therefore insignificant in comparison with the multitude of numbers described in a work of Archimedes written more than two centuries before the beginning of the Christian era.

It may be of interest to observe that each of the two Greek mathematicians who are commonly regarded as most eminent in the remarkable period of early mathematical development has associated with his name an extensive system of numeration. The second of these is Apollonius who was a contemporary of Archimedes and used  $10^4$  as the base of a system of numeration while Archimedes used  $10^8$  for this purpose. These arithmetic developments are the more worthy of note here in view of the fact that the Greeks are especially noted for their contributions towards the development of geometry. Their contributions towards the development of arithmetic and algebra have perhaps received too little attention in the past as a result of undue credit to the Hindus and Chinese who have made many claims for discoveries which have proved to be unreliable.

In the favorably known "Vorlesungen über Geschichte der Mathematik" by M. Cantor the statement appears that it is probable that the cuneiform nota-

tion for numbers used by the Babylonians did not extend as far as one million—at least no such large numbers had then been found. A similar statement has naturally been introduced into many other works on the history of mathematics. Much larger numbers have, however, been found later in this notation, and it is very interesting to note that these extend to  $60^8 + 10 \cdot 60^7$ , and thus suggest a connection between this system and that of Archimedes based upon  $10^8$ . At any rate, we have here an instance of the use of a very large number by the ancient Babylonians even if it is much smaller than those used later by the ancient Greeks. In fact, the ancient Hindus and Chinese are also said to have developed a system of enumeration based on as large a number as  $10^{53}$ , but many of the dates relating to early mathematical developments in these countries seem to be uncertain.

The main object of the present note is to direct attention to the early efforts to exhibit linear order in this world by means of large numbers and thus to extend the field to which the considerations relating to finite multitudes apply. The use of large numbers represents an intellectual emancipation from the narrow channels of experience, for if all the human beings that have ever lived on this earth had assisted each other in counting consecutive numbers, each one confining himself to the numbers not counted by any of the others, they would not yet have reached the enormous totality which the system of Archimedes made available. While the contemplation of systems of numeration relating to large numbers is inspiring it has not been as rich in fruition as regards the later development of number theory as some other very early theoretic considerations relating to numbers, for instance, the contemplation of what are known as Pythagorean triads, which seem to have attracted attention at least as early as 4000 B. C.

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### SOYBEAN CHEESE

It is probable that the Chinese are the best empirical dieticians in the world. In the course of their thousands of years of civilization the Chinese have accumulated an amazing knowledge of the preparation of foods. This knowledge they have handed down from generation to generation with the greatest fidelity, in recorded and printed form in their encyclopedias and in actual practice from master to apprentice.

The interpretation of these dietary practices in terms of modern science is now under way, with the prospect that the Chinese people themselves will learn how to carry out their established dietary

Pemmican

C. Hart Merriam  
Papers  
BANC MSS  
80/18 c

## CREE PEMMICAN

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Allison Skinner, in 'Notes on the Plains Cree'<sup>1</sup> describes the manufacture of pemmican.

"Pemmican was made by cutting buffalo meat into long thin steaks and drying them first in the sun, then on a rack or scaffold over a slow but hot fire of buffalo-chips. The dry meat was then placed in a buffalo rawhide, over which another was laid and beaten upon with a flat stone or a stone hammer, or later with a wooden flail.

When sufficiently macerated, the meat was mixed with melted buffalo lard, and sometimes with dried saskatoon berries as a relish. The resultant compound was allowed to cool, when it was sewn up in rawhide bags to keep for future use. Pemmican thus preserved is said to have lasted indefinitely." (82)

<sup>1</sup>Am. Anthropologist, Vol. 16, pp. 68-87, 1914.



PEMICAN.

Short statement concerning method of preparing pemican, concluding with "There is another kind, called the sweet pemican, of which berries constitute the chief ingredient."

Dunn:History of Oregon Territory, 75, London, 1844.

## PEMMICAN

In a sketch of the Naskopies, Indians of the Ungava District, Labrador, Lucien M. Turner gives the following account of their method of preparing pemmican:

"The women flay the deer, cut the meat into thin slices and hang it within the tent and over the fire to dry and smoke.[110] . . . The leaner portions are reduced to a coarse powder by means of a pestle, put into bags, and when ready to be eaten, are mixed with melted tallow or marrow, converting them into pemmican. This article is highly prized as an article of food. It resembles a mass of home-made soap, into which a quantity of black sawdust and sand have been stirred. The taste is similar to that of a rancid candle, over which a quantity of its snuffings has been smeared. . . . The Naskopies is superstitious about this food, and will not permit it to be taken from the tent in which it was placed to be eaten." [111]

Turner: Trans. Roy. Soc. Canada, Section II, 110-111, 1887.

In an article on the "Athapascas" is the statement that the Chippewyans will, if necessary, eat fish in its raw state; "but those whom I saw preferred to dress their victuals when circumstances admitted the necessary preparation. When they are in that part of their country which does not produce a sufficient quantity of wood for fuel, they are reduced to the same exigency, though they generally dry their meat in the sun." ↓

↓ "The provision called Pemican, on which the Chippewyans, as well as the other savages of this country, chiefly subsist in their journeys, is prepared in the following manner. The lean parts of the flesh of the larger animals are cut in thin slices, and are placed on a wooden grate over a slow fire, or exposed to the sun, and sometimes to the frost. These operations dry it, and in that state it is pounded between two stones; it will then keep, with care, for several years. If, however, it is kept in large quantities, it is disposed to ferment in the spring of the year, when it must be exposed to the air, or it will soon decay. The inside fat, and that of the rump, which is much thicker in these wild than our domestic animals, is melted down and mixed, in a boiling state, with the pounded meat in equal proportions; it is then put in baskets or bags for the convenience of carrying it. Thus it becomes a nutritious food, and is eaten without any further preparation, or the addition of spice, salt or any vegetable or farinaceous substance. A little time reconciles it to the palate. There is another sort made with the addition of marrow and dried berries, which is of a superior quality."

--Schoolcraft, Indian Tribes, V, 175, 1855.

## PEMMICAN

In a short account of buffalo hunting among the half-breeds around Devil's Lake[N.Dak.], Fremont says: "They bring with them carts built to carry each the meat of ten buffalo, which they make into pemmican. This consists of the meat dried by fire or sun, coarsely pounded and mixed with melted fat, and packed into skin sacks. It is of two qualities; the ordinary pemmican of commerce, being the meat without selection, and the finer in small sacks, consisting of the choicest parts kneaded up with the marrow. Buffalo tongues, pemmican, and robes, constitute chiefly their trade and support."

Fremont: Memoirs I, 51, 1887. Second Exped.  
under Nicollet, 1839.

## PEMMICAN

General Randolph B. Marcy gives the following description of the preparation of pemmican: "The buffalo meat is cut into thin flakes, and hung up to dry in the sun or before a slow fire; it is then pounded between two stones and reduced to a powder; this powder is placed in a bag of the animal's hide, with the hair on the outside; melted grease is then poured into it, and the bag sewn up. It can be eaten raw, and many prefer it so. Mixed with a little flour and boiled, it is a very wholesome and exceedingly nutritious food, and will keep fresh for a long time."

Marcy: *Prairie Traveler*, 33, N.Y. 1859.

Poison

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## POISONED ARROWS

Dr. W. J. Hoffman states that the Pit River Indians of California are reported by several authors to have employed dog's liver mixed with the juice of the wild parsnip for poisoning their arrows.

He states also that the Shoshone and Bannok formerly used to secure<sup>a</sup> deer, cause it to be bitten by a rattlesnake, after which it was killed and the meat placed in a hole in the ground. When this had become putrid the arrow points were dipped into it.

Hoffman quotes Hardy, 'Travels in Mexico', London, p. 298, 1829, as authority for the statement that the Seri of northwestern Mexico prepare poison for their arrows "by putting into a hole in the ground a cow's liver, rattlesnakes, centipedes, scorpions, etc, and beating them up with a stick."

American Anthropologist, Vol.4, No.1, pp.69-70, January, 1891.

## POISONED ARROWS

A.S.Taylor writes in the Calif. Farmer:

"A correspondent of the S.F.Evening Bulletin, writing from Fort Crook, in the Pitt River country, 11th Aug., 1861, details an account of a fight with the Indians of that section (to the Eastward) of which the following is an extract:

. . . . .

It may be of some interest to know with what substance the Indians poison their arrows, and how they do it. The substance is rattlesnake poison, and they make use of it in the following manner: When they kill a deer, antelope, or any other animal of the kind, they fix the liver on the point of a stick, and place it in front of a rattlesnake; then they tease his snakeship until he has bitten the liver several times. The liver is then left in the sun until it is putrid, when the Indians smear their arrows with the putrid mass, and set them in the sun to dry."

A.S.Taylor, Calif. Farmer, Vol. 16, No. 9. Nov. 22, 1861.



Lt. H. L. Abbot while in the valley of the lower Pit River, August 2, 1855, says of the Pit River Indians: "It is said that these savages sometimes poison their arrows by exposing a piece of liver to the repeated bites of a rattlesnake, and, after burying it for a short time, smearing the point with the half decomposed mass."

Pacific R.R.Repts. VIa, 62. 1857.

P O I S O N S

MENOMINI INDIANS. (Substances used in poisoning  
arrow tips).---

W.J.Hoffman: 14th Ann.Rept.Bur.Eth.for 1892-93:  
pp.284-285, 1896.

APACHE INDIANS (Substances used in poisoning arrow tips)\*

Ibid: p.284.

OJIBWAS,  
TUSKARORA & CAYUGA, DAKOTAS, BLACKFEET INDIANS (Arrow  
poison, shaman poisons, poisons producing abortion)---

Ibid: pp.285-286.

P O I S O N S

PAI UTE, of Nevada (Suicide by wild turnip).--

G. Mallery: 4th Ann. Rept. Bur. Eth. for 1882-83:

p. 132, 1886.

----- Same: In 10th Ann. Rept. for 1888-89:

p. 537, 1893.

P O I S O N S

SERI INDIANS, Tiburon Island (Poisons used in tipping arrows)---

W J McGee: 17th Ann.Rept.Bur.Eth.for 1895-96:

pp.256<sup>\*</sup>-259<sup>\*</sup>, 1898.

## ARROW POISON.

The Mah'-kah-mo chum'-mi of Cloverdale Valley on Russian River tell me that the old people used to prepare a poison for their stone arrow tips, to be used in hunting bears, both black and grizzly, but chiefly grizzlies. The poison was prepared by putting deer livers in rattlesnake dens or in holding them in front of rattlesnakes so that they would be struck. The arrow points ~~are~~<sup>were</sup> stuck into the liver and allowed to dry. *com*

ARROW POISONS

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Bene van Rippen, in an article entitled Notes on Some Bushmen Implements, devotes four full pages to the subject of arrow poisons, vegetable and animal.

Memoirs, Am. Anthropological Assoc.,  
Vol. V, No. 3, pp. 86-90, Sept. 1918.

copy in our Misc. Ethnology files  
down

## POISONS (YOKUT AND MONACHE)

A. H. Gayton, 'Yokuts-Mono Chiefs and Shamans', 1930  
(Tribal names written as Gayton writes them)

Tulare Lake Region, p. 402.

Jimsonweed & another plant mixed (used  
internally)

Ground rock (used externally)

Wukchumni, p. 403.

Tachi (activities of poisoner-chief Motsa)  
pp. 404-407.

## PLANTS USED FOR POISONING FISH

In tropical America, plants of the genus Ichthyomethia are widely used for poisoning fish.

A revision of the genus by S. F. Blake is published in the Journal of the Washington Academy of Sciences, Vol. 9, No. 9, pp. 241-252, May 4, 1919.

(Copy in my Botanical File)



THE POISON OF THE SCORPION.-- The poison and poisoning apparatus of the scorpion have been recently made an object of study by M. Joyeux-Laffuie. The former, he finds, is very active, though not so powerful as some have represented. A drop of it, either pure or mixed with a little distilled water, rapidly kills a rabbit, when injected into the cellular tissue. Birds are as easily killed with it as mammals. One drop suffices to kill seven or eight frogs. Fishes, and, above all, mollusks, are much more refractory. But, on the other hand, the articulata are wonderfully susceptible; the hundredth part of a drop will immediately kill a large crab. Flies, spiders and insects on which the scorpion feeds, are quickly affected by its sting. The poison soon paralyzes the striated muscles, suppressing spontaneous and reflex movements. In all animals there is first excitation, then paralysis. The author regards the scorpion's venom as a poison of the nervous system, not a poison of the blood, as M. Jousset de Bellesme asserts.

### ARROW-POISON IN AFRICA.

An English review of chemistry and pharmacy states that the poison used by the Bushmen near the Kalahari desert is obtained by crushing an insect of the genus Diamphidia. The active principle was found to be a toxalbumin that acts on the red corpuscles of the blood, causing a dissolution of the hemoglobine. This results in symptoms of paralysis, followed by death. Boiling destroys the effect of the poison.

Am. Anthropologist, Vol.10, No.9, p.298, Sept. 1897

Lt. H. L. Abbot while in the valley of the lower Pit River, August 2, 1855, says of the Pit River Indians: "It is said that these savages sometimes poison their arrows by exposing a piece of liver to the repeated bites of a rattlesnake, and, after burying it for a short time, smearing the point with the half decomposed mass."

Pacific R.R.Repts. VIa, 62. 1857.

## INDIAN ARROW POISON

While traveling <sup>west</sup> through Nevada in 1860 R. F. Burton came to a "station" in Roberts Springs Valley, where Mose Wright was one of the employes. Burton writes:

"Mose Wright described the Indian arrow-poison. The rattle-snake --the copperhead and the moccassin he ignored -- is caught with a forked stick planted over its neck, and is allowed to fix its fangs in an antelope's liver. The meat, which turns green, is carried upon a skewer when wanted for use: the flint head of an arrow, made purposely to break in the wound, is thrust into the poison, and when withdrawn is covered with a thin coat of glue. Ammonia is considered a cure for it, and the Indians treat snake bites with the actual cautery."

--R. F. Burton: The City of the Saints, and Across the Rocky Mts. to California, 586, 1861.

### Wash-shoo Poisoned Arrows

According to Coey Moore, full blood Wash-shoo  
(Reported by Fred Wurster. Summer 1926)

Grizzly bears were very dangerous and  
hard to kill until we used poisoned arrows made by  
dipping into the liver of the rattlesnakes. --  
Stockton Record, Sep. 4, 1926.

## USE OF CURARE BY SOUTH AMERICAN INDIANS

"When the Ottomacs of Uruana, by the use of niopo (their arborescent tobacco), and of fermented liquors, have thrown themselves into a state of intoxication, which lasts several days, they kill one another without ostensibly fighting. The most vindictive among them poison the nail of their thumb with curare; and, according to the testimony of the missionary, the mere impression of this poisoned nail may become a mortal wound, if the curare be very active, and immediately mingle with the mass of the blood. When the Indians, after a quarrel at night, commit a murder, they throw the dead body into the river, fearing that some indications of the violence committed on the deceased may be observed. 'Every time,' said Father Bueno, 'that I see the women fetch water from a part of the shore to which they are not accustomed to go, I suspect that a murder has been committed in my mission.'"--Humboldt's Personal Narrative, Vol.2, p.508, 1835.

# Arvon Cousins

Hoffman: Bull. Essex Inst. XVII, 32, 1885.

Refers to previous papers by himself in Bull.

Soc. d'Anthropologie de Paris, vol VII, 3<sup>d</sup> ser. 205 + 1883

# Wissaminy Fish

Mason: Aboriginal Am.

Zootechmy, Am. Antropol.

NS 1, 72-73, 1899. (Paper in Ind. Hunting)  
file

[Refer to Simpson - General Bibliography]



POISONED ARROWS OF THE AKAS.—The Akas are one of the so-called Lohitic tribes of the Asam valley, occupying independent hill territory to the north of the Brahmaputra. They poison their arrows for warfare as well as for large game, and such arrows proved deadly to most of the Sepoys wounded by them in the expedition sent against the tribe some years ago. Several of the arrows were sent to me for examination while I was acting professor of chemistry at Calcutta some years ago. From its physiological effects the poison was evidently aconite, and the roots from which the poison was alleged to have been derived undoubtedly belonged to a species of *Aconitum*. The arrow-heads are mostly made of bamboo, but a few are of iron. The shafts are usually of bamboo. Some of the heads are made up of pieces dovetailed and tied together with cane in such a way that dragging on the arrow when it has reached its quarry only pulls out the stem, and the barbs separate more deeply into the wound. The surface of the heads are scored so as to form valvular crevices for the poisonous extract which is smeared over them.—Waddell in *Journal of the Anthropological Institute*, London, August, 1894, p. 57.

Am. Anthropol., Vol. 8, No. 1, Jan. 1895

ARROW POISON

Ma-ring-am

Mo-he-ah-ne-um

} from Marongo Reservation 2 1932-1933.  
D.M.

"Arrows: all stone-and flint-pointed arrows were poisoned. Viscera and 'strip like liver' were rotted and arrow points dipped in it."

Polygamy

20/18  
E

Furges in  
Hands + Souls

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Galeospitheus

Fragline deer

'Animal Marriage,' by Woods Hutchinson,  
Contemporary Review, October, 1904,  
London.

Polygamy

Causes & Results among Rinnepedia

by C. C. Nutting

Am. Nat. Feb. 1891.

Polygamy among Calif. Indians

Engelhardt's Hist. Calif. Missions

Vol. 2: 239, 1912.

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Polysyllabic names

Letter to John W. Foster

dated Jan 13, 1893

Four leaf copy book

ff 282-284 -

## MORMONS

*Mormons.* By WILLIAM ALEXANDER LINN. The Story of the Mormons, from the Date of their Origin to the year 1901. 637 pp., 8vo, cloth. New York, 1923. Published at \$3.00

Special Price \$1.75

The finest critical history of the Mormon movement. Mormonism is treated clearly, without prejudice, with emphasis placed on its secular rather than on its religious significance. The author traces its development from the discovery of the Golden Bible through the long migrations and the final settlement, discussing the doctrines of the church, its leaders, its fight in Congress to protect polygamy, and its social, political and religious effects. The text is authoritatively documented, liberally annotated and indexed, and illustrated by several facsimile reproductions.



Nutting, C. C.

1891

Some of the Causes and Results of Polygamy among the  
Pinnipedia.--<Am. Naturalist, XXV, No. 291, Feb. 1891, 103-  
112.

# African King Criticized for His Having Only 75 Wives

King of Babudja Must Follow Advice of Priestess;  
Anthropologists Urged to Give Up Very Old American

**T**ROUBLES of kings in Africa held attention of the American Anthropological Association at their meeting in Washington, D. C.

One king of the Yoruba tribe, West Africa Slave Coast, has 75 wives and has lost prestige among his 60,000 people, the anthropologists were told by Rev. Edward Ward of the Catholic University of America. Criticism leveled against this ruler is that he should have more wives for sake of appearances. One of his chiefs, with 205 wives, far outshines the king in that region where wives are a badge of wealth and general importance.

Eight reasons for the custom of marrying many wives in Yoruba land have been found by Father Ward, but wealth is the main factor that determines how much of a harem a man can undertake.

A king of the Babudja tribe, in Southern Rhodesia, has to take advice from a council of elders, and in addition to that, he must get approval of a mysterious and powerful priestess on every important decision that is made, Heinz Wieschhoff of the University of Pennsylvania reported.

Mr. Wieschhoff himself made every effort to see this powerful political figure, the priestess. But although he passed the mountain on which he was

told he lived, nobody dared lead him near her. The Charewa, as this priestess is called, approves the king's choice of a wife, and even chooses the names of the king's children.

## No Old Stone Age Americans

Anthropologists were asked by the president of their association to give up their 50-year hunt for Old Stone Age inhabitants in America.

The theory that America had human inhabitants before the last Ice Age has not been proved, and should be "pronounced legally dead," Dr. Herbert J. Spinden declared in his presidential address before the Association.

It was understandable, he said, that science should have hunted in America for the stone fist axes and scraping tools of the Old Stone Age when these relics of prehistory first came to light in Old World countries over 50 years ago; but even then the odds seemed against the search. All prehistoric people ever found in North America, he added, have proved to be no earlier than the Neolithic, or New Stone Age.

"Of course," added Dr. Spinden, "revolutionary new evidence would justify reconsideration of even the deadest theory."

Dr. Spinden based his decision, that

Original Defective

hunting for the Old Stone Age in America is a "hot cause," on evidence that a wide zone across the Old World was unused by man until after the last continental ice sheet melted. Ancestors of the first American immigrants must have entered this great zone, 1,000 miles deep and stretching across northern Asia, in order to approach the entrance to America via Bering Strait. Throughout the time the zone was blanketed or unused, Dr. Spinden concludes, there was no immigration to the New World.

Citing the suggestion by Prof. E. A. Hooton of Harvard that America's Indians have some traits suggesting infusion of white races, as well as Mongolian, Dr. Spinden said that a mass migration of different culture elements may explain how America was peopled. Such a mass migration could have been started by the invasion of northern Europe by Germanic peoples. These displaced peoples already living in the north, and then moved eastward, finally spilling over into America. Spread of desert conditions in central Asia may have been another factor urging migration.

"But this mass migration," said Dr. Spinden, "could not have taken place until northern Europe and Asia were themselves occupied." *Jan. 2, 1937*

forming parts. From the bottom of this Paleozoic Era they measure backward through the long Collozoic, or Era of Jelly-Animals, to a beginning possibly 900 million years back, and thence through the Eophytic, or Dawn-Plant Era, to its beginning about 1,250 million years ago. Before that time was the Abiotic or Lifeless Era, with oldest rocks of ages estimated between 1,650 and 1,850 million years.

# llion Years

## Radioactivity Cooks Mountains

Mountains come into existence because radioactivity within the earth produces great doming-up blisters of semi-molten stuff, more or less as steam-filled "blobs" appear on the surface of a pot of boiling mush. This, roughly, was the hypothesis put forward by Dr. John L. Rich of the University of Cincinnati.

The boiled-up domes themselves do not form the mountain ranges, Dr. Rich explained; they are much vaster than any mountain ranges. What happens is that the harder surface layers coast off the slopes of the domes and are thrown into wrinkles around their bases. These wrinkles are the mountain ranges. The liquid contents of the domes find a partial escape through cracks in their thinned-out roofs, as vast field-flows of lava. The stretched harder matter on top cracks into what are known as block faults, whose tilted edges form mountain systems of a different type.

## Mountains Under Massachusetts

Vast buried foldings of massive crustal layers, veritable subterranean mountain ranges that have never seen the light of day, quite probably underlie Massachusetts and Connecticut, Dr. Chester R. Longwell of Yale University suggested. He was led to this hypothesis by a study of what are called gravity anomalies, or differences in the pull of gravity in different places. Areas of stronger pull indicate the nearness of the tops of these stationary billows of dense rock; areas of weaker pull are presumably over their valleys or troughs.

*Science News Letter, January 2, 1937*

Original Defective

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*Science News Letter, January 2, 1937*

Original Defective

### POLYANDRY VS. POLYGAMY.

IT was about a year ago that I wrote to the FOREST AND STREAM a brief account of the conduct of two male and one female Virginia quail which had been confined together for some time, and had apparently lived in perfect harmony. An interesting case of converse relations has just come under my observation.

Early this spring I placed in an outdoor coop a trio of young Virginia quail, a cock and two hens—all birds hatched and reared in confinement, and the two sexes not related. It has been my opinion that quail is polygamous in his nature, or would be if he had opportunity, and this arrangement was made for the especial purpose of giving the theory a practical test. Everything moved along harmoniously till about the 30th of May, one of the hens in the meantime having begun to lay.

But on the morning named I noticed that only two of the birds were visible, and supposing that the missing hen was on the nest I gave the matter no attention till afternoon, when on entering the coop I found her wedged in behind the dust box in the corner, bruised and bleeding, with the feathers half stripped from her back. When I released her from her refuge and she came staggering out into the coop the cock bird attacked her like a little fury that he was, regardless of my presence, and would soon have finished her entirely if I had not interfered. After a day's separation I placed the discarded hen in the coop but protected by a small slatted box. The cock bird paced up and down unceasingly in front of the box, while the hen seemed as anxious to get out as he was to get in. At the end of twenty-four hours' confinement in the box I released the hen once more. The reconciliation was apparently complete, and the three again seemed to make up a happy family. But fortunately I had taken the precaution to arrange a retreat for the member who had previously proved *de trop*, and in this I found her late in the afternoon. Again I took her out, and again I returned her, only to see the same apparent reconciliation. But on the second return the male bird showed himself not to be a monogamist from principle so much as for other reasons, for this time he fixed his erratic heart upon the previously discarded spouse, and drove his former love into retirement. This was too much for me, and I at once removed the wife whom he had twice thrust off, and have left the two other birds together ever since.

It is perhaps hardly fair to assume that this is entirely conclusive. The various removals of this rejected hen established that the one the cock bird had first chosen was the one that had begun laying. She has continued so doing after the removal of the odd female (which, by the way, was the larger and finer looking of the two), and now has a nest containing seventeen eggs. Had both hens begun laying and nested at or about the same time, would the male have quarreled with either? I cannot say; I only know that in all prior relations with the male, both hens stood on the same footing.

In the case cited last spring, had no opportunities for nesting and had not begun to lay. Had she done so, the relations between the two male birds might have become very different.

JAY BEBE.

**Sex in Government.**—The task which those persons have undertaken who desire to change the present relations of women to government in this country is a formidable one. We refer to the woman-suffrage movement. This journal does not enter the domain of politics; but the relations of the sexes have a history far older and deeper than human government, and, as a phenomenon of Nature, they fall within our scope.

To those who have studied the sex problem from the scientific stand-point, the doctrine that the sexes are thoroughly distinct mentally as well as physically goes without saying. That the different functions imposed on each by Nature for countless ages should produce characteristic mental peculiarities follows from all laws of mental evolution. And those of each sex who have had opportunities of studying the other probably agree that such is the fact. A different opinion could only be entertained by persons whose opportunities have been small, or by persons who are themselves not normal types. The plain facts are these: The function of child-bearing has long since incapacitated the female sex for a longer or shorter part of her life from taking any considerable share in the labor necessary for support and defence. Her maternal instinct, apart from child-bearing, is still further destructive of success in these directions. Hence these labors have been undertaken by the male, who is not only free from these disabilities, but has additional adaptations for such work. The result of this division of labor has been to develop the distinctive qualities, and the latter have caused in turn still further divergence of function. It is demonstrated that the sexes of civilized man are more diverse than those of savage and primitive man, both physically and mentally.

The practical question is, Do the peculiarities of women incapacitate them from taking part in government? To answer this question we must examine the nature of the social—and in so far political—contract under which the sexes co-operate. We begin at the beginning. Woman is physically necessary to man. Man is necessary to woman for support and defence. On this basis the superstructures of civilization rest. Exceptions to this law are relatively few and of but temporary duration. Primitively, then, woman was more or less of a slave to man, much as weaker men were to stronger men. The evolution of the moral qualities has of course ameliorated the condition of the weak, and especially that of woman. The present advanced position of woman rests entirely on a foundation composed of the moral qualities of the man. Should these qualities fail her, her position reverts to its primitive stage. Under our present system, should she be treated barbarously by one man, she can call in the aid of other men for her protection. And this she

is very sure of getting if her cause is good, for the administration of justice is one function of government.

Let us suppose that woman should share equally with man the administration of justice. Could she execute her decisions in case of the opposition of men? Not if that opposition should be sufficiently strong. But supposing that a majority of men were on her side, would women stand as good a chance of justice from their own sex as from men? Knowledge of women answers in the negative. We think women generally would prefer to trust men for justice in preference to women. It is evident, then, that in those departments of government which most concern women, their aid is unnecessary. We do not touch on the many questions of government "support and protection," into which women generally do not care to enter.

The primitive reason why men protect and support women remains in as full force to-day as it ever did, and through it the latter get more than justice. And if the diversity of sex characters continues to increase as it has been doing, these reasons will grow stronger instead of weaker. We see no evil in such a prospect. The passion, emotion, or sentiment of love is a great civilizer. Like the lower creation, man puts on his best dress under its influence. No greater evil can befall society than the undervaluation of this sentiment. The slurs upon it, which are so common in society and in the press, come from persons who either do not understand the order of nature, or who are forbidden by some sinister destiny from conforming to it.—Cope

~~Immortality of the Personal Consciousness.—A symposium on this subject was recently published in the Easter number of the *Christian Register* (Unitarian) periodical of Boston. Eighteen scientists, all American excepting one (Dr. A. R. Wallace, now in this country), sent short articles expressing their views on the following three questions, propounded by the editor of the *Register*: "1. Are there any facts in the possession of modern science which make it difficult to believe in the immortality of the personal consciousness? 2. Is there anything in the discoveries of science which would support or strengthen the belief in immortality? 3. Do you consider the question beyond the pale of science altogether?"~~

~~The replies are various, and may be classified as follows:~~

~~1. The evidence from science is opposed to a belief in immortality (4).~~

~~A. No affirmative evidence mentioned. Leidy, Ward, Newcomb.~~

~~B. Immortality a gift of God. T. S. Hunt.~~

~~2. Agnostic (1).~~

~~E. S. Morse.~~

~~3. Science not unfavorable (8).~~

Wash. Post - May 9, 1917.  
**Mormon Underwear**

## **Tangles Navy Rules, Halting Enlistments**

---

Mormons are patriotic, but their underclothes, designed according to religious tenets, are getting them tangled up with the navy regulations. They have special regulations about the kind of underwear they shall don, while the navy has its own ideas on this same vital subject.

So yesterday the Navy Department heard from some Mormons at Salt Lake City, asking if the regulations could be waived in favor of the Mormon styles, in order that some of the sect could enlist.



~~Polygamy~~  
Stansbury's Gift. a Great Salt Lake of Utah.  
1853.

ment, (which is a theocracy,) and in the nature especially of their domestic relations.

With regard to the first of these, it is not my design to give more than a brief outline, referring the theological student to a treatise on this subject, about, as I understand, to be published by Lieutenant Gunnison, who was attached to the party, and who has paid especial attention to this subject.

The claim of the Mormons is, that they constitute the only true church now upon the earth; that all other denominations of Christians, so called, are out of the true path to Heaven, which can only be attained through the administration of the ordinances of their church, by the "Melchisedec priesthood." This, they assert, was removed from the earth some eighteen hundred years ago, since which period, as they insist, no true church has existed, until, in 1826, their founder, Joseph Smith, was visited by an angel from Heaven. This favoured man was instructed by the heavenly messenger in the way of truth, and led to a spot where, concealed in a stone box buried in the earth, were a number of records, written upon golden plates, and in a language called by him the "reformed Egyptian." From this box a portion of the records were taken by the angel and given to Joseph, upon whom was also conferred the "power and gift of revelation," by which he was enabled to translate the writing graven upon the plates. This he did, and gave the result to the world, as the "*Book of Mormon*." Joseph, they say, was also ordained to the "Melchisedec priesthood," with the power of knowledge in all languages, the gifts of the Spirit, and the authority of "binding and loosing." He and an associate were constituted apostles to preach the "gospel," and to establish among the nations the "church of Jesus Christ of the latter-day saints." In 1830, a church was organized, consisting of six members only, which has since grown so as to count its disciples by hundreds of thousands.

The Bible used by the Protestant Christian world is acknowledged by them to be of Divine origin and authority, but they assert that it has been much corrupted and interpolated—so much so as to require in part a new translation, which has been accordingly completed by their prophet Joseph, directly inspired for the purpose, and the book is soon to be published. They claim for the "Book of Mormon" the same Divine origin, and hold it to be equally authoritative with our Scriptures as a rule of faith and practice. In addition, they have the direct revelations which have heretofore been made to the seer, and which are recorded in the "Book of

Doctrines and Covenants;" and they also continue to receive, as intimations of the Divine will, such communications as are now made to his successor from time to time, for their guidance, not only in matters of faith and doctrine, but in those also of worldly policy and the concerns of every-day life. In the gift of miracles, and healing of the sick by the laying on of hands by the elders of the church, they are firm believers; and I have met more than one who has assured me not only that they had been eye-witnesses of the miraculous cures thus performed, but had themselves been the subjects of them.

The mode of worship is, in its general arrangement, the same as that adopted by most Protestant denominations who do not use printed ritual; to wit, singing, prayer, and a sermon or exhortation from the pulpit. A band of music is stationed behind the choir of singers, and not only aids in the devotional services, but regales the audience before and after the close of the exercises.

But it is in their private and domestic relations that this singular people exhibit the widest departure from the habits and practice of all others denominating themselves Christian. I refer to what has been generally termed the "spiritual wife system," the practice of which was charged against them in Illinois, and served greatly to prejudice the public mind in that State. It was then, I believe, most strenuously denied by them that any such practice prevailed, nor is it now openly avowed, either as a matter sanctioned by their doctrine or discipline. But that polygamy does actually exist among them cannot be concealed from any one of the most ordinary observation, who has spent even a short time in this community. I heard it proclaimed from the stand, by the president of the church himself, that he had the right to take a thousand wives, if he thought proper; and he defied any one to prove from the Bible that he had not. At the same time, I have never known any member of the community to avow that he himself had more than one, although that such was the fact was as well known and understood as any fact could be.

If a man, once married, desires to take him a second helpmate, he must first, as with us, obtain the consent of the lady intended, and that of her parents or guardians, and afterward the approval of the seer or president, without which the matter cannot proceed. The woman is then "*sealed*" to him under the solemn sanction of the church, and stands, in all respects, in the same relation to the man as the wife that was first married. The union thus formed is con-

sidered a perfectly virtuous and honourable one, and the lady maintains, without blemish, the same position in society to which she would be entitled were she the sole wife of her husband. Indeed, the connection being under the sanction of the only true priesthood, is deemed infinitely more sacred and binding than any marriage among the gentile world, not only on account of its higher and more sacred authority, but inasmuch as it bears directly upon the future state of existence of both the man and the woman; for it is the doctrine of the church that no woman can attain to celestial glory *without the husband*, nor can *he* arrive at full perfection in the next world without at least one wife: and the greater the number he is able to take with him, the higher will be his seat in the celestial paradise.

All idea of sensuality, as the motive of such unions, is most indignantly repudiated; the avowed object being to raise up, as rapidly as possible, "a holy generation to the Lord," who shall build up his kingdom on the earth. Purity of life, in all the domestic relations, is strenuously inculcated; and they do not hesitate to declare, that when they shall obtain the uncontrolled power of making their own civil laws, (which will be when they are admitted as one of the States of the Union,) they will punish the departure from chastity in the severest manner, even by death.

As the seer or president alone possesses the power to approve of these unions, so also he alone can absolve the parties from their bonds, should circumstances in his judgment render it at any time either expedient or necessary. It may easily be perceived, then, what a tremendous influence the possession of such a power must give to him who holds it, and how great must be the prudence, firmness, sagacity, and wisdom required in one who thus stands in the relation of confidential adviser, as well as of civil and ecclesiastical ruler, over this singularly constituted community.

Upon the practical working of this system of plurality of wives, I can hardly be expected to express more than a mere opinion. Being myself an "outsider" and a "gentile," it is not to be supposed that I should have been permitted to view more than the surface of what is in fact as yet but an experiment, the details of which are sedulously veiled from public view. So far, however, as my intercourse with the inhabitants afforded me an opportunity of judging, its practical operation was quite different from what I had anticipated. Peace, harmony, and cheerfulness seemed to prevail, where my preconceived notions led me to look for nothing but

the exhibition of petty jealousies, envy, bickerings, and strife. Confidence and sisterly affection among the different members of the family seemed pre-eminently conspicuous, and friendly intercourse among neighbours, with balls, parties, and merry-makings at each others' houses, formed a prominent and agreeable feature of the society. In these friendly reunions the president, with his numerous family, mingled freely, and was ever an honoured and welcome guest, tempering by his presence the exuberant hilarity of the young, and not unfrequently closing with devotional exercises the gayety of a happy evening.

There are many other curious points contained in their religious creed, but it is not my purpose here to write a theological treatise upon their views. The effect of the system, as may be well supposed, is to render the people in a high degree separate and peculiar; and to prevent, not only all amalgamation, but even any intimate association, with other communities.

To this irreconcilable difference, not in speculative opinions only, but in habits, manners, and customs necessarily growing out of them, may, I think, in a great measure, be attributed the bitter hostility of the people among whom they formerly dwelt, and which resulted in their forcible expulsion. The same causes of social incompatibility which existed then exist now, and in much greater strength—the community being freed from the pressure of public opinion that then surrounded them; and, although the freest toleration is (no doubt sincerely) proclaimed toward any who may choose to settle among them, yet I do not see how it is possible for the members of any other Christian societies, all of which are theoretically and practically opposed to their views, to exist among them without constant collision, jealousy, and strife. The result, therefore, must be the establishment here of a people of one faith, the fundamental principles of whose civil government will, under the lead of the ecclesiastical hierarchy, be framed to accord with that faith, to build up and support it, and to exclude from all participation in its administration every element that does not fully coincide with its requirements. When what is now but a Territory shall have become a sovereign State, with the uncontrolled power of making its own laws, this will undoubtedly be done; and we shall then see in our midst a State as different from the rest of the Union in faith, manners, and customs, as it is widely separated by the vast plains and inhospitable deserts that surround it. That such a State will soon be formed, no reflecting



# THE FIFTH WIFE

by  
Albert A. Powe

TO the Indians he was known as Chuck-a-ma-ha, which, translated, means, The Man Who Laughs Much. The plainsmen called him Old Baldy, because he never appeared abroad except on the back of a little bald-faced pony. To the scattering white farmers in that section, who lived upon Indian leases, called improvements, he went by the name of Tom Fuller. At home each one of his four wives called him Tom, though each with a different accent. The twenty-five or thirty children who owed to him their birthright, learned early, from the bad boys of a white neighbor, to call him the Old Man. For the sake of convenience and brevity in this story, he will be called by the name his white neighbors gave him, Tom Fuller.

Tom was a Euchee Indian. The Euchee is a tribe that dwells among the Creeks of the Indian Territory, enjoying the property and legislative tribal rights of Creek citizens, but retaining their own language, customs and religion. Among these is the inherent right of every head of the family to as many wives as he can induce to accept the protection of his name and shelter. The Euchee chief, with only one or two wives to work for him, is regarded as being poor indeed. But Tom Fuller was no ordinary blanket Indian. Long ago, when he was a roystering young buck who wore three eagle feathers plaited in his long braid of hair, and fine moccasins on his feet, he planned great things for the future. To begin with, he selected as the place of abode for his future family the crest of a prairie knoll which commanded a wide view of the plains upon three sides, while upon the other was a convenient forest which would furnish fuel

and fence timber for generations to come. At no great distance was a small, everlasting creek that would provide a bountiful supply of water. To a white man who came that way looking for a place to pasture his stock Tom gave a grazing and farming lease upon all the land the other wanted, on condition that he would build him a log house of two rooms on the top of the knoll, and also fence in and break a sofka patch of a few acres on the rich slope at the foot of the knoll. Tom himself was too busy attending ball games, pony races and buck dances to do any work himself. What was the use of working when he could get a white man to do the job much better for practically nothing. Was Tom not part owner of all that vast domain, and if the white man was willing to work for him for the simple right to let his cattle run on the public domain, why not let him do it? So one day, without the least effort upon his part, when he was about twenty years of age, Tom found himself the owner of a two-room house, and a six acre sofka patch, all fenced and broken and ready to be planted. As he gazed upon his new possessions he regretted that since the white man had been such an easy thing to manipulate, that he had not put in the contract that he was to plant and cultivate his field, as well as fence and break it, and he gave a sigh of regret over the wasted opportunity and decided that unless his field was to lie fallow he would have to get a squaw.

Twenty miles to the south resided old Chief Big Horn. Tom knew the chief had a score or two of marriageable daughters, and asked only a pony apiece for them. A day's ride to the north dwelt the Pawnees, who

had more ponies than they knew what to do with, and Tom had long ago become an expert horse-thief. To think was to act with Tom. He made a night visit to the country of the Pawnees, with such success that when he appeared at Big Horn's range a few days later he was driving six as likely ponies as any Indian could want. As he desired to get rid of his stock as quickly as possible, he bargained for two wives from the chief, and traded the other horses to him for a wild hog claim in Deep Fork bottom. His father-in-law threw in an old buffalo hide, a sofka stool and a lot of advice about how to get the best work out of the two wives.

With his new possessions, Tom set out for home astride his remaining pony. His two new wives walked beside him, and carried the household furniture, which consisted of the buffalo hide, the sofka stool and an iron pot—a wedding present from one of his mothers-in-law. They reached the house before nightfall. The next day Tom went to call on his white neighbor and traded him the buffalo skin for enough corn and potatoes to plant his farm. Besides, he borrowed a hoe. Then he took his two brides down to the field, and, sitting astride the fence, directed the job of planting. His wives, however, were experts, and, after a few hours' watching, Tom decided they could get along without his presence. He went back to the house, and, selecting a smooth place in the puncheon floor, he lay down and slept the rest of the day. With two willing hands in



"His father-in-law threw in an old buffalo hide, a sofka stool and a lot of advice about how to get the best work out of the two wives."

his field, a good wild hog claim in the bottom to furnish meat, and now and then a maverick that got in his way, Tom prospered. As the years went by he came to be regarded as one of the wise men of the tribe. So well did his first double matrimonial overture pan out that before long he went courting again, and a third wife came home with him. A room was added to the house on the knoll, a few more acres added to the field, and another white man secured an improvement under the protecting care of Judge Fuller—for Tom had gotten into politics and had been elected Judge of the Third Judicial District of the Muskogee Nation. He held court in his house, and the prisoners were either whipped or shot, according to sentence, in front of his doorway.

The next year wife number four was added to the household; another cabin was built and the sofka patch once more underwent a change of boundaries. Now the Tom Fuller ranch, as it became known, comprised fully twenty acres of cultivated ground. Tom's full corn pens in winter were the envy and admiration of every Indian for a hundred miles around, and Tom's kids became the terror of two counties, for while all this had been going on, so had the years. There had been troubles, too. The smallpox had broken out on the knoll, and when it died away there was a good-sized family graveyard started on the north side of the houses, among the peach trees that had grown up there.

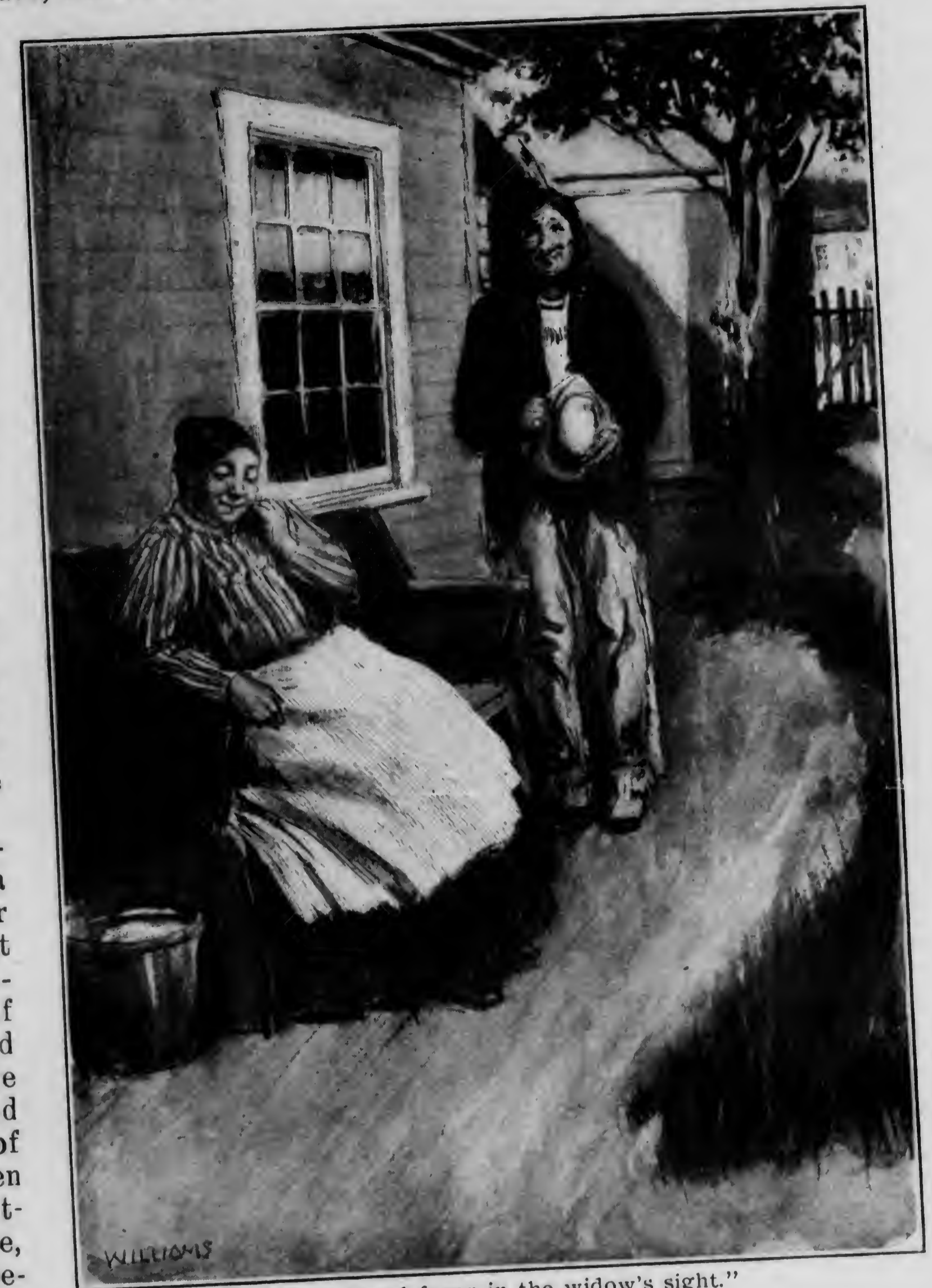
Then Tom got into trouble over a cattle transaction, which put him into jail and court, and finally the pen, where he served two years as a United States prisoner and learned the shoemaking trade, but he never followed it for a livelihood after he returned home.

Then one of his boys, a roystering chip off the old block, was accused of having murdered a ranchman. The lawyers who defended him and saved him with a life sentence for manslaughter got nearly all Tom's stock for fees. But nothing could quench the ardor or energy of the old man, as he was now called, and at the age of sixty years, when the hot blood of youth is supposed to have been cooled by the snows of many winters, Tom Fuller fell in love. This brings us to the reason for this story.

Tom's previous marriages had all been a matter of business or convenience. Sentiment had never before entered into any part of his make-up. Life had been to him a mere question of living and getting the most out of things. He had been successful. He had cattle and ponies galore, and a troop of marriageable daughters continually added to his store, either by working at home or getting married. Tom was careful to get full value for his daughters, and once, when a young buck had tried to steal away one of them without having paid the price, the old man had him arrested and brought before him in his capacity as judge, and forthwith sentenced him to be shot. Friends interceded and advanced the price demanded for the girl, whereupon the old man remitted the sentence and gave the happy couple a silver ring and his blessing.

Now, Tom's wives had grown old and fat

and ugly. They talked too much, and he no longer found pleasure in their society. He spent a good deal of time away from home in the town which had grown up but a few miles away, and where he frequently got



"Tom found favor in the widow's sight."

very drunk. Long ago he had learned to speak bad English, and after he had been elected judge he had discarded his blanket and moccasins, and wore store clothes and cowboy boots. The eagle feathers had also long ago disappeared.

When in town Tom always stopped at a little hotel kept by a buxom widow of about five and thirty, who was known by the townspeople as the Widow Grant. Tom found favor in the widow's sight, who made no bones of letting it be known that her purpose in coming to the Territory was to marry

right, and in that way secure a rich farm and a permanent home for herself and half-a-dozen little Grants, pledges of her first adventure on the matrimonial sea. She knew all about the quartette of squaws down on Fuller's Ranch. She had seen them often when they came to town, but she ascertained also that Tom had never been legally bound to a single one of them, and she had no notion of interfering with the sofka patch and the establishment on the knoll. She made a short campaign, and Tom, flattered nearly to death, fell head over ears in love with the widow, who, while far from being a beauty, was a veritable Helen in comparison with the four fat women on the knoll.

The wedding would take place in the fall; it was now July. Tom and the widow kept their happiness to themselves, and no one even suspected the sensation that was coming when corn was ready to husk, least of all the family on the knoll. They were mildly surprised one day when their liege lord and master came home from town duly and properly sober, and brought with him a white carpenter. They were more so the next day when wagons with lumber and more men came, and immediately in front of the log cabins in which they dwelt, there was begun the groundwork of a pretentious frame cottage. Their wonder and that of all the neighbors and children grew with the house. Many questions were asked, but Judge Fuller kept his counsel. When the house was finished it was carpeted and furnished and admired by the four wives, who never doubted for an instant but that this beautiful house was intended for them, as a reward for their years of toil and devotion. But when all was done and the judge locked the doors, and put the keys in his pocket and drove away without a word, they were disappointed, but not undeceived. In town, the expectant bridegroom had been equally successful in keeping his plans from being known to the widow, so that until the very day of the wedding, after the license had been secured, the preacher engaged, and the astonished guests bidden to witness the ceremony in the hotel parlor, no inkling of the mutual surprise in store for them had reached either the four wives at the knoll or the widow in town. Only the carpenters who built the house knew that there was going to be trouble on the morrow, and they had been admonished by the judge to keep their mouths shut. The wedding of the Widow Grant and Judge Tom Fuller was the

sensation of the hour, and that night the couple received a truly royal charivari, in which every cowboy who heard of it in time to get to town took a share, and more noise was made than at the capture of San Juan. As several of Roosevelt's Roughriders were present at both engagements, they ought to know.

The next morning the judge went to the local livery stable and presently returned with a handsome new buggy and team. Informing his bride that he had bought it for their wedding trip, he invited her to go for a drive. This was the first surprise, and she chided him gently for his extravagance. She had lain awake of nights planning how she would invest his money. She had fully determined to put the five hundred acre farm on the Arkansas in wheat that fall, and in other things her active brain had figured out large profits. Contrary to the judge, her former marriage had been for love, and this was purely a business affair, although she considered the judge not at all a bad-looking Indian. The dapple grays stepped out handsomely and swung into a fast trot on the level prairie road toward the knoll, where three momentous surprises were waiting—one for the bride, one for the quartette of wives, and another for the unsuspecting bridegroom, whose spirits rose as each mile passed. So long and so absolutely had his word been law, that no suspicion of the brewing storm clouded his happiness. In a few hours they came in sight of the knoll, as they swept out on the prairie from the timber of the creek bottom. There, white in the morning sun, stood the new cottage. The judge checked up the grays and looked proudly at his new spouse.

"How do you like 'um?" he asked.

She turned one startled look from the house to the judge and exclaimed: "Judge Fuller, have you been such an old fool as to put your money in a house like that way out here on the prairie?"

The judge smiled.

"Him big house," he said. "Lots fine chair an' stove in 'um. Him for you."

By this time they had reached the door and the judge sprang out with all the agility of a young man bringing home his first bride, paying not the least attention to the troop of dusky, dirty children of all ages and conditions, with four fat, wondering faces in the background.

"This home," he said, with a stately wave of his hand. "All for you. Fat women they work for you. You boss of the ranch."

By this time the erstwhile widow was in a towering rage. Her face was a flower of crimson.

"Drat you, Tom Fuller!" she exclaimed. "Haven't you got a lick of sense? Do you think for a moment that I'd live out here with all these niggers? What do you take me for? When did you build this house?"

Now, nothing gives an Indian more deadly offense than to call him a negro, and as a dozen or more of the younger Tom Fullers

looked on. Then, with just the suspicion of a smile of satisfaction, as her new-made spouse sputtered out a string of strange oaths, she gathered up the reins, touched the grays with the whip and wheeled rapidly off toward the town.

She arrived in time to learn that the livery man held a lien on the team for \$500, that the herd of cattle had been sold to build the house, and the five hundred acre farm was leased for three years to pay for the furniture.



"They kept him there on a diet of sofka and water for a whole month."

spoke English better even than their parent, her words were quickly translated to the four women in the background, with the result that they at once came to the front, and put a few direct questions to the judge in Euchee. He answered in the same tongue, and then, as the carpenters predicted, something happened. Before the luckless bridegroom had time to grasp the situation they had pounced upon him and scratched his face. They pulled his hair and shrieked and yelled Euchee oaths, while the judge, unable to defend himself from this combined attack of so much avoirdupois, brought into play every English cuss word he had ever heard, while the children all joined in the tumult. For the space of a minute wife number five

As the judge did not show up for a month afterward she filed suit for a divorce, alleging non-support and desertion, and secured it at the next term of court.

It was not until long afterward that she learned that the quartette of wives at the knoll, after pummeling the judge to their hearts' content, locked him up in one of the cabins and kept him there on a diet of sofka and water for a whole month, while they took possession of the handsome residence he had built as a surprise for the widow. To this good day Judge Tom Fuller has made no further attempt to add another wife to his family. And it is said that he is the most henpecked husband in the whole Euchee tribe.

## MEMORANDUM RESPECTING POLYGAMY AMONG MAMMALS.

The habit of polygamy among mammals is not general, but is restricted to certain groups, and in a few instances to certain species in monogamous groups. So far as I am aware there are no polygamous species in the great orders comprising the Bats, Edentates, Insectivores, and Rodents, and among terrestrial Carnivores the Lion is the only polygamous species I know of. Among pelagic Carnivores, on the contrary, polygamy is the rule, particularly among the Eared-Seals. In the case of the Hair seals there seems to be some doubt as to whether certain species are polygamous or monogamous. From personal observation I know positively that the Hooded Seal is monogamous, and I am almost equally certain that the Harp and Harbor Seals are monogamous. The Sea Elephant of the South Seas, though a hair seal, is known to be polygamous, maintaining harems comparable in some respects with those of the Fur-Seals. This is the only well authenticated instance of polygamy among Hair Seals, and it may be remarked that the Sea Elephant is the most aberrant and highly specialized member of the whole family as well as the one in which there is the greatest discrepancy in size between the sexes. So far as I know the seals are the only amphibious mammals in which the polygamous habit exists.

Among Ungulates polygamy is the rule. The Ungulates embrace the cattle, sheep, deer, antelopes, wild horses, and so on, most of which possess horns or antlers and are remarkable for their fighting propensities.

.. It seems to be a principle among polygamous animals that the males are much larger than the females or possess superior means of carrying on aggressive warfare, since the males of all polygamous species fight among themselves for the possession of the females.

This leads to the causes that have led to the development of the polygamous habit. Polygamy is a factor in sexual selection, but it does not represent the first stage of sexual selection, being preceded by promiscuity and the acquisition of superior fighting powers in the male sex. Among the males of gregarious species possessing superior means of defense the struggle for the possession of the female results in excessive development of such parts of the body as are used as weapons of defense or offense. The increasing development of these weapons goes hand in hand with increasing sharpness in the struggle for the females until polygamy follows promiscuity in many of the gregarious species. In our own country the Elk and Buffalo are notorious examples of polygamous animals, single bulls possessing large harems, which they defend with the most jealous vigilance at the cost of many bloody battles and not rarely at the cost of their lives, for other vigorous bulls continually beset the masters of these harems whom they meet in battle from time to time, the victor always claiming the harem, unless, as is sometimes the case, both combatants are killed in the conflict, in which case a new vigorous male at once takes possession.

That domestication tends to produce or hasten the polygamous habit is well-known, but in this case the determining cause is man's selection, not natural selection, since purely economic reasons make



it desirable that one male should serve as many females as possible. At the same time, domestication even though incomplete has an undoubted tendency to bring about polygamy. The common House Rats and Mice are believed to be polygamous, thus constituting a notable exception among the great order of Rodents. Darwin states: "It deserves notice that the instinct of pairing with a single female is easily lost under domestication. The Wild Duck is strictly monogamous. The domestic Duck, highly polygamous." (Darwin, Sexual Selection, Appleton's American edition, 1875, p.220).

Population

C. Hart Merriam  
Papers  
BANC MSS  
80/18 c

## POPULATION - CALIFORNIA

Let us see to what extent the Indians had "vacated" California before the Americans came. In Chapter V it was shown that there were sixty-seven and a half Indians to the square mile for forty miles along the Lower Klamath in 1870. Before the whites came doubtless there were one hundred, but we will take the former figure. Let us suppose there were six thousand miles of streams in the State yielding salmon; that would give a population of four hundred and five thousand. In the early stages of my investigation I was led to believe that wild oats furnished a very large source of supply, but have abandoned that idea as erroneous. In all oak-forests, acorns yielded <sup>4/5/416</sup> at least four-sevenths of their subsistence, fish perhaps two-sevenths; on the treeless plains the proportion of fish was considerably larger, and various seeds contributed say one-seventh. There are far more acorns in the Sierra and the Coast Range than on the Klamath, and all the interior rivers yielded salmon nearly as abundantly as that river. I think three hundred thousand might be added to the above figure in consideration of the greater fertility of Central and Southern California; this would give seven hundred and five thousand Indians in the State.

Let us take certain limited areas. The pioneers estimate the aboriginal population of Round Valley, when they first visited it, all the way from five thousand to twenty thousand. One thousand white people in it would be considered a very fair pop-

## POPULATION - CALIFORNIA

ulation, if indeed it would not crowd it. Mr. Christy estimates that there were from three hundred to five hundred Indians in Coyote Valley near Ukiah; now there are eight white families there, and they think they have none too much elbow-room. General Bidwell states that in 1849 there were at least one thousand souls in the village of the Korusi (Colusa). A Mr. Robinson pointed out to me the site of a village on Van Dusen's Fork which he thought contained one thousand people in 1850. Several other instances might be adduced if necessary. I saw enough in Northern California to convince me that there is many a valley in that section which once contained more Indians than it will of whites for the next century. The natives drew their stores from wide forests all around and from the waters; the whites depend chiefly on the valley itself.

The very prevalence of the crime of infanticide points to an over-fruitfulness and an over-population. - Powers, Tribes of California (Contributions to North Am. Ethnology, Vol. III) pp. 415-6, 1877.

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The following extracts are from a letter by Mr Powers, Nov. 3, 1876, to Major Powell in response to a request to modify this estimate (ibid 2-3):

## POPULATION - CALIFORNIA

My Dear Sir: Your letter asking me to modify my estimates as to the aboriginal population of California has been received and carefully considered. When you wished me to strike out the matter relating to origin and language, I did it cheerfully, because I was obliged to admit that it was written somewhat superficially on a subject that demanded profound study. But this is a different case. I traveled years in California, penetrated the remotest valleys, and talked with scores of trustworthy men--men like General Bidwell, Judge Steele, Representative Fairchild, and others--who had been among the Indians ten, twenty, thirty years, and seen them in their prime. These men gave me solid facts respecting their own limited areas. I know that the estimates of pioneers as to the population of large tracts are often wild and unreliable, but they should certainly be able to give a close guess as to single villages or valleys only a few miles square.

What can I do with these facts? Take, for instance, the census made by Ormond along the lower Klamath; take the statement of Captain Sutter that he had over 400 Indians, old and young, about him at Fort Sutter; take the statement of Claude Cheney that he had 50 or 60 about him on his ranch; take the figures of the old padres, which show that there were about 4,000 at San Miguel Mission at one time. In 1831 there were

POPULATION - CALIFORNIA

18,683 Indians domesticated at the various missions of the State. Take the statement of General Bidwell that, in 1849, there must have been 1,000 Indians in the single village where Colusa now stands; suppose he estimated the number twice too large; take 500; and now there are not above 20. How can I fly in the face of such facts as these? The State is full of them. Kit Carson says there were thousands in Napa Valley in 1829; but in 1859 he could not find a tenth, no, not a twentieth, part of them, and now there are not 50 in the whole valley. (P<sub>2</sub>)

\* \* \* \* \*

\*\*\* ~~but~~ I have waded too many rivers and climbed too many mountains to abate one jot of my opinions or beliefs for any carpet-knight who wields a compiling-pen in the office of the \_\_\_ or \_\_\_. If any critic, sitting in his comfortable parlor in New York, and reading about the sparse aboriginal populations of the cold forests of the Atlantic States, can overthrow any of my conclusions<sup>2)3</sup> with a dash of his pen, what is the use of the book at all? As Luther said, at the Diet of Worms, "Here I stand; I cannot do otherwise." — *ibid* 2-3

DECREASE AND EXTERMINATION

There is every reason to believe that the native population, from the date of the discovery of California to the time <sup>when</sup> it was shriveled by ~~the~~ oppressive contact with foreigners, had remained reasonably ~~constant~~.

It may be assumed therefore that ~~260,000 represents~~ <sup>was</sup> approximately 260,000,

the number of Indians at the beginning of the last century and

250,000 the number in 1834. I have not had time to complete the

search for data bearing on the rate of decrease and the numbers

present in different years, but the following figures, so far as they

go, indicate plainly the general ~~downward~~ <sup>course</sup> ~~cause~~ of the pop-

ulation.

During the height of the gold period, <sup>from to</sup> 1850-1853, (disregarding Schoolcraft's absurdly low estimate of 32,000, and Barbour and Wozencraft's exaggerated guess of 200,000-300,000), at least three estimates were published by men <sup>(whose business it was to deal with the Indians.)</sup> ~~conversant with Indian affairs in the state.~~

Adam Johnson, Sub-agent in charge of the Valley Indians, gave the number as 80,000;

E.F. Beale, Supt. of Indian Affairs, as 75,000-100,000; and the Commissioner of Indian Affairs, as 100,000. The mean of these is 88,750, which probably is not far out of the way.

In 1856 Bledsoe estimated the number at about 48,000, but he omitted several tribes ~~were overlooked~~ and his figure <sup>appears to be</sup> ~~is obviously~~ too low.

Beginning with 1860 and continuing to the present time the

~~decennial~~ Federal Census has recorded the number of Indians as follows:

In	1860	31,338
	1870	29,025
	1880	20,385
	1890	16,624
	1900	15,377

Center and ordinary office

In spite of obvious errors and discrepancies these statistics are of considerable <sup>interest</sup> ~~value~~ and in the main are ~~doubtless~~ <sup>probably may be</sup> approximately

correct. <sup>up to 1900</sup> They doubtless err ~~considerably~~ <sup>stently</sup> in underestimating the numbers of wild or 'uncivilized' Indians living away from the reservations. The omission of this class--or its reduction to an absurdity--is conspicuous in the Census of 1890, where <sup>the number given is</sup> only 43. ~~Indians are~~ entered as 'not taxed' and not on reservations. The actual number at

<sup>this date</sup> could not have been less than 1500 and probably exceeded 2000.

The tremendous decrease that has taken place during the past century--a decrease amounting to the complete annihilation of scores of tribes and the reduction to scattered remnants of scores of others--is due wholly to the coming of the whiteman. <sup>It began</sup> In the early days of the Mission Padres, <sup>as we have already seen, and</sup> ~~a decrease began which~~ <sup>continued</sup> has kept on to the present time. While ~~this decrease has been~~ <sup>was</sup> in the main gradual, there were two periods in which its rate was suddenly and greatly accelerated. The first of these was the period immediately following the confiscation of the missions, beginning in 1834; the second the period immediately following the discovery of gold, beginning in 1848.

The decrease following the mission period was startlingly rapid. The four years immediately preceding the confiscation of the missions were years of unprecedented prosperity and of marked increase in the number of neophytes. ~~We have already seen that~~ <sup>in 1834</sup> the number <sup>having</sup> attained ~~it~~ <sup>its</sup> maximum of upwards of 30,000,



INDIAN POPULATION OF CALIFORNIA IN 1853

The Census report of the Secretary of State of California for 1853 gives the "domesticated Indians" as numbering 33,539. *But* Hardly half the tribes of the state were visited by or even known to the enumerators. - *don*

INDIAN POPULATION OF THE UNITED STATES, JUNE 30, 1923.

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TOTAL .....344,303.

Alabama:

Not under agent,

405

Arizona:

Camp Verde Agency:

Mojave Apache,

496

Colorado River Agency:

Mojave Chemehuevi,

1,130

Fort Apache Agency:

White Mountain Apache,

2,590

Havasupai Agency:

Havasupai,

184

Hopi Agency:

Hopi,

2,336

Navajo,

2,500

Kaibab Agency:

Kaibab Paiute,

198

Leupp Agency:

Navajo,

980

Navajo Agency:

Navajo,

11,280

Pima Agency:

Maricopa (Gila River),

267

Pima,

4,629

Papago,

1,104

Salt River Agency:

Maricopa,

127

Mojave Apache,

212

Pima,

963

San Carlos Agency:

Apache and Mojave,

2,518

Sells Agency:

Papago,

4,568

Truxton Canon Agency:

Walapai,

440

Western Navajo Agency:

Hopi,

307

Navajo,

5,989

Paiute,

197

43,015

Recd. Dec. 12, 1923.

Arkansas:

Not under agent,

106

California:

Bishop Agency:		
Moache,	107	
Paiute,	1,268	
Shoshoni,	103	
Fort Bidwell Agency:		
Digger,	5	
Paiute,	211	
Pit River,	386	
Fort Yuma Agency:		
Cocopah,	27	
Yuma,	826	
Paiute,	2	
Mojave,	2	
Greenville Agency:	729	
Redding district (various tribes),	2,248	
Hoopa Valley Agency:		
Bear River, Crescent City,		
Eel River, Hupa, Klamath River, Smith River, Blue Lake,	1,913	
Mission Agency:		
Mission Indians and remnants of other small bands in southern California,	2,807	
Round Valley Agency:		
Concow, Ukie, etc.	2,017	
Tule River Agency:	684	13,335

Colorado:

Consolidated Ute Agency:		
Southern Ute,	344	
Ute Mountain,	437	781

Connecticut:

Not under agent,

159

Delaware:

Not under agent.

2

District of Columbia:

Not under agent,

37

Florida:

Seminole Agency:  
Seminole,

461

Georgia:

Not under agent,

125

Idaho:

Coeur d'Alene Agency:

Coeur d'Alene,  
Kalispell,  
Kootenai,

601

78

129

Fort Hall Agency:

Bannock, Shoshoni, and Skull Valley,

1,761

Fort Lapwai Agency:

Nez Perce,

1,415

3,984

Illinois:

Not under agent,

194

Indiana:

Not under agent,

125

Iowa:

Sac and Fox Sanatorium,

354

Kansas:

Potawatomi Agency:

Iowa,  
Kickapoo,  
Potawatomi,  
Sac and Fox,

338

277

803

93

1,511

Kentucky:

Not under agent,

57

Louisiana:

Not under agent,

1,066

Maine:

Not under agent,

839

Maryland:

Not under agent,

32

Massachusetts:

Not under agent,

550

Michigan:

Mackinac Agency:

L'Anse, Vieux Desert, and  
Ontonagon Bands of Chippewa,

1,214

Not under agent:

Scattered Chippewa, Ottawa,  
Potawatomi, and others,

6,417

7,631

Minnesota:

Consolidated Chippewa Agency:

Fond du Lac,

1,269

Grand Portage,

356

Nett Lake,

602

Leach Lake,

1,856

White Earth,

7,635

Pipestone Agency,

303

Red Lake Agency,

1,633

13,654

Mississippi:

Choctaw Agency,

1,439

Missouri:

Not under agent,

171

Montana:

Blackfeet Agency:

Blackfeet,

3,124

Crow Agency:

Crow,

1,777

Flathead Agency:

Flathead,

2,650

Fort Belknap Agency:

Assiniboine,

591

Crosventre,

586

Fort Peck Agency:

Assiniboine,

809

Yankton Sioux,

1,375

Rocky Boy Agency:

Rocky Boy Band,

479

Tongue River Agency:

Northern Cheyenne,

1,417

12,808

Nebraska:

Omaha Agency:

Omaha,

1,441

Winnebago Agency:

Winnebago,

1,096

2,537

Nevada:

Fallon Agency,	367	
Fort McDermitt:		
Paiute,	314	
Moapa River Agency:		
Paiute,	124	
Reno Agency:		
Scattered bands,	8,813	
Walker River Agency:		
Paiute and Washo,	851	
Western Shoshone Agency:		
Hopi, Paiute, Shoshoni, and		
Shoshoni Paiute,	675	11,144

New Hampshire:

Not under agent,		44
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New Jersey:

Not under agent,		99
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New Mexico:

Jicarilla Agency:		
Jicarilla Apache,	608	
Mescalero Agency:		
Mescalero Apache,	642	
Northern Pueblo Agency,	3,154	
Pueblo Bonito Agency:		
Navajo,	2,800	
San Juan Agency:		
Navajo,	7,000	
Southern Pueblo Agency;	5,361	
Zuni Agency:		
Pueblo,	1,911	21,476

New York:

New York Agency:		
Cayuga,	187	
Montauk,	30	
Oneida,	245	
Onondaga,	565	
Poospatuck,	20	
Seneca (Allegany),	971	
Seneca (Cattaraugus),	1,393	
Seneca (Tonawanda),	539	
St. Regis (not part of Six		
Nations),	1,613	
Tuscarora,	376	
Shinnecock,	200	6,139

North Carolina:

Cherokee Agency:		
Eastern Cherokee,	2,515	
Not under agent,	<u>9,368</u>	11,883

North Dakota:

Fort Berthold Agency:		
Arikara,	426	
Grosventre,	547	
Mandan,	273	
Fort Totten Agency:		
Sisseton, Wahpeton, and		
Cuthead Sioux (known as		
Devils Lake Sioux),	933	
Standing Rock Agency:		
Sioux,	3,588	
Turtle Mountain Agency:		
Chippewa,	<u>3,635</u>	9,607

Ohio:

Not under agent,		152
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Oklahoma:

Cantonment Agency:		
Arapaho,	216	
Cheyenne,	508	
Cheyenne and Arapaho Agency:		
Arapaho,	480	
Cheyenne,	717	
Kiowa Agency:		
Apache,	187	
Comanche,	1,697	
Kiowa,	1,679	
Wichita and affiliated tribes,	1,201	
Apache (Geronimo's band),	85	
Osage Agency:	2,099	
Pawnee Agency:		
Pawnee,	773	
Kaw,	420	
Ponca Agency:		
Ponca,	721	
Otse,	598	
Tonkawa,	62	
Seger Agency:		
Arapaho,	137	
Cheyenne,	606	
Quapaw Agency:		
Eastern Shawnee,	166	
Modoc,	40	

Oklahoma (continued):

Quapaw Agency (continued):

Ottawa,	274
Quapaw,	347
Seneca,	526
Wyandotte,	502

Shawnee Agency:

Absentee Shawnee,	551
Citizen Potawatomi,	2,227
Mexican Kickapoo,	200
Sac and Fox,	673
Iowa,	82

\*Five Civilized Tribes:

Cherokee Nation:

By blood,	36,432
By intermarriage,	286
Delawares,	187
Freedmen,	4,919

Chickasaw Nation:

By blood,	5,659
By intermarriage,	645
Freedmen,	4,662

Choctaw Nation:

By blood,	17,488
By intermarriage,	1,651
Mississippi Choctaw,	1,660
Freedmen,	6,029

Creek Nation:

By blood,	11,952
Freedmen,	6,809

Seminole Nation:

By blood,	2,141
Freedmen,	986

119,280

Oregon:

Klamath Agency:

Klamath, Modoc, Paiute (Pit River),	1,201
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Siletz Agency:

Confederated Siletz,	440
Grande Ronde,	332
Fourth Section allottees,	368

Umatilla Agency:

Cayuse,	337
Umatilla,	145
Walla Walla,	628
Other tribes,	17

Warm Springs Agency:

Wasco, Tenino, Paiute, and others,	1,094
Scattered Indians on public domain,	2,200

6,762

\* Five Tribes population taken from 1920 Indian Office Report.



Pennsylvania:

Not under agent, 358

Rhode Island:

Not under agent, 106

South Carolina:

Not under agent,  
Catawba, Cherokee, Oneida, and others, 304

South Dakota:

Cheyenne River Agency:

Blackfeet, Miniconjou, Sans Arc, and  
Two Kettle Sioux, 2,904

Crow Creek Agency:

Lower Yanktonai Sioux, 928

Flandreau Agency:

Flandreau Sioux, 297

Lower Brule Agency:

Lower Brule Sioux, 539

Pine Ridge Agency:

Oglala Sioux, 7,455

Rosebud Agency:

Rosebud Sioux, 5,572

Sisseton Agency:

Sisseton and Wahpeton Sioux, 2,392

Yankton Agency:

Yankton Sioux, 1,954

Santee Sioux, 1,212

Ponca, 372 23,625

Tennessee:

Not under agent, 56

Texas:

Not under agent, 22,110

Utah:

Goshute Agency:

Goshute, Cedar City, Indian Peak,  
Kanosh, Koosarum, Warm Creek,

Washakie, 349

Shivwitz, 102

Uintah and Ouray Agency:

Uintah Ute, 468

Uncompahgre Ute, 421

White River Ute, 252 1,592

Vermont:

Not under agent,

24

Virginia:

Not under agent,

822

Washington:

Colville Agency:

Confederated Colville,

2,515

Neah Bay Agency:

Hoh,

41

Makah,

418

Ozette,

7

Quileute,

195

Spokane Agency:

Chewelah,

6

Spokane,

669

Taholah Agency:

Chehalis,

89

Nisqually,

72

Skokomish,

187

Squaxon Island,

57

Quinalt Reservation,

719

Unattached:

Cowlitz,

490

Clallam,

535

Fuyallup,

152

Other tribes,

298

Tulalip Agency:

Lummi,

505

Port Madison (Susquanish),

204

Swinomish,

221

Tulalip (remnants of many tribes  
and bands),

404

Muckleshoot,

183

Yakima Agency:

Confederated Yakima,

2,939

10,906

West Virginia:

Not under agent,

7

Wisconsin:

Grand Rapids Agency:

Winnebago,

1,292

Hayward School:

Chippewa,

1,309

Keshena Agency:

Menominee,

1,838

Wisconsin (continued):

Keshena Agency (continued):

Oneida,	2,657	
Stockbridge and Munsee,	606	
Lac du Flambeau Agency:		
Chippewa,	825	
Laona Agency:		
Potawatomi,	390	
LaPointe Agency:		
Chippewa at Bad River,	1,116	
Red Cliff School:		
Chippewa,	<u>559</u>	10,592

Wyoming:

Shoshone Agency:

Arapaho,	921	
Shoshoni,	<u>916</u>	1,837

INDIAN POPULATION CALIF. & NEVADA, 1867-8

Major-General H.W. Halleck in his Annual Report of the Affairs of the Military Division of the Pacific, dated San Francisco, September 22, 1868, estimates the Indian population of California at 12,000, and that of Nevada at 8,000.

Maj. Gen. H.W. Halleck, Annual Rept. Affairs of the Military Division of the Pacific, Sept. 22, 1868. MS, War Dept., 'Old Files Division.'

Carded

POPULATION SNAKES & UTAHS

The Niles' National Register,  
Feb. 4, 1843, publishes a table of  
Indian tribes west of the Mississippi,  
compiled by T. Hartley Crawford,  
Commissioner of Indian Affairs, in  
which the population of the "Eutaws"  
is estimated at 19,200 and that of  
the "Snakes" at 1,000.--Niles' National  
Register, Vol. 63, p. 356, Feb. 4, 1843.

SHOSHONE POPULATION in 1831 - Rough guess.

Niles' Weekly Register, June 18, 1831, publishes a table of the "Indian Population of the United States", in which the "Snakes" are estimated at 20,000, and tribes "West of the Rocky Mountains" at 30,000.--Niles' Weekly Register, Vol. 40, p. 280, June 18, 1831.

## INDIAN POPULATION OF PARTS OF CALIFORNIA IN EARLY MISSION DAYS

Mariano G. Vallejo refers more than once to the Indians of Tulare Valley, whom he says numbered 60,000 in the early days.

INDIAN POPULATION, 1866

CALIFORNIA

D. Wooster in a letter to the California Alta dated May 4, 1866 states that the Indians in California now number about 25,000.

The clipping from the Alta is to be found in the Hayes Collection, Vol. 40, p. 9, at Bancroft Library.



Carded

## INDIANS ON NOME LACKE RESERVE

A. S. Taylor publishes in the California Farmer the following notes on Indian population "prepared mostly from Official Reports of the Indian Bureau at Washington City":

	Males	Females	Total
· <u>Nome Lackes</u>	450	320	770
· <u>Noi Mucks</u>	40	30	70
· <u>Wye Lackes</u>	22	15	37
· <u>Noi Yucans</u>	10	16	26
· <u>Noi Sas</u>		13	13
· <u>Yukas at Nome Cult</u>			3, 000
· <u>Nevadas</u>			25

[Note: This table is quoted from Rept. Commr. Ind. Affairs, for 1862, p. 359, 1863.]

A.S. Taylor, Calif. Farmer, June 12, 1863.

Carded

INDIANS ON FRESNO RESERVE

A.S. Taylor publishes in the California Farmer the following notes on Indian population "prepared mostly from Official Reports of the Indian Bureau at Washington City." ↓

<u>Tucson, Fresno Reserve</u>			
	Males	Females	Total
· <u>Nelcelchumnees</u>	45	40	85
· <u>Potoencies</u>	60	50	110
· <u>Noot-choos</u>	45	40	85
· <u>Pohoneches</u>	55	50	105
· <u>Chow-chilas</u>	45	40	85
· <u>How-chees</u>	8	10	18
· <u>Pitchatches and Lal Linches</u>	80	70	150
· <u>Coss-was</u>	40	48	88
· <u>Monos</u>	260	275	535
· <u>Wartokes, Iteeches and Chopces</u>	150	140	290
· <u>Watches</u>	40	35	75
· <u>Notonotos and Nemelchees</u>	100	90	190
· <u>Cowwillas</u>	60	50	110
· <u>Telemnies</u>	50	55	105
· <u>Cove-chances</u>	115	125	240
· <u>Tatches and Mowelches</u>	80	85	165

↓ A.S. Taylor, Calif. Farmer, June 12, 1863.

↓ Quoted from Rept. Commr. Ind. Affairs for 1862, p. 359, 1863. The use of the word 'Tucson' in the heading is probably an error, the heading in the Commr's Rept. being 'Fresno Reserve.'

POPULATION OF KLAMATH RIVER VILLAGES

In connection with the average number of inhabitants per village on Klamath River, a question of frequent recurrence, we have fortunately several very definite statements by George Gibbs and Redick McKee as the result of their observations in the fall of 1851.

Referring to the rancherias of the Shaste tribe, McKee consulted with several white men in Scott Valley and Yreka (then known as Shasta Butte City) who estimated the average number in each rancheria as 60 all told. This was considered by all of the gentlemen as a safe estimate."

Senate Ex. Dec. 4, Special Session, p. 177, 1853.

BOWD

INDIAN POPULATION, CALIF., OREGON

WASHINGTON & UTAH

The report of Jefferson Davis,  
Secretary of War, to the President  
of the U. S. (published in the  
Report of the Secretary of War, 1854)  
states that the Indian population of  
California, and the territories of  
Oregon, Washington and Utah is 134,000.

Report of Sec. of War., Sen. Ex. Doc. 1,  
32d Cong., 1st Sess. (Serial 747),  
1854.

INDIAN POPULATION

CALIF.

Niles' National Register, Nov. 6, 1847, publishes the following notes on the Indian population of Calif. from an article by Mr. Roberts, a missionary, published in the Methodist Advocate and Journal:

"Mr. Larkin, formerly our consul, now [155] navy agent in Monterey, fixes the number [156] of tame or domestic <sup>and</sup> Indians, at from 8,000 to 10,000. . . . And Dr. Marsh thinks there are nearly a million of wild Indians, scarcely one degree above the bear, chiefly on the western slope of the Sierra Nevada or Great Snow Mountain of California, living on pinones full 6 months in the year."--Niles' National

Register (from Methodist Advocate & Journal), Vol. 73, p.155-6, Nov. 6, 1847.

## INDIAN POPULATION

## CALIFORNIA

Niles' National Register, Sept. 27,  
1848, publishes the following note:

"According to an official statement  
from the Secretary of War, and Commis-  
sioner of Indian Affairs, the number of  
Indians in Oregon, New Mexico and  
California is 72,139.

In Oregon	23,309
<u>Upper California</u>	<u>15,930</u>
New Mexico	31,900

Niles' National Register, Vol. 74, p. 203  
Sept. 27, 1848.

## INDIAN POPULATION OF CALIFORNIA, 1851

Hon. John McDougal, Governor of California, in a letter to the Secretary of War, dated San José, March 1, 1851, and published in the Report of the Secretary of War, 1851, states that:

"The valley of Los Angeles, of the the San Joaquin, of the tributaries of the Sacramento, and the country around the main sources of that river, and the northern coast contain an Indian force estimated at not less than 100,000 warriors."

Report of the Secretary of War/Sen. for 1851,  
Ex.Doc.1, 32d Cong., 1st Sess.,  
(Serial 611), p. 138, 1852.

INDIAN POPULATION CALIFORNIA, 1856

W. W. Mackall, Assistant Adjutant General, in a letter to T. J. Henley, Superintendent of Indian Affairs, dated Benecia, August 3, 1856 writes:

"It is said that there are 60,000 Indians in California and not more than 2000 of them on reservations."

W.W.Mackall, Assistant Adjutant General,  
letter to T.J.Henley, Benecia,  
August 3, 1856. MS, 'Old Files  
Division', War Dept., No. P 338,1856.



The following is a copy of a MS in the Mayes Collection  
of the Bancroft Library

Number of Mission Indians and their Condition

Statement of Rev. A. Ubach, July 20, 1873

"Following are the names of the different localities or  
settlements occupied by the Indians within my knowledge --  
with their respective numbers, as far as I have been able  
to ascertain from the different captains or alcaldes in  
each locality.

San Pascual has a population of over 200, all Christians.  
Several Americans have squatted in their midst.

Mesa Grande, 20 miles further, has a population of 100 persons,  
young and old.

Mesa Chiquita, 10 miles further, has a population of 36 persons

Santa Ysabel, has an Indian population of over 200 persons,  
all Christians.

Agua Caliente has a population of 220 persons, all Christians.

San Felipe and La Puerta Cruz -- 50 persons

Vallecitos -- nearly 100, most of them Christians.

Guatay and Valle de los Pinos -- 50, most of them Christians

Capitan Grande -- 50, all Christians

Temecula -- over 200, all Christians

Pala - Pauma. -- Over 100, all Christians

Potrero - Rincon. -- Over 400, nearly all Christians.

Apuche - La Jolla, -- Over 300, nearly all Christians

Matawy - San Jose.-- 80, nesly all Christians

Ahuanga. - Cotum. -- 50, nearly all Christians.

Their is another large tribe of Indians, called Cahuil-  
las, within my jurisdiction, which numbers in all about  
1200; brave and ready to join any outbreak. Their settle-  
ments border on the desert, this side of Fort Yuma,

On the other side of the Desert are oth r tribes. I  
never visit them. Few of them are Christians.\*

[Scrapbooks]

This MS is in Hayes Collection, vol. 38, p. 36, in  
the Bancroft Library

WHAT THE UNITED STATES CENSUS SHOWS ABOUT THE INDIAN DEATH RATE.

From the page-proof of the Volume "Mortality Statistics"  
 Furnished by the Director of Vital Statistics, Bureau  
 of the Census, Department of Commerce

Deaths of Indians (exclusive of still-births)

Rate per 1,000 estimated population

	<u>1921</u>	<u>1922</u>	<u>1923</u>	<u>1924</u>
	17.5	19.2	22.5	25.9
California	13.8	13.8	19.4	19.9
Idaho	(2)	19.3	39.6	51.4
Michigan	32.0	24.6	34.5	27.7
Minnesota	13.9	13.4	25.8	26.9
Montana	22.7	26.6	22.7	34.5
Nebraska	34.4	57.9	48.	41.1
New York	11.3	11.6	15.8	18.7
N. Carolina	12.5	11.2	12.7	13.2
N. Dakota	(2)	(2)	(2)	33.
Oregon	14.0	24.0	26.5	24.2
Utah	22.3	21.5	18.7	24.9
Washington	24.1	32.1	31.1	34.5
Wisconsin	17.3	14.5	19.4	28.4
Wyoming	(2)	42.	55.7	86.1

(2) Not added to registration area until a later date.

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Nebraska	34.4	57.9	48.	41.1
New York	11.3	11.6	15.8	18.7
N. Carolina	12.5	11.2	12.7	13.2
N. Dakota	(2)	(2)	(2)	33.
Oregon	14.0	24.0	26.5	24.2
Utah	22.3	21.5	18.7	24.9
Washington	24.1	32.1	31.1	34.5
Wisconsin	17.3	14.5	19.4	28.4
Wyoming	(2)	42.	55.7	86.1

(2) Not added to registration area until a later date.

Alex. S. Taylor, in his 'Indianology of California' published in California Farmer, 1860-1863, gives the following statement showing the names and population of pueblos of the Pimas and Maricopas: (in Arizona)

San Xavier	170
Sacaton	144
Hueso Parrado	250
Agua Rias	527
Cerrito	258
Arenal	577
Cachanila	503
Hormiguero	510
Casa Blanca	339
Cerro Chiquito	232
Llano	395

Alex. S. Taylor, 'Indianology of California', California Farmer,  
June 19, 1863.

Correct

INDIAN POPULATION OF CALIFORNIA -- GEN. ANDERSON'S ESTIMATE, 1852

The Daily Alta California (March 18, 1852) states that Gen. Anderson in a debate on Land Resolutions before the California Senate, March 16, 1852, said that he had "expended much pains in endeavoring to form an estimate of the number of Indians in California," and "that he had arrived at a different conclusion regarding their number from that reached by Col. McKee."

"He gave the following as his estimate, viz:

The number of Indians in Shasta Valley and on Scott and Klamath Rivers . . . . .	800
In <u>Klamath County</u> . . . . .	1500
<u>Klamath Lake Indians</u> . . . . .	1000
Indians of the Coast Range west of the Sacramento and east of the Trinity, in the direction of Reading's Springs . . . . .	1000
From Shasta Butte south to the head of Cow Creek, east of the Sacramento and west of the Sierra Nevada .	2000
Including the Cow Creek country as low down as Butte Creek . . . . .	<u>1000</u>
	7300
South of Reading's Springs and west of the Sacramento, to the highest ridge of the Coast Range between the said Springs and Red Bluff . . . . .	1000
<u>Reading's Indians</u> . . . . .	300
Along the Valley of the Sacramento and to Cache Creek, west of the Sacramento, including the <u>Colusi Indians</u>	1000
East of the Sacramento, <u>Bidwell's Indians</u> and their affiliated tribes . . . . .	1000
In the Bend of the Sacramento, including <u>Lanson's</u> <sup>(Lassen's?)</sup> and <u>Gill's Indians</u> . . . . .	500
The <u>Ukees</u> , in a volcanic ridge north of Dye's and south of Butte Creek -- number unknown, but supposed, from various opportunities of observing them, to be equal to . . . . .	<u>1000</u>
Total North . . . . .	12,100
South, estimated . . . . .	<u>10,000</u>
Total . . . . .	22,100

*Carded*

# INDIAN POPULATION OF CALIFORNIA -- GEN. ANDERSON'S ESTIMATE, 1852

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	7300
South of Reading's Springs and west of the Sacramento, to the highest ridge of the Coast Range between the said Springs and Red Bluff . . . . .	1000
<u>Reading's Indians</u> . . . . .	300
Along the Valley of the Sacramento and to Cache Creek, west of the Sacramento, including the <u>Colusi</u> Indians	1000
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The <u>Ukees</u> , in a volcanic ridge north of Dye's and south of Butte Creek -- number unknown, but supposed, from various opportunities of observing them, to be equal to . . . . .	<u>1000</u>
Total North . . . . .	12,100
South, estimated . . . . .	<u>10,000</u>
Total . . . . .	22,100

Daily Alta California, March 18, 1852.

INDIANS OF SOUTHERN CALIFORNIA  
(Colorado District)

"I continued my tour of inspection from the Tejon to what is known as the Colorado District. This district extends east and west from the Mojave to the Colorado river and to the Pacific coast, and southward to the boundary line between California and Mexico. Within this extent of country there are at least ten thousand of the most warlike and intelligent Indians within the boundaries of this State. They comprise the Santa Inez tribe, Venturaneans, San Luisaneans, Cabezons, Coahuilas, Seranos, Coyotes, Chumas, Chimehuehuas, Yumas, Mojaves, (divided into different small tribes), Kanawamahs, and Wallupis. Nearly all of these Indians are by nature agriculturists, and it would require but little aid and instruction from the government to render them contented and peaceful tillers of the soil."

--J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, pp. 325-326, 1863.



POPULATION

INDIANS IN OWENS RIVER VALLEY

"The narrow valley of Owens river is only, at this time, sufficient for the support of the very small number of Indians (fifteen hundred by census) who at present occupy and inhabit it."--J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, p. 327, 1863.

## CALIFORNIA INDIANS

A detailed account of the Indian population of California, showing the great decrease in native population during the past century, together with a discussion of many of the causes which led to this decrease, and of the status of Indian tribes prior to 1905.--Merriam, The Indian Population of California, American Anthropologist, NS VII, pp. 594-606, Dec. 1905.

Population

SIERRA OR CARUANA

On Tejon reservation "the Sierra or Caruana Indians, under their chief, Vicente, number 36 men, 40 women, and 20 children; they own 22 cows and 33 horses, and cultivate about 30 acres of land as their own farm. — J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, p. 324, 1863.

Population

SURILLO or CARTAKA

On Tejon reservation "the Surillo or Cartaka tribe, Chiefs Chico and Rafael, number 52 men, 65 women, and 45 children; they own 20 horses, and have 40 acres of land under cultivation."--J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, p. 325, 1863.

Population



L A G U N A or T A T A G U A

On Tejon reservation "the Laguna or Tatagua tribes, Chief Raimundo, number 80 men, 88 women, and 63 children; they own 30 horses, and have 50 acres of land under cultivation."--J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, p. 325, 1863.

POPULATION



INDIANS IN SOUTHERN CALIFORNIA

"In my department there are at least sixteen thousand Indians."--J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, p.327, 1863.

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The <sup>department</sup>~~district~~ referred to is the Agency for Southern District of California, "embracing a tract of country of more than eight hundred miles in length, by about three hundred miles in width."--Ibid, p. 324.

Population

LLÉGEENOS or DIEGEENOS

"Tomaso is chief of the tribe of Indians called Llégeenos, or Diegeenos. . . . According to Tomaso, his tribe numbers about 8,800 persons, all speaking the same language, and occupying the territory from San Luis Rey to Agua Caliente."--Whipple, *Expd.* from San Diego to the Colorado in 1849, 31st Cong., "d Sess., Sen.Ex.Doc. 19, p. 2, 1851.

INDIANS IN COLUSA CO., CALIF., 1850.

"In 1850 there were perhaps 1000 Indians in Colusa Co. of the Colus tribe, 200 or 300 of the Willies, who inhabited Grand Island, 200 of the Cortinas, who had their headquarters near the head of Cortinas Creek, about 20 miles SW of Colusa. There was also a large tribe in the vicinity of Newville and some scattering villages near the upper end of the county. Those about Newville were considered the most dangerous. The Grand Island Indians survived the white civilization the longest and for many years made good harvest hands. The Colus tribe were under the immediate control of Sioc, a chief of more than ordinary intelligence, who held a sort of provincial control over all the other tribes of the valley."

--Memorial and Biog'l Hist. of North'n Calif., Lewis Pub'g Co., 124, 1891.



Population

"DIGGER" INDIANS ON <sup>Tejon Reservation</sup> ~~SOUTHERN CALIFORNIA~~

"The Indians properly belonging at present to the Tejon reservation may be numbered at about 1,370, among whom are the following thrifty tribes or bands." . . . .

The following are enumerated: The Sierra or Caruana, 96 people; Laguna or Tatagua, 231 people; and the Surillo or Cartaka, 162 people. . . . . "These Indians all belong to the race known in California as the 'Digger'; there are several hundred of the same class living on the Laguna, Tihatchipe, Hockeye, Kern river, Posa creek, and other localities within the bounds of this portion of my district."

--J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, pp. 324-325, 1863.

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The district referred to is the southern District of California.--Ibid, p. 324.

## Population

### P A I - U T E S

Number of Pai-Utes "near the Lake of Soda" [Soda Lake, Mohave Desert] given as 300.--Domenech, Seven Years' Residence in Gt. Deserts of N. Amer., Vol. I, 186, 1860.

Monache

OWENS RIVER, CALIFORNIA

"The Owen's river country has, during the year 1863, been<sup>89</sup> the scene of several engagements between detachments of California Volunteers and the Indians of that region. The principal action was fought March 19th, between 20 men headed by Lieut. Doughty and a body of Indians strongly posted in a stony ravine [near the head of Owen's Lake. The enemy was de-<sup>90</sup>feated, leaving 16 dead on the field."

--William H. Knight, Bancroft's Hand-Book Almanac for 1864, 89-90, 1864.

Population

INDIANS IN COAHUILA VALLEY

"I should estimate the total population of the Cabezon, or Coahuila valley, at from eight hundred to one thousand Indians. They are generally peaceable and industrious; many of them, when not at work in their own fields, seek employment at San Bernardino, or at the farms, orchards, and vineyards in the vicinity of that town. During the 'rush' of miners to the Colorado river, which took place within the month of June, numbers of them travelled thither by the route leading through the Cabezon settlements, and they all speak favorably of the friendly disposition manifested towards them by these Indians."--J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, pp. 326-327, 1863.

CHEMUEVIS ✓

POPULATION

Estimated at 300 warriors, and whole number of people  
1,500.--Whipple, Ewbank, and Turner, Pacific R.R.Repts.,  
Vol. III, Pt. 3, p. 17, 1856.

POPULATION



Y U M A S

(Whipple, Exped. from San Diego to the Colorado in 1849,  
31st Cong., 2d Sess., Sen. Ex. Doc. 19, 1861.)

The number of Yumas estimated by emigrants at the  
mouth of the Gila River was given to Whipple as 5000  
(p. 5), and by Santjago a chief as "from five to ten  
thousand people" (p. 12).

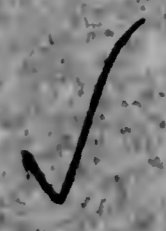
C O C O P A S

POPULATION

Estimated at 3,000.--Whipple, Fwbank, and Turner,  
Pacific R.R.Repts., Vol. III, Pt. 3, p. 17, 1856.

Estimated in 1799 by Don José Cortez at 3,000.--Ibid,  
pp. 17-18.

Population



## CAJUENCHES

"The Cajuenchas, who are about 3000 in number, live on the banks of the Colorado, in a charming country."--  
Domenech, Seven Years' Residence in Gt. Deserts of N. Amer.,  
Vol. II, p. 10, 1860.



Mohave

Population



T A M A J A B S

\*This tribe numbers about 3000 individuals, settled on the left bank of the Colorado, between the 34° and 35° N. lat. \*--Domenech, Seven Years' Residence in Gt. Deserts of N. Amer., Vol. II, p. 62, 1860.

Population

Y U T A H S

✓

"The population of the Yutahs may be estimated at  
5000 souls." --Domenech, Seven Years' Residence in Gt.  
Deserts of N. Amer., Vol. II, p. 8, 1860.

## POPULATION



### C U C H A N S

From information secured from various Indian sources, Whipple concludes that the number of Cuchans "living in villages upon both banks of the Rio Colorado, within about twenty miles from the mouth of the Rio Gila" are "about five thousand persons."-- Whipple, Expd. from San Diego to the Colorado in 1849, 31st Cong., 2d Sess., Sen.Ex.Doc. 19, p. 16, 1851.

POPULATION



C U C H A N S

From information secured from various Indian sources, Whipple concludes that the number of Cuchans "living in villages upon both banks of the Rio Colorado, within about twenty miles from the mouth of the Rio Gila" are "about five thousand persons."-- Whipple, Exped. from San Diego to the Colorado in 1849, 31st Cong., 2d Sess., Sen.Ex.Doc. 19, p. 16, 1851.

Population

CAHUILLAS

Number of Cahuillas "of the mountains" given as  
500.--Domenech, Seven Years' Residence in Gt. Deserts  
of N. Amer., Vol. I, 186, 1860.

POPULATION

M O H A V E S

Statistics on the population of the Mohave nation as secured from a Mohave guide, the birth rate in representative families, and "evidence of the gradual decay of the tribe."

The warriors as estimated by Loroux numbered 600, and the whole population 4000.--Whipple, Ewbank, and Turner, Pacific R.R.Repts., Vol. III [Pt. 3] p.17, 1856.

NUMBER OF INDIANS IN CALIFORNIA IN 1851, by James D. Savage

Klamath, Trinidad, Sacramento and tributaries. . . . .	30,000
San Joaquin and tributaries down to Tuolumne. . . . .	6,500
Tuolumne River Indians, . . . . .	2,100
Merced River Indians, . . . . .	2,100
San Joaquin headquarters Indians, . . . . .	2,700
King's River Indians, . . . . .	200
Kern River Indians, . . . . .	1,700
Tulare River Indians . . . . .	1,000
Umas River Indians . . . . .	5,000
East Side Nevada Indians . . . . .	31,000
On the coast not civilized . . . . .	6,000
Total. . . . .	<u>88,300</u>

Memorial and Biographical History of the counties of Fresno,  
 Tulare, and Kern, Calif., p47 [author & date not given].

The only other way that occurs to me of making an estimate of the aboriginal population is to start with the number and approximate size of the villages throughout the state. This is now impossible, for while Adam Johnston, McKee, Wozencraft, <sup>Taylor,</sup> Powers and others mention a large number of village sites, and while I might add a number more, there still remain a multitude of which no record exists.



Between the years 1805 and 1810 there was a falling off of the Indian population at the missions amounting to about 2,000 persons--and this in spite of the fact that every effort was made to secure additional neophytes by raids and baptisms. For a number of years the death rate exceeded the birth rate--in some years it is said the proportion was 3 to 1. Hittell attributes the decrease from 1805 to 1810 to epidemics and desertions. The desertions he says "were the result of cruelties exercised towards the neophytes". Among the epidemics he mentions that some affected the head and throat, and alludes to one at Soledad in 1802, and one at Monterey in 1805.--Hist. Calif, I, 611-612.

California Indians not on Reservations - 1880

Rept. Comm. Ind. Affs. for 1880, 238-240, 1880:

Ind for 1882

# p. 330, 1882

	<sup>In 1880</sup>	<sup>In 1881-2</sup>
Klamath [River]	1,125	
In Sierra Co.	5	12
Alpine Co.	10	
Amador Co.	30	272
Colusa Co.	250	353
Sonoma	150	339
Eldorado	187	193
Tolo [= Yolo]	50	47
Mendocino	1,181	1240
Placer	384	91
Shasta	921	1037
Napa	62	64
Sutter	6	12
Solano	15	21
Tehama	126	157
Yuba	200	330
Butte	339	522
Lake	646	774
Humboldt	224	224
Nevada	50	98
Marin	60	162
Plumas		508

California Indians not under an Agent in 1878-9

Comm. Ind. Affs. in Rept. for 1878, <sup>1878 + Rept. 1879 228,1179</sup> p. 282, given

following as not under an agent:

	<u>1878</u>	<u>1879</u>
Klamath [River]	1,125	1,125
Sacramento Valley	150	150
Clear Lake	100	100
Ukiah	200	200
Yuba Valley	25	300
Redwood	25	25
Little Lake	40	86
Healdsburg	50	50
Russian River	200	200
Yit River	<u>600</u>	<u>600</u>
	2,515	2,936

In other words, he and his officer ignored or were ignorant of at least half of the non-reservation Indians of the State. com

## YUMAS

Fages mentions in his Diary on Dec. 3, 1781, a band of Yumas on Colorado River, numbering about 600. p.169.

Again he speaks of the 'Yuma nation, which numbers about 3000, according to our investigations'. p. 173.

Fages was told that the "Yuma band was very large, exceeding 1500, as was true." p.177.

---Diary of Pedro Fages, Colorado R. Campaign, 1781-1782, Pubs. Acad. Pac. Coast Hist. III, 169; 173, 177, 1913.

Number of Indians at the several Missions at the dates given.

(from Mitchell's Hist. Calif.)

San Diego (F 1769.) 1783:740 N; 1798: 908;

San Luis Rey (F.1798.) 1805 :900; 1811:1500; 1820:2600; 1830:2776

Capistrano (F.1776). 1783:383; 1796: 924

San Gabriel(F.1771.) 1783: 638; 1796: 1331

San Fernando (F.1797). 1799-1805:1100

San Buenaventura (F.1782). 22; 1796: 725

Santa Barbara (F1782+1786) 1795: 549; 1796:646; 1797: ~~456~~ <sup>946</sup> ~~on~~  
~~the rancheria (300) were baptised on condition 456 I.~~  
1805: Neophytes then living 1756; largest than any other  
mission in the country at that time.

La Purisima (F.1787). 1796: 760; 1799: 923; 1805: 1385

Santa Ynez (F.1804). 24 Neophytes; 1805: 520; 1811: 628. (~~19th mission~~)

San Luis Obispo (F.1772) . 1783:492; 1796:814

San Miguel (F.1771). 1799:285; 1811:971

San Antonio. (F.1771). 1783:582; 1796:1168

Soledad (1791 F). 1793: 198; 1796:289; 1799:500; 1811:600

San Carlos (F1770). ? 614; 1796:835 ; 1786 Total Ind.Pop. 740  
~~710 (I, 457).~~

San Juan Bautista (F.1799) 344; 1805:1219

Santa Cruz (FF.1791). ~~1811:509~~ 1811:509 1796:about 400.

Santa Clara (F.1777). 1783:458; 1796:433.

San Jose (F.1799). 1799:285; 1811:484.

=> San Francisco Dolores, (F.1776) Harbor of San Francisco  
San Francisco Solano or Sonoma (F.1823. ) In 1830 "the neophytes num-  
bered seven hundred and sixty [760], considerably more than half of  
whom, however, appear to have been baptised at other missions.  
(I, p.499).

San Rafael (F.1817. ) 1822: 500; 1830: 1600 and still living  
~~1000 of all baptised.~~

Father Junipero during 10 years baptised 5,800 Indians, in all.

~~End of 1783: Neophytes altogether: 4,244. (I, p.453).~~

Aug. 1815: Population of Mission Indians a little over 22,000

In the fall of 1815 the Mission Indians numbered over 22,000 (Mitchell I, 641)  
In the beginning of 1834 the Mission Indians numbered upwards of 30,000 (Mitchell II, 207)

Ind. N. 19.616

POPULATION OF SACRAMENTO VALLEY IN 1847

(From Sacramento Union, July 25, 1860)

New Salem, December 21, 1847.

Capt. J. A. Sutter:

Dear Sir:

Inclosed I send you the population of the Valley from the Buttes upward. The white population is correct.-the Indian population is not over-rated.

POPULATION	MALES	FEMALES	TOTAL
Whites	58	24	82
Tame Indians	7	12	19
Wild Indians	<u>10000</u>	<u>9500</u>	<u>19500</u>
Total	10065	9536	19601

The above estimate includes the "Willies" and the Rancherias on the Feather River as low down as the Baga and Dichera, together with the white population from the Buttes up the valley.

Respectfully Your Obedient Servant,

J. Bidwell.

Note. New Salem was on Feather River between Butte and Sutter Counties in the present Cutts Orchard.

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INDIAN POPULATION OF CALIFORNIA IN 1856--Agent Henley's Report.

On Reservations in 1856:

Klamath [River]	2,500	
Nome Lacke	2,000	
Mendocino	500	
Fresno	900	
Tejon	700	
Nome Cult Valley	3,000	
Kings River	<u>400</u>	10,000

Estimate of Indians not on Reservations:

In San Diego and San Bernardino Counties	8,000
In Los Angeles, Santa Barbara, San Luis Obispo, Monterey, & Santa Clara, Counties	2,000
In Tulare and Mariposa Counties	2,500
In Tuolumne, Calaveras, San Joaquin, Alameda, and Contra Costa Counties	4,100
In Sacramento, Eldorado, & Placer Counties	3,500
In Sutter, Yuba, Nevada, & Sierra Counties	3,500
In Butte, Shasta, and Siskiyou Counties	5,500
In Klamath, Humboldt, & Trinity Counties	6,500
In Mendocino, Colusi, Yolo, Napa, Sonoma, and Marin Counties	<u>15,000</u>
Total number in Henley's Superintendency	61,600

House Doc.1, 34th Congress, 3d Session, 796-797, 1856.



Hall J. Kelley, in his Memoir on Oregon dated 1839, writes the following concerning California Indians:

"Most of the native Indians have perished, or have gone into the missions about the bay of San Francisco. Many tribes are utterly extinct; in places where I was told that, in 1832, there was a population of a thousand or fifteen hundred souls, I found sometimes none; and not a vestige of their habitations, save a pile of discolored stones, or a slight depression of soil. Pestilence and the wrath of man have combined in the work of extermination, until, of the ancient owners of this most interesting territory, very few now occupy its fertile fields. I do not believe, and I speak after due investigation, that the whole Indian population between the Colorado and the Pacific, in 1834, exceeded three thousand souls. But along the Sacramento and elsewhere, there is abundant evidence that, in former times, a teeming and crowded population was spread over that now desolate region."

Kelley, Hall J., Memoir on Oregon, 25th Cong., 3d Sess., H. Rept. 101, p. 53, Jan. 31, 1839.

SANTA BARBARA CHANNEL COAST

Felipe Neve reported in June 1777 "on the means and importance of controlling the eight or ten thousand natives of the twenty-one Channel rancherias."

--Bancroft (after Prov.Rec., MS, i, 70-3), Hist.Calif., I, 338-339, 1884.

Goycochea (Report, March 12, 1796), mentions by name 22 rancherias "from San Buenaventura to Purisima" and gives the "total number of gentiles" as 1783.

--Bancroft (after St.Pap.,Miss.,MS, ii, 94), Hist.Calif., I, 672 ft.note, 1884.

Population of Sacramento Valley in 1847

RANCHO CHICO  
ORCHARDS

*Copied by H.M.H.*

Annie E. K. Bidwell

RANCHO CHICO

CHICO, CAL.

(From Sacramento Union, July 25, 1860)

New Salem, Dec 21, 1847.

Capt. J. A. Sutter: Dear Sir: Inclosed I send you the population of the Valley from the Buttes upward. The white population is correct. - the Indian population is not over-rated.

<u>Population</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>
Whites	58	24	82
Fame Indians	7	12	19
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Total	10065	9536	19601

The above estimate includes the "Willies" and the Rancherias on the Feather River as low down as the Baga and Dichera, together with the white population from the Buttes up the valley.

Respectfully your Obedient Servant,  
J. Bidwell.

Note. New Salem was on Feather River between <sup>Butte</sup> Butte and Sutter Counties in the present Cutts Orchard.

The density of population in certain valleys and along certain rivers is surprising, and to persons unfamiliar with local conditions in California seems incredible. A number of specific instances have been recorded by Powers and others; to these I add the following: A few years ago an old Wiktchumme Indian gave me the names of no less than a dozen tribes which in the time of his youth inhabited the Kaweah Delta and adjacent region; and men still living have told me that when they settled at Visalia the number of Indians living in the vicinity was at least five thousand.

**SAN LUISEÑO POPULATION, 1862.**

Benjamin Hayes, a district judge and much interested in the welfare of the Indians, reports the population of the Luisenos on May 30, 1862 as follows, in MS note in the Hayes Collection.

Temecula, 300	La Joya, 112
Pala, 155	Yapitchah, 53
Pauma, 120	Puerta Chichita, 20
Potrero, 310	Puerta Cruz, 58
San Ysidro, 50	Coyotes, 120
Agua Caliente, 254	Vallecito, 20
Ahuanga, 16	San Jacinto, 100
San Luis Rey, 25	In all, 1813 souls

(At Agua Caliente, or Warner's, about 25 are from Temecula -- the rest are Dieguinos)

The above enumerated with this exception are San Luisenos.

Benjamin Hayes, MS note in Hayes Collection, <sup>(Scrapbooks)</sup> vol. 38, p. 109,  
Bancroft Library

Indian Population of California in  
Oct. 1856

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Total

48,100

Hittell, Hist. Calif. III, p. 916.

Reservation Indians 10,000

Nonreservation

38,100

48,100

For details consult above reference.

Hittell refers to

Bledsoe, Indian Wars, 207-211, 457-464, &

Taylor's life, illustrated, 75.

INDIAN POPULATION OF CALIFORNIA, BY COUNTIES IN 1890 AND 1900

	1890	1900	(from 12 <sup>th</sup> Census, Vol. 1, pt. 1, p. 531, 1891.) Name of tribes added by me - com.
Alameda-----	25-----	71	Mixed Tuolumne, Muwa,
Alpine-----	224-----	142	Piute & -
Amador-----	58-----	130	Muwa
Butte-----	319-----	201	Midoo
Calaveras-----	77-----	100	Muwa
Colusa-----	277-----	121	Patwin & Pahtin, Nomenkla
Contra Costa---	3-----	8	?
Del Norte-----	376-----	269	Karok?
Eldorado-----	136-----	138	Necenon + perhaps Washoo
Fresno-----	347-----	520	Holkoma, Chokimina, Choenimne, Entimbitch,
Glenn-----	-----	24	Nomenkla
Humboldt-----	1,379-----	1,728	Hoopa, Yurok & z
Inyo-----	850-----	940	{ Piute Panamint Shoshone
Kern-----	337-----	344	New-oo-ah, Pakanepul
Kings-----	-----	51	Tache
Lake-----	556-----	428	Hram-fo
Lassen-----	335-----	381	Piute, Midoo, Pit River
Los Angeles---	144-----	69	Sahiel; Sorona
Madera-----	-----	401	Nim; Chukchansy, muwa
Marin-----	31-----	25	
Mariposa-----	152-----	173	Muwa
Mendocino-----	581-----	1,353	Pomo, Yuke, Konkow, Wylakke, Pit Rivers
Merced-----	30-----	4	?
Modoc-----	499-----	503	
Mono-----	368-----	389	Piute
Monterey-----	58-----	26	Carmelanos
Napa-----	15-----	18	?

	1890	1900	
Nevada	159	48	Nishinam
Orange	5		
Placer	73	74	Necenon.
Plumas	374	444	Midoo
Riverdale <sup>side</sup>		809	Saboba, Coahuilla
Sacramento	40	24	
San Benito	41	36	<sup>Stromontuch Chulacheng</sup>
San Bernardino	399	572	<sup>Pute Mohave</sup>
San Diego	478	2,197	<sup>Diegano Luisene Santa Ysabel Yuma cc</sup>
San Francisco	31	15	
San Joaquin	2	1	
San Luis Obispo	47	11	
San Mateo	6	1	
Santa Barbara	73	72	
Santa Clara	19	9	
Santa Cruz	10	67	
Shasta	693	862	Wintoon, Pit River
Sierra	10	31	Midoo, Washoo
Siskiyou	710	480	Shasta,
Solano	11	2	
Sonoma	297	316	
Stanislaus	12	25	Muwa
Sutter	1	20	
Tehama	101	99	
Trinity	193	234	Wintoon?
Tulare	178	175	Wuksache, Wikitchumne, Yowelmanne
Tuolumne	218	149	Muwa
Ventura	91	5	
Yolo	41	28	Win <sup>2</sup> 1890
Yuba	27	24	Midoo

The seemingly extraordinary statement that in 1890 only 478 Indians were found in San Diego County (and similar discrepancies elsewhere) may be explained by a footnote which says that in 1890 the number of Reservation Indians (5,268) was not enumerated by counties but was added to the total.

2 1900  
 Total 16,624  
 15,377



Indian Population of  
 Mariposa Co. 3407  
 Fresno Indians 1337  
 Merced " 220  
 -----  
 5024

} or before  
 1854-

Schadlercraft, IV, 608, 1854.

obvious understatement

Advisory Council on Indian Affairs, Dec. 13, 1923.

In response to an inquiry of Dr. Merriam who asked if there was any official standard by which the blood status of an Indian could be established legally, Mrs. Seymour stated that there was no set rule; that there were to be found on the rolls Indians with an infinitesimal amount of Indian blood in their veins.

Population - Lower Klamath

Lucy Thompson - her book, 'Totem American Indian'  
p. 12 (1916) says that in the fall of 1876 she counted  
at the White Deer Skin Dance upwards of 3 thousand  
Indians - Upper Klamath, Lower Klamath, Hoopa,  
Smith River, + Mad River Indians.

## Indian Population of US in 1906

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Reft. - Comm. Ind. Affairs - for 1906,

481-485, 1906.

(Calif. Indian p. 481)

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Ind. Population in 1908

Reft. - Comm. for 1908, 185, 1909

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Population by certain Counties  
Rept. Comm. 2d. Sess. for 1882,  
330, 1882.

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Indian Population of California  
 as given in Rept. Indian Commr.  
 for year ending June 30, 1904 (p. 596)

'Digger' (Jackson farm)	34
Paints (Lt. Bidwell)	200.
Pit River	500
Yuma	650
Hoopa	414
Lower Klamath	530
Concow	171
Litter Lake & Redwood Val.	114
Nonelaki & Pit River	81
Yuki & Wailaki	257
} <sup>in</sup> Round Valley	
Mission:	
San Jacinto School	1,263
'Cahuilla' (at Pala)	1,560
'Wichumii', Kawiia, } Pit River, & others } (not under any agent)	9,371 (from Census of 1900)
	15,145

To this should be added to Mohaves who  
 live on the California side of the line near  
 Needles, & some others.

Nos. of California Indians

census of 1900 (published 1903)

Total 15000 Indians

Taxed 13,800

Untaxed 1,549

On Reservations 2,874

Indians by State p. CXXIV

Taxed & non-taxed p. 488

By Counties p. 531

On-reservations p. XCI (Indians & others)

Statistics contradictory

In the Census of 1890 only 43 Indians  
were given as 'not taxed' & not on reser-  
vations. The actual number could  
not have been less than 1500 & may  
easily have been 2000. — *con*

Numbers of Indians in different parts of California in 1856,  
about 50000 (Bledsoe) (Hittell, III, 916)

But this count gives only a rough estimate <sup>for most</sup> of the Sierra tribes  
and takes no account at all of the desert tribes east and southeast  
of the Sierra.

Schoolcraft in  
1850 estimated no. of  
Calif. Indians at  
32,231

In 1853 the Commr. of  
Indian Affairs estimates  
their no. as 100,000.

— Indians taxed & not taxed  
11<sup>th</sup> Census, p 15, 1894.

### Census of 1860

Calif. 'civilized' Indians	17,798
" non reservation	13,540
	<hr/>
	31,338

Ibid, pp. 17-18

### Census of 1867

#### California Indians

Coahuillas de	4	400
Hoopa Val		623
Smiths Riv		625
King Riv &c	14	900
Mission	3	300
Owens Riv		725
Tule Riv	?	— ?
Round Val		1389
Wyalacis	?	— ?

11<sup>th</sup> Census 1894 ff 18-21

### Census of 1870

Calif. 29,025

Ibid, p. 22

### Census of 1880

Calif. 16,277

Ibid (23)

### Census of 1890

Calif. 16,624



Thos J. Farnham, — Trails  
in Calif - (1844) say about  
40,000 Indians in California  
~~at that time~~ — but of a  
large number of tribes he knew nothing.

---

California Indians  
Enumerated by Counties  
Census of 1890

11<sup>th</sup> Census, Indians Taxed + not taxed  
pp. 199-200 -

Other data on Calif.  
tribes 200 - 223.

---

Cal Wright: 11<sup>th</sup> Census

Is "land" a figure of speech?

p. 200 - out a fraction

Numbers, trees & lignitic stocks omitted

The large aboriginal population of Calif  
was due of course to the ~~the~~ unusually  
beautiful food supply - as pointed out  
by Kroeber & others. Kroeber's estimate of the  
population, as you show, was greatly  
in excess of mine. He may have been  
more nearly correct.

~~Some~~ An old Whitehorse gave me the names of  
a dozen tribes who inhabited the Klamath  
Delta adjacent region during his youth;  
and men still living have told me that when  
they settled at Visalia in the early days there  
were at least 5000 Indians living in the  
vicinity.

Calif. Indians on Reservations

---

10,524 in 1924 (- Ind. Office)

C HART MERRIAM  
1919 SIXTEENTH ST.,  
WASHINGTON, D. C.

C. HART MERRIAM  
1919 SIXTEENTH ST.,  
WASHINGTON, D. C.

Annual Rept. Comm. Ind. Affairs for 1897

Indians of California:

p. 482.

Modoc 505

Klamath (River) 673

Yuma 707

Tule River 175

Mission (cutthroat) 2,966

Konkow 162

Little Lake + Redwood 136

Ukiah + Wylakke 283

Pitt River + Nome Ladu 63

Not under Agent 6,995

12,665

{ On p. 119 of same Report, the no. of Mission Indians is given as 3,848.

# Population

Estimated at 2000 in 1870 by G. B. McIntosh (with some details). Rept. Comm. Ind. Affairs for 1870, 81, 1870.

# Indian Population of California

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Thos. J. Henley, Supt. Ind. Affs. for Calif.  
reports the number of Indians  
within his Superintendency in 1856  
as 61,600. - Repts. Comm. Ind. Affs.  
for 1856, p. 246, 1857.

Indian population of Calif. in 1910.

---

Census gives 16,371.

---

Calif. Indians of 10 years or over not able to speak English: males 711; females 1058; total 1769

---

# Population:

## Round Valley Reservation in 1892: ✓

Convicts 144 - - - - 144

Clear Lake, Kitter Lake, Redwood, Foster Val. 120

Ukie and Wylackie - - - - 257

Pitt River & Neme Ladzie - - - 48

"of the above tribes of Indians there are <sup>569</sup> more living off  
the reservation than there are living upon it" -

T. F. Willsey, apt., Rept. Comm. Ind. Affs. for 1872,

226, 1872.

---

## Population Mission Tribes 1893

Mission Tribes in 1893: total 3,982 [ = 4000+ ]

Rept. Comm. Ind. Affs. for 1893, 124-125, 130, 1893.



# Population

2 1885

Mission Trilus:

Serranos 390

Coahuillas 793

San Luis Rey 1,142

Dieguense 745

---

g. g. McCallum 3,070

(in Rept. Comm. Ind. Affairs for 1885, p. 8, 1885.)

# Indian Population 1890

Indian Office Census (Repts. Comm. for 1891, 1892, 1893)

Mohaves on Reservation	640
Mohaves off "	1077
Chemehuevis & Hualapai	900
Yuma, Mission, & Tule Riv.	4,056
Hoopa	475
Round Valley	582
Calif. not under opt.	6,995

---

14,725

Tule River Indians	162	}	Ibid p. 221.
Yuma "	977		
Mission	2,812		

Mojave on reserve	624	}	Ibid Pt. 2, p. 72
Mojave at Needles	667		
Mojave at Fort Mojave	700		
Chemehuevis	200		
Hualapai	700		
Hoopa	492		
Mission <sup>(on reserve 1721)</sup> off "	924	}	Ibid Pt. 2, pp 72-73.
Summit (Cochise?)	167		
Round Valley	564		
Calif. not under opt.	6,995		

Calif. Indians.

Diminution & Extinction

Senate Doc. 4, Special Res. 1853.

pp. 45

113

182

242

378

The white population just before  
the American occupancy was only  
5,000, while at the end of 1849 it  
was 100,000 - an increase of  
95,000 in about 4 years

Population as given in Rept. Comm. Ind. Affs. for year ended June 1897.

California:

Hoopa --- 505  
Klamath 673

Yuma 707  
Tule Riv. 175  
Mission 2,966 } Mission-Tule Reser.

Concow 162  
Little Lake + Redwood 136  
Ukiah + Wylackie 283  
Pit River + Numbachie 63 } Round Valley Reser.

Wicomic, Kameak, & others 6,995

Total, 12,665

Between 1860 & 1890 no account was taken  
in the Federal Census of Indians not  
taxed (living in tribal relations). -  
Census for 1900, Vol. 1, p. 488.

This is not true for 1860 & 1870, & only  
partly true for 1880. See Indians Taxed  
& not Taxed, 1890.

---

Census of Indians - based on first based, 1890

Calif. on reservations	5,268
	<del>5,107</del>
Mission-Tule Consolidated	4,483
Round Valley	581
in Prisons	43
	<hr/> 5,107

In census for 1900 the number on Calif. Reservations is 2,874  
(12<sup>th</sup> Census, vol. I, pt. 1, p. xci, 1901)

Calif. Reservation Indians in 1890

Hoopa - - - 468

Mission - - - 2,645

Tule Riv - - - 162

Yuma - - - 1,208

Round Valley 581

5,064

Indians Taxed + not Taxed

11<sup>th</sup> Census, 1890, p. 98, 1894.

# California Indian Population

## Census data

	1860	1870	1880	1890	1900
Civilized or taxed	17,798	7,241	16,277	11,517	13,828
Uncivilized not taxed	13,540	21,784	Reserv. 4,108 Wild - ?	5,107	1,549
Total	31,338	29,025	20,385+	16,624	15,377



NUMBER OF MISSION INDIANS IN CALIFORNIA AT DIFFERENT DATES (from HITTELL)

1795	12,216	
1805	20,627	
1810	18,784	(Decrease attributed to epidemics and desertions--I,611)
1815	22,000	(I, 640-641)
1818	20,238	
1830	24,634	(Total baptized to this date, 85,977)
1842	4,450	(Said to be 1/7 the number in 1834)
1834	30,000	

Most of above data from Hittell, Hist. Calif., I, 741-743.

Alex. Forbes, in his "History of Upper & Lower Calif." pub. in London, in 1839, states the number of converted Indians in the former to have been, in 1831,

Converted Indians,.....	18,683
Of all other classes....	<del>4,042</del>
	<u>23,025</u>

"He expresses the opinion that this number had not varied much up to 1835."

Humboldt, in his " Essay on New Spain", states the population of Upper Calif., in 1802, to have consisted of .

Converted Indians,...15,562

Other classes.....1,300

-----  
16,862

**VERSO**

Population (from Hervey of Indian Bureau) 1856 -  
by Counties

See

Taylor, Calif. Farmer, June 8, 1860.

Taylor thinks total ~~for~~<sup>in</sup> year 1852, 120,000.  
(Ibid. p. 20 Bureau of Agr. copy.)

Population

Taylor, Indianology of Calif. 4<sup>th</sup> Series -  
Calif. Farmer June 12, 1863.

Population of Pacific Domain - (p. 163 Bureau of Agr. copy)

When Calif. was admitted to the Union  
"it was estimated that 65,000 Indians  
~~resided~~ within the jurisdiction of the first Dept. of  
Indian Affairs for California, Col. Richard McKee"  
Kleavel, Indian Wars, 456, 1885.

Checks an estimate:

Nos. recorded by Census in 1850-59  
present population multiplied by no. of  
nearby villages -

2 classes of old village sites, present holes, fragments,  
artifacts etc etc  
1 within many of old buildings still living  
2 gone before ancestors of present people came

As to the relative pressure  
brought upon the Indians by  
the Spaniards & the Americans  
it should be remembered  
that up to the time of the  
American occupancy the  
total white population numbered  
only about 5000; while at  
the end of the year 1845 it numbered  
100,000.

Population Mission Indians  
given in detail by Apt. L. A. Wright  
in Dept. Comm. Ind. Affs  
for 1903, p. 146-7.



In 1830, according to Kittell, the Census of (5)  
the Mexico Census revealed that "while  
the Indians were rapidly decreasing, the whites  
were steadily increasing!"

Population So. Calif. ~~1877~~

5056 Coachillas and Mission Indians in San Diego & San Bernardino  
counties alone. - Repts. Comr. Ind. Affs. for 1871, 691, 1872.

## Population in Fresno Farm region - 1858

Mr. B. Lewis, Subagent in charge of Fresno Ind. Agency in 1858, reported "within the bounds of this agency" 23 distinct tribes, numbering 2550 Indians. Besides these, there are 600 monos, making a total of 3,150.

Senate Doc. 1, 35<sup>th</sup> Cong. 2<sup>d</sup> Sess. 643, 1858.

In that paper I estimated the aboriginal population, at the time of the discovery of California, at 260,000. Subsequent research, particularly the very large additional number of rancherias <sup>learned</sup> ~~known~~ to have been inhabited within the memory of old Indians still living, convinces me that this estimate was too small and that 300,000 would be a ~~sufficiently~~ conservative estimate.

Vancouver estimated the  
number of Indians in California  
in 1793, including those on the  
peninsula of lower California,  
at 160,000 to 200,000.

(Hittell)

Indian Population of Calif -

= 1846 estimated by

E. K. Dumbear at 200,000.

The Pioneer of the Age; a Treasury  
of Gold - Calif. 1867.

---

Population in 1826

Indians of Sonoma + other valleys north of S.F. Bay from Point Reyes to Clear Lake 40,000 - 70,000.

Sacramento valley from Red Bluffs to Am. Fork 80,000.

San Joaquin Valley 80,000

Neoflyts at Missions 25,000

Mohave + Colorado Deserts + rivers 20,000

N.W. Calif. 30,000.

Total for Calif in 1826 - - 265,000.

A.S. Taylor, Indianology of Calif. & Calif. Farmer,  
Feb. 22, 1860.

Estimated that in 1826-27 there were in Sonoma Valley 2000 Indians; in Santa Rosa Valley 1500; in Russian Val. 2000; in San Rafael 600.  
Ibid, March 30, 1860.

## Kanimara

"When Capt. Cooper settled the  
Malina Rancho in Santa Rosa  
Valley in 1834 there were living  
in his neighborhood as many as  
2000 Kanimaras."

and prior to 1820 the Kanimara  
and Woodcockles together are said  
to have numbered "not less than 10,000."

—Taylor, Calif. Farmer, March 2, 1860.

---



Taylor quotes "a friend living near Tehama" as  
authority for the statement that in 1843  
there were 50,000 Indians in Sacramento Valley,  
—Calif. Farmer, March 23, 1860.

RUN

# Population

Calif.

Mariposa Co. Indians	5 bands	3407
Fresno Indians	5 bands	1337
Madera "	3 bands	280

Schoolcraft, IV, 608, 1854.

5024

## Indians on King River in 1850.

In May 1850 Lieut. Gen. H. Derby crossed King River from the south and rode up the north bank for a distance of 15 miles. From information gained partly by personal observation but mainly from three white men (named Jones, Rider, and Hampton) who were then operating 2 ferries, 5 miles apart, on the river (and who were the only white men living in the region), he learned that there were at least 17 rancherias on the river, numbering in all about 3000 Indians.

He is shy of tribal names, but mentions the Cho-e-minee - by which he means of course the Cho-e-nim-ne living then and now at the mouth of Mill Creek.

Population of California, from Bowen

Ormond in 1870 counted 2,700 Indians on Lower Klamath from Weitschek down - 40 miles. This does not include the Indians to east. p. 59

---

Kelsey estimated original population of Round Valley at 5,000. p. 128

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Sevel on Russian River in 1847 counted 300 - 400. Bowen estimates that "the town over included 1,500 souls. p. 169

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various details on p. 416

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In 1849 1000 or more at Calusa - 416

---

In 1850 1000 in villages on Van Dusen Fork 416.

---

Bowen's remarkable estimate of ~~705,000~~ 705,000 based on length of Salmon streams 415-416.

---

Part of Indian Population, Northern Calif.

[Senate Doc. 4, Special Sess. 1853]

(P. 220)

In 1851 R. McKee, Indian Agt., estimated  
the population as follows:

Klamath River & Lower Trinity tribes	1,400 - 1,500
Redwood Creek & Klamath near mouth	1,500
Upper Klamath, + Shasta & Death Valley (p. 220)	<u>4,000</u>
	7,000

In same year same man (McKee) gives for  
other northern tribes:

Sonsoma Valley & Russian River	1,200
Clear Lake Valley	1,000
Two valleys near head So. Fk. Eel River	1,100
Coast, Ft. Ross to San Francisco Bay	500
Coast, Ft. Ross to mouth Eel River	400
Humboldt Bay	300
Mts. + valleys, Eel River & Van Dusen Ek.	500
	<u>5,000</u>

(Ibid, p. 182)

McKee is noted for the smallness of his estimates  
of population.

# Indian Population of California

[Senate Doc. 4, Special Session, 1853.]

In 1851 Barbour & Woyencraft (2 of the 3 Calif. Indian Commissioners) estimated the number of Indians in the State at between 200,000 and 300,000. (p. 62)

But this fellow Commissioner, R. Tucker, thought this number far too great (p. 63)

In the same year (1851) Adam Johnston, Indian Sub-agent for the Sierra & Valley tribes (with headquarters at Merced Reservation) estimated the number at 80,000. (p. 242)

1852 In Nov. 1852 E. F. Beale, then Supt. of Indian Affairs in Calif. estimated the number for the State at 75,000 to 100,000. (p. 379)

None of the above appear to take any account of the Desert tribes east of the Sierra -

Population of California, Senate Doc. 4, Official Des. 1853.

Details for southern Sierra valley tribes  
Ibid, 244.

Barbours:

12 tribes with 4000 people came to  
King's River to treat on May 11, 1857.  
p. 233

May 29 on Carmack 7 tribes & 1200 people  
p. 255

On June 3 on Paint Creek (S. of Tule River)  
1700 came

Barbours (S.W.) 1857

Total of treaty tribes of La Gracine & Tular

valleys 25,000 - 31,000.

p. 263-264

Southern Calif. 20 25,000

55,000 south of Stanislaus River

## Population:

Area of abt 90 sq. miles from Yuba on North to 'Mescalummi' on South, contained in 1851 about 40,000 Indians, according to estimate by Wozencraft. (p. 113) Quotes Harris & others (old residents) as saying that four years earlier population at least 80,000 (same area). They consider Wozencraft estimate too low. (p. 113).

---

Reservation bet. Bear & Yuba, aft 15 miles N+S + 12 E+W. concluded treaty with 10 tribes making 3900 - 4000. (p. 120)

---

Wozencraft in 1851 states in letter to Indian Commr. that there are in Calif. "more than 300 bands" of Indians, each possessing its own Captain. p. 132



Calif Indian Population Senate Doc. 4, Official Res. 1853.

Reservation no 1, (but Merced + Tuolumne Rivers) Adam Johnston  
May 1, 1851. present 711. "when all come in my number 2,000 to 3,000"  
p. 105.

June 24, 1851. Reservation (1) bet. Stanislaus + Tuolumne - about 1,000

(2) bet. Tuolumne + Merced - about 800 \*

(3) bet 'Chouchille' + Cowier (Kamiah) 1800 - 2,000

(4) Tulare Lake (not <sup>yet</sup> visited) ?

p. 105 - Adam Johnston

i. 1851

Mozzevercraft says, "it would be a safe maximum estimate to calculate  
the entire number of Indians to be included in the six treaties at  
75,000 - 80,000." - p. 188. These 6 treaties are with Indians on East  
side Sacramento + Joaquin rivers with eight exceptions of Colusa Indians  
who are on west side. (1881)

Population Sierra foothills -

Adam Johnston, Senate Ex Doc 4 of. Res. 243 (map) 244.  
1853.

at Camp Belt, Kings River, 4000, Ibid p. 253

Calvinia River, 1200. Ibid 255.

On Paint Cr. Tulare Co, 1700 Ibid 256

At Tejon 600. Ibid 256

San Joaquin + Tulare valley, 25-30,000. Ibid 263.

San Luis Obispo - San Diego 25-30,000. " "

Population <sup>or Reservations</sup> in 1851 at west base of  
 Sierra from Stanislaus to Kings River  
 Adam Johnston (Senate Doc. 4, Official Re. 1853  
 p. 244):

1 <u>Stanislaus River</u> reaching, 30 miles for <sup>Stockton</sup> <del>Stockton</del>	900
2 <u>Tuolumne River</u> (18 miles distant from above)	450
3 <u>Merced</u> (12 miles from Tuolumne)	500
4 <u>Fresno</u> (50 miles from Merced)	1200
5 <u>Ft. Miller on So. Joaquin</u> (18 miles from Fresno)	1000
6 <u>Kings River</u> (25 miles from Ft. Miller)	400

In May 1851 Indian Commr. Barlow gave the  
 Indian population of the west foot of the Sierra  
 between Kings and Kern rivers, comprising  
 12 tribes, as aggregating 4,120 people (p. 81).

## Population of So Calif. - 1851

Gen. Aft. Weyenscraft, in <sup>an undated</sup> letter to the Commr. of Indian Affairs (recd. at Washington, D.C., Feb. 18, 1852) speaks of a treaty consummated with "the three nations" (names not mentioned) estimated at 15,000-20,000 souls (p. 288).

Later in the same letter he speaks of the Kah-me-ah (meaning the desert tribes commonly called Chahillos), San Luis Rey Indians, Co-con-ah-ras, Dieguinos, "and the Indians of the Colorado." ~~See~~ (p. 289.)

In Oct. 1856, according to  
 Hittell (Vol. III, p. 916, Hist. Calif.) the  
 Indian population of California was  
 as follows (based on Bledsoe + Taylor):

Klamath River Reservation		2,500
Nome Lakee	"	2,000
Mendocino	"	550
Nome Cult	"	3,000
Fresno	"	900
Kings River	"	400
Tejon	"	700
		<hr/> 10,000

Sandiego + San Bernardino Cos.	- - -	8,000
Los Angeles, Santa Barbara, San Luis Obispo, Monterey, Santa Cruz, Santa Clara	} - -	2,000
Tulare + Mariposa	- - -	2,500
Tulare, Calaveras, San Joaquin, Alameda, Contra Costa	} - -	4,100
Sacramento, El Dorado, Placer	- - -	4,500
Sutter, Yuba, Nevada, Sierra	- - -	3,500
Butte, Shasta, Siskiyou	- - -	5,500
Klamath, Humboldt, Trinity	- - -	6,500
Mendocino, Colusa, Yolo, Napa, Sonoma + Marin	- - -	1,500
		<hr/> 38,100
		48,000
		48,100

Powers' estimate ~~of the~~

~~population~~ was greatly in excess of mine; he may have been <sup>the</sup> more nearly

correct. His estimates were based on the abundance of ~~the~~ food, ~~supply~~,

particularly along the great rivers, taken in connection with certain

<sup>known</sup>

facts as to the density of population at particular localities; while

mine is based on the records of the Mission Fathers for the southern

coast strip, with the assumption that, owing to the <sup>abundance & approximately even</sup> widespread diffusion

~~of the~~ food supply, the population was probably equally great in other

areas of the same size throughout the <sup>non-desert</sup> ~~greater~~ parts of the State.

# Population

80/18  
C

ANTHROPOLOGY.<sup>1</sup>

THE INDIAN CENSUS. — Mr. Sherman Day, in the *Overland Monthly* for November, speaks of the remissness of the census officers with respect to the enumeration of Indians. He has compiled a table of our Indian population which combines the meager returns of the census, the data of the Indian Office, and some investigations of his own, as follows:

States.	Total, including Ag'cy Indians.	Indians outside.	Agency Indians.	Total Indians.
Alabama . . . . .	1,262,505	213		213
Arkansas . . . . .	802,525	195		195
California . . . . .	866,342	13,601	4,324	17,925
Colorado . . . . .	195,252	154	925	1,079
Connecticut . . . . .	622,700	255		255
Delaware . . . . .	146,608	5		5
Florida . . . . .	269,493	180		180
Georgia . . . . .	1,542,180	124		124
Illinois . . . . .	3,077,871	140		140
Indiana . . . . .	1,978,301	246		246
Iowa . . . . .	1,624,965	466	350	816
Kansas . . . . .	996,995	815	899	1,714
Kentucky . . . . .	1,648,690	50		50
Louisiana . . . . .	939,946	848		848
Maine . . . . .	648,936	625		625
Maryland . . . . .	934,943	15		15
Massachusetts . . . . .	1,783,085	369		369
Michigan . . . . .	1,646,732	7,249	9,795	17,044
Minnesota . . . . .	785,155	2,300	4,372	6,682
Mississippi . . . . .	1,131,597	1,857		1,857
Missouri . . . . .	2,168,380	113		113
Nebraska . . . . .	456,341	233	3,939	4,174
Nevada . . . . .	70,097	2,803	7,831	10,634
New Hampshire . . . . .	346,991	63		63
New Jersey . . . . .	1,131,116	74		74
New York . . . . .	5,087,987	819	5,116	5,935
North Carolina . . . . .	1,399,750	1,230		1,230
Ohio . . . . .	3,198,062	130		130
Oregon . . . . .	179,239	1,694	4,471	6,195
Pennsylvania . . . . .	4,282,891	184		184
Rhode Island . . . . .	276,531	77		77
South Carolina . . . . .	995,577	131		131
Tennessee . . . . .	1,542,359	352		352
Texas . . . . .	1,591,857	992	108	1,100
Vermont . . . . .	332,286	11		11
Virginia . . . . .	1,512,565	85		85
West Virginia . . . . .	618,457	29		29
Wisconsin . . . . .	1,323,253	3,161	7,756	10,917
Total in States . . . . .	49,418,560	41,890	49,896	91,786

<sup>1</sup> Edited by Professor OTIS T. MASON, 1305 Q street, N. W., Washington, D. C.

<i>Territories.</i>	<i>Total, including Ag'cy Indians.</i>	<i>Indians outside.</i>	<i>Agency Indians.</i>	<i>Total Indians.</i>
Arizona .....	57,661	3,493	17,221	20,714
Dakota .....	166,273	1,391	31,096	32,487
D. Columbia.....	177,624	5		5
Idaho.....	36,862	765	3,652	4,417
Montana.....	57,864	1,663	18,705	20,368
New Mexico.....	146,242	9,772	26,677	36,449
Utah.....	146,334	807	2,371	3,178
Washington.....	88,219	4,405	13,103	17,508
Wyoming.....	22,562	140	1,782	1,922
Indian Ter.....	79,024	5 tribes other tribes	60,036 18,988	79,024
Total organized Territories...	978,665	22,441	193,631	215,072
Alaska (estm.).....	33,426	31,250		31,240
Terr. with Alaska.....	1,012,091	53,681	193,631	247,312
Grand Total.....	50,430,651	95,571	243,527	339,098
Total Indians without Alaska, States.....				91,786
“ “ “ “ Territories.....				216,072
“ “ “ “ .....				307,858
“ “ with “ .....				339,098
Agency Indians, States.....			49,896	
“ “ Territories.....			193,631	
Total agency Indians .....			243,527	

BRITISH ANTHROPOLOGY.—The Journal of the Anthropological Institute commences each volume with what we call the fiscal year. No. 2 of Vol. XIII appeared in November. The original papers of general import, are as follows:

On some customs of the Aborigines of the River Darling, N. S. Wales. By Frederick Bonney.

The nature and origin of group marriage. By C. Staniland Wake.

Notes on stone implements from S. Africa. By Maj. H. W. Feilden.

Notes on Relics of the sign and gesture language among the Malagasy. By Rev. James Sibree.

On some Australian beliefs. By A. W. Howitt.

On the Botocudos. By A. H. Keane.

The Ethnology of Germany (Part VI), the Barini, Barangians and Franks. Section II. By Henry H. Howorth.

Mr. Bonney speaks from an experience of fifteen years, and repudiates the assertion that the Australians are the lowest type of mankind. Infanticide is practiced from humane motives, the infant immediately after birth being dispatched by the mother's brother, by a blow on the back of the head, strangling with a rope, or choking with sand. The initiation of the youth is painful and tedious, and many seek to defer the day. After its completion the young man may marry. They believe that sick-



## CALIFORNIA'S INDIANS

364  
Estimates made by the most reliable historians indicate that the maximum Indian population of California was approximately 700,000. California's Indian population was made up of an almost infinite number of tribes, each of which spoke a different dialect. The differences in these dialects were very great. Sometimes, even today, one band of a single tribe speaks a dialect not understood by other bands of the same tribe.

Early history indicates that the California Indians began to die off in large numbers even before the great gold rush migration of 1849 and 1850. It would seem that these Indians, possessing little or no immunity to the white man's diseases, fell ready victims to the infections which he brought. In the early forties large numbers of Indians lived in established villages along the watercourses tributary to the Sacramento and San Joaquin rivers. White trappers journeying to the upper reaches of these streams during certain seasons of the year noted the large numbers of Indians in these villages. Upon their return at the end of the trapping season they were astonished to find that these villages were almost depopulated. In some places dead bodies were strewn about the ground, with only a few survivors left to tell the story of the epidemic which had wiped out whole villages of Indians. It is impossible to state exactly the nature of these epidemics, but they would seem to be in the nature of an intestinal infection. Later history shows that vast numbers of California Indians have died in outbreaks of smallpox, measles, influenza, and other epidemic diseases.

The United States census report for 1920 gives the total Indian population in California as 17,360.

From 700,000 to less than 20,000 is a decrease that can show few comparisons in history.

Sept. 25, 1925

end of the stone age from Sicily in the Mediterranean through Egypt, Greece, Mesopotamia, Southern Russia and China as far as the Pacific coast is the claim of the Swedish archeologist, Professor J. Gunnar Anderson, who recently returned to Stockholm after serving eleven years as official mining adviser to the government of China.

In cooperation with the Chinese authorities, for which he has the highest praise, he has explored the prehistoric cities of northern China, and after dividing his finds equally with the University of Peking, he has sent home during the past few years no less than 2,200 cases containing fossils, as well as contents of graves, chiefly pottery articles, which show that the inhabitants of China about 3,000 B. C. practiced virtually the same arts as did the peoples living in southeastern Europe and southwestern Asia.

Until Professor Anderson began his excavations the easternmost point at which traces of this common European-Asiatic culture had been found was at Anau in Russian Turkestan, but now they have been located within thirty miles of the Pacific coast in China as well as in southern Manchuria.

It was in 1914 that Professor Anderson obtained leave from the University of Stockholm to become adviser to the Chinese government, and from 1915 to 1919 he was occupied chiefly with technical geologic work in locating mineral deposits. At the same time he observed the opportunity for archeological explorations and in 1918 he obtained the necessary permits. Part of the expenses, amounting to more than \$100,000, have been paid by the Swedish government and part by a Swedish-China Committee of which the Crown Prince of Sweden is chairman.

### INCREASE OF THE INDIAN POPULATION OF THE UNITED STATES

CONTRARY to widely circulated reports that the "American Indian is dying off at an alarming rate in the great southwest," the Pueblos and other Indian populations are holding their own and increasing at a rate nearly as high as that shown by census figures for the white population.

Dr. Edgar L. Hewett, director of the School for American Research of the Archeological Institute of America at Santa Fé, New Mexico, has transmitted to the American Association for the Advancement of Science a report of a census just made that shows that in the last decade the population of Pueblo villages has increased 22.2 per cent. and now totals to 10,565. Only one Pueblo showed a decrease, and that was due to an influenza epidemic a few years ago.

During the same period the entire population of the United States increased 39 per cent., part of which was due to immigration. These figures Dr. Hewett considers adequate refutation of the general idea that there has been a "startling decrease in our primitive population."

"On the question of the Indian ceremonies, also, much emotion has been wasted," Dr. Hewett said. "They are vital in the life of the Indians. They are highly esthetic in character, and are not attended by as immoral consequences as are the social dances of the whites. Nor are

the ceremonies dying out, nor are they likely to. On the contrary, ceremonies that had disappeared are being revived every year and the Indians are preserving their own self-respect by cherishing their native culture which has in it elements of nobility worthy of any race. There is no religious persecution of the Pueblos, no effort is being made to suppress their dances unless pernicious features crop out, and in such cases the Indians are more amenable to advice than are the youth of our own race."

### SHADOW BANDS

THE cause of the shadow bands, elusive ripples of light seen just before and just after a total eclipse of the sun and which were particularly apparent at the eclipse of last January in New York and New England, the cause of the next such eclipse visible in the United States, the results of a New York electric light company in determining the southern limit of the path of the eclipse in January; these were some of the subjects of a study by members of the American Astronomical Society recently at Carleton College. Dr. Charles W. Wylie, of the Iowa State University, announced the results of his study of the shadow bands and their cause, due to irregularities in the atmosphere, and that they are not from a bright star, such as Sirius, but from a white surface in an optical instrument. Dr. Wylie, "a person of keen observation," said that the light and dark mottling seen in the shadow bands is a point. Ordinarily, the shadow bands are not seen, because the sun is not visible during a total eclipse, just before the sun, a narrow band of light is seen, a line, and so on. The effect is the same as that of the shadow bands.

In confirmation of observations made at Carleton College, Conn., the path of the shadow bands was traced, and the effect was found to be the same as that of the shadow bands.

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## THE CENTER OF POPULATION—A PROPHECY AND ITS FULFILMENT

By Professor WALTER CROSBY EELLS

WHITMAN COLLEGE

IN *Scribner's Monthly*, the forerunner of the present *Century Magazine*, for June, 1872 (Vol. IV, p. 214), occurs an article "The advance of population in the United States," by Julius Erasmus Hilgard. This article has special interest for the scientific public to-day, due to the fact that it is exactly fifty years since its author was elected president of the American Association for the Advancement of Science. In this article that talented engineer and brilliant scientist made the first reliable computation of the center of population of the United States, and ventured a half dozen remarkable prophecies as to its future course. The recent publication of a special bulletin of the national Census Bureau, "Center of population and median lines and center of area," gives data from which it is possible to show to what a remarkable extent these predictions of Hilgard, made over a half century ago, have been fulfilled.

The first official computation of the point known as the *center of population* was made under the direction of Francis A. Walker, superintendent of the ninth census and also professor of political economy and history in the Sheffield Scientific School of Yale University. It was made expressly for publication in the first statistical atlas of the United States, which was published in 1874, and based upon the results secured in the ninth census, that of 1870. The center of population was computed laboriously for each census date since 1790, except for those of 1840 and 1850. These, although he computed them by a somewhat different method, were taken from Hilgard's article mentioned above.

Without attempting to reproduce Hilgard's tables and map, it is interesting for the present generation to read again the more significant paragraphs from his article.

The decennial inventory of the nation forms an almost inexhaustible source from which the statistician and political economist may draw information concerning the development of the country as to its population, wealth and industry in their most varied aspects. . . .

In order to get some measure of this advance, or some general idea of the rate at which the country is filling up, we will consider the centers of population at different periods and examine their progress.

If the population of a country were uniformly distributed, the center of population would coincide with the geographical center, being the point upon which the area may be said to balance. . . . The center of population may be defined as the center of gravity of the population, it being, in fact, the point

all his doings, which state to continue, which mark to hit, is much better than after we have fallen and erred, and missed, eftsoones to recover the same. Even as it is better to standfast still than to fall and rise againe, better to keep still a Castle or Citie, than after we have suffered the enemy to enter to rescue it again.

That the reader may better carry with him the lessons of the book the author sums his most important teachings in the following verse:

Ayre, labour, food, repletion,  
Sleepe, and passions of the minde,  
Both much and little hurt alike,  
Best is the meane to finde.

In these five pointes as it were in so many Lute strings resteth the whole harmonie of man's life Wherein moderation beareth the burthen of the song.

No strings have been added to the lute of health since the days of Cogan, though they have been strummed vigorously, if less enter-tainingly, by hygienists in each generation; and in the twentieth, as in the sixteenth century, temperance is still their refrain.

in which the area, loaded with its population, each man in his place, would balance. . . .

We shall furthermore observe, before proceeding to the actual case in hand, that when the tendency is to a uniform distribution of the population, the excess of increase in the new country over that in the old settlements will in time diminish, and that therefore the approach of the center of population to that of area will proceed at a constantly lessening rate. Without entering upon an elaborate discussion of this proposition, it will suffice to say that the resulting law will not differ essentially from a movement of the center of gravity of population toward its ultimate limit, in a nearly constant ratio of the remaining distance—that is to say, if within a given period the center of gravity has advanced toward its permanent place by one fourth part of the distance at the beginning of the period, it will in an equal period next succeeding advance over one fourth of the remaining space, and so on, always assuming that the movement of population is not affected by any extraordinary disturbances.

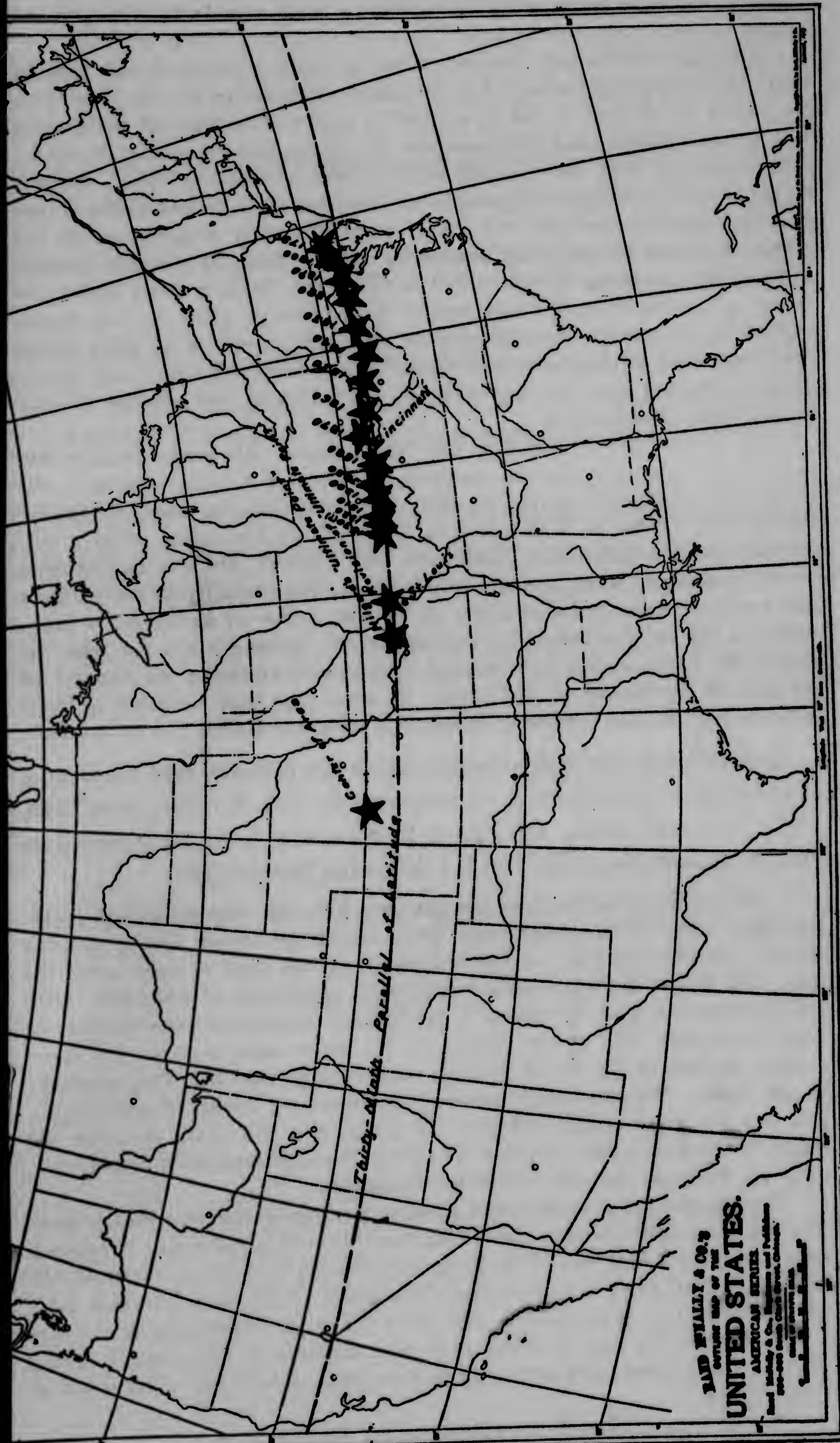
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Hilgard then gives the exact location, by latitude and longitude, of the center of population, as computed by him, for the years 1840, 1850, 1860 and 1870. On this rather narrow basis he generalizes and prophesies as outlined in the following paragraphs:

The advances in the three periods were fifty-five, eighty-two and forty-six miles. The comparatively large stride during the second decade and the checked advance and more northerly direction in the third at once strike the eye. The former is attributable to the rapid settlement of California after the discovery of gold, by which a considerable population was transferred from the eastern half of the country, to its westernmost regions; the latter exhibits the loss in the rate of increase occasioned by the Civil War, especially in the South. We may safely assume that disturbing causes of such magnitude can not occur again, and that the progression will show hereafter but slight fluctuations from a regular law, since those extraordinary events have, after all, produced but very moderate inequalities.

Placing now, at a venture, the ultimate position of the center of population 600 miles to the west of its location in 1840, which will bring it between fifty and sixty miles west of St. Louis, we observe that the advance of 180 miles in the last three decades is just three tenths of the whole distance, leaving 420 miles still to be gained. But three tenths of this remaining distance is 126 miles, which may be taken as a good estimate of the advance during the next thirty years, and will bring us to a point some thirty miles south of Indianapolis.

Not wishing to stretch our inferences too far, we leave it to such of our readers as choose to perform the simple calculation for subsequent periods,



MAP SHOWING MOVEMENT OF CENTER OF POPULATION

At the time of Hilgard's predictions the positions of the center of population for 1790, 1800, 1810, 1820 and 1830 had not been computed.

which will lead them to the result that in the year 2000 the center of population will still be lingering in Illinois, some thirty miles east of St. Louis. However that may be, it is certainly safe to predict that in 1880 our center will be about 10 miles north of Cincinnati.

THE PROPHECIES SUMMARIZED

The extracts quoted above contain the following very striking predictions:

- (1) The center of population will remain near the thirty-ninth parallel of latitude.
- (2) Great disturbing facts like the settlement of California (1850-1860) and the Civil War (1860-1870) are not likely to occur again.
- (3) The center of population will advance in accordance with a regular law, by which in 1900 it will have moved 126 miles westward and by the same law in 1930, 88 miles farther west.
- (4) In the year 2000 it will be about 30 miles east of St. Louis.
- (5) In 1880 it will be 10 miles north of Cincinnati.

FULFILMENT OF THE PROPHECIES

It is of great interest now, a half century after these predictions were made, to see how very strikingly they have been fulfilled.

(1) The closeness with which the center of population has clung to the thirty-ninth parallel is very remarkable. The point farthest north was reached in 1790, and the point farthest south in 1830, but the entire difference was only 21.4 miles. The farthest north since the date of Hilgard's prediction was in 1890, when it was 13.7 miles north of the thirty-ninth parallel. It has kept slightly north of the thirty-ninth parallel at every census since 1850, varying from 4.7 miles in 1880 to 13.7 miles in 1890. In 1920 it was 11.9 miles north of the thirty-ninth parallel. In 1920 it was only two miles north of its position in 1870, the latest available date in Hilgard's article.

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(3) This is perhaps the most daring and unique of all Hilgard's predictions, since it attempts to put everything into a fixed mathematical formula. In the thirty year period from 1870 to 1900 the center of population actually advanced westward 120 miles, or 119.5 miles, to be more exact, instead of the predicted 126—a very small error indeed.

Applying Hilgard's method of moving three tenths of the distance remaining to the "ultimate point" (600 miles west of the

position in 1840), it is found that it should have moved westward three tenths of 294 miles, or 88 miles, between 1900 and 1930. In the two thirds of this period from 1900 to 1920 it has moved only 49 miles, or ten miles less than two thirds of the predicted distance.

But Hilgard's choice of a point 600 miles west of the 1840 position was somewhat arbitrary. It will be noted that he himself qualifies it by the phrase "at a venture." In the light of subsequent developments a slightly different choice of location for the "ultimate point" (to which identically the same method would apply) can be made with a slight improvement. The solution of a simple set of equations shows that if Hilgard has assumed "at a venture" a distance of 540 miles, instead of 600 miles, and then on the basis of the movement from 1840 to 1870 of 180 miles, had taken *one third* as a constant multiplier instead of *three tenths*, he would have come even closer to the actual conditions as far as they are known fifty years later.

With this slight change of constant distance, it works out thus:

1840-1870: One third of 540 miles = 180 miles.

Actual distance, 180 miles.

1870-1900: One third of 360 miles = 120 miles.

Actual distance, 119.5 miles.

1900-1930: One third of 240 miles = 80 miles.

Two thirds of this last movement of 80 miles is 53 miles, as compared with 49 miles, the distance actually travelled from 1900 to 1920. The chances seem good that it may move the remaining 31 miles during the present decade.

This revised "ultimate point," 540 miles west of the 1840 position, would be practically on the meridian of St. Louis, instead of 50 or 60 miles west of it, and thus would come even closer to making that city the logical seat of government. If it is placed on the thirty-ninth parallel, it would be about 25 miles north of St. Louis, in the southeastern part of Jersey County, Illinois.

(4) Of course the prediction regarding the position in the year 2000 can not yet be verified. But continuing the above suggested revision of Hilgard's principle, we have the following predictions until the year 2020:

1930-1960: One third of remaining 160 miles = 53 miles.

1960-1990: One third of remaining 103 miles = 34 miles.

1990-2020: One third of remaining 69 miles = 23 miles.

These results indicate that in 1990 it would probably be about 70 miles east of St. Louis, and in 2020, about 46 miles east. Hilgard's prediction of 30 miles east in 2000 may therefore be allowed to stand, with only slight modification, for another half century or more.

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which he naturally makes with the greatest confidence, should actually have proved relatively his poorest forecast. As a matter of fact, instead of being 10 miles north of Cincinnati, it was south and west of that city by 8 miles, across the Ohio River in Kentucky. It is evident that Hilgard was justifiedly misled by the fact that from 1860 to 1870 the center of population moved northward 13 miles, a greater northward movement than ever before or since, until it was in the same latitude as Cincinnati. It was quite natural to suppose that in the next decade it would continue northward ten or twelve miles more. But its sudden jump northward was apparent rather than real, partially at least due to an inadequate enumeration. The census bureau explains it in part by the waste and destruction in the south from the Civil War, and in part (perhaps more important), to the acknowledged fact that the census of 1870 was very defective in its enumeration of the southern states, especially of the newly enfranchised negro population. That its sudden northern movement was thus fictitious rather than real is also indicated by the fact that it returned southward nine miles in 1880, when the enumeration was equally accurate in north and south.

#### WHO WAS HILGARD?

A few facts concerning this almost forgotten scientist, who succeeded so remarkably in his prophecies regarding the center of population when it was practically a virgin and untried field, may be of interest to the reader to-day.

He was born in Bavaria in 1825 but came to Illinois with his father's family when only ten years of age. He began his study of engineering in Philadelphia in 1843 and two years later entered the service of the Coast Survey under the distinguished Bache. This was the beginning of an honorable career of merit and ability with this organization lasting for over forty years and culminating all too tardily in his appointment as superintendent of the survey in 1881, a position which he held for four of the declining years of his life.

Starting as a temporary employe in field service, in the twenty years preceding the Civil War, under the magnetic encouragement of his chief, he came to occupy successively positions of greater trust and responsibility. He was a careful scientific student, as well as a successful executive. He was enthusiastic, an indefatigable worker, alert in the recognition of all that was valuable in new methods, and from his linguistic ability and wide reading thoroughly informed on the progress of geodesy and engineering both at home and abroad.

Under the stress of the Civil War, the Coast Survey was called upon for heroic and invaluable service in connection with southern

coast surveys and charts. The direction of the work was heavy, responsible and incessant; the anxiety, watchfulness and care were said to be as wearing on the chief as those of the commander of an army corps. Under this terrific strain the brilliant Bache's mind gave way, and double responsibility fell to his principal assistant, Hilgard, who met every requirement of the difficult position with credit and distinction.

After the breakdown of his chief, Hilgard might have had the superintendency for the asking, but he refused to ask for it as long as his broken chief lived, since the family of Bache were in such circumstances that his salary was necessary for their support. This disinterestedness and loyalty to his chief cost him dear. Bache lingered through four weary years, and when death finally took him there were several strong rival candidates in the field. After a prolonged struggle it was considered wise to appoint a "dark horse," Benjamin Peirce, of Harvard University, "the father of American mathematics."

It was not until 1881, after a lifetime of sacrificial and distinguished service, that Hilgard was finally appointed superintendent of the Coast Survey. He was then broken in health and suffering from the invasion of his household by death. The appointment seemed to give him new life, but it proved to be only a temporary stimulus. His working days were about over. Under the unfortunate political changes of 1884 he was compelled to sever his relations with the organization to which he had devoted a lifetime of loyal service. It was a crushing blow. Suffering with illness all the time, he never regained his health, although he lingered on until death finally came in May, 1891.

In 1862, in addition to his heavy work in the Coast Survey office, he was also supervisor of weights and measures for the treasury department. He was one of the members of the Metric Commission at Paris in 1872 and was made a member of the permanent committee. He took a leading part in preparing exact metric standards for distribution to the various states and territories. He was a member of the International Bureau of Weights and Measures, of which he declined the directorship. Typical of his many scientific contributions, may be mentioned one on the telegraphic determination of differences in longitude of Greenwich, Paris and Washington.

He was a charter member of the National Academy of Sciences and for some years its home secretary. In 1874 he was given distinctive recognition by his fellow-scientists when they elected him president of the American Association for the Advancement of Science.

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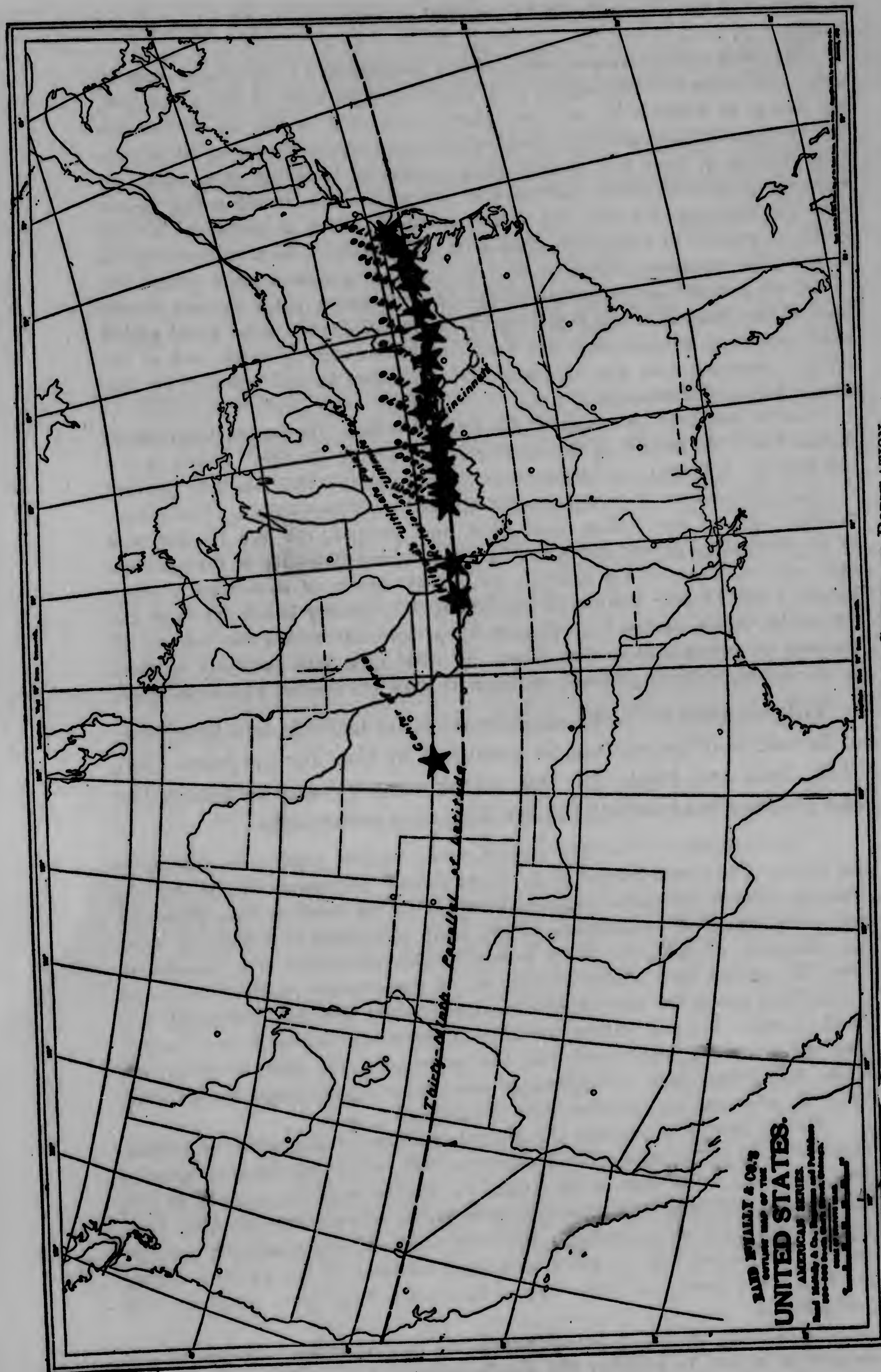
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(5) It is rather surprising that Hilgard's final prediction of the situation only eight years after the publication of his article,

which he naturally makes with the greatest confidence, should actually have proved relatively his poorest forecast. As a matter of fact, instead of being 10 miles north of Cincinnati, it was south and west of that city by 8 miles, across the Ohio River in Kentucky. It is evident that Hilgard was justifiably misled by the fact that from 1860 to 1870 the center of population moved northward 13 miles, a greater northward movement than ever before or since, until it was in the same latitude as Cincinnati. It was quite natural to suppose that in the next decade it would continue northward ten or twelve miles more. But its sudden jump northward was apparent rather than real, partially at least due to an inadequate enumeration. The census bureau explains it in part by the waste and destruction in the south from the Civil War, and in part (perhaps more important), to the acknowledged fact that the census of 1870 was very defective in its enumeration of the southern states, especially of the newly enfranchised negro population. That its sudden northern movement was thus fictitious rather than real is also indicated by the fact that it returned southward nine miles in 1880, when the enumeration was equally accurate in north and south.

#### WHO WAS HILGARD?

A few facts concerning this almost forgotten scientist, who succeeded so remarkably in his prophecies regarding the center of population when it was practically a virgin and untried field, may be of interest to the reader to-day.

He was born in Bavaria in 1825 but came to Illinois with his father's family when only ten years of age. He began his study of engineering in Philadelphia in 1843 and two years later entered the service of the Coast Survey under the distinguished Bache. This was the beginning of an honorable career of merit and ability with this organization lasting for over forty years and culminating all too tardily in his appointment as superintendent of the survey in 1881, a position which he held for four of the declining years of his life.

Starting as a temporary employe in field service, in the twenty years preceding the Civil War, under the magnetic encouragement of his chief, he came to occupy successively positions of greater trust and responsibility. He was a careful scientific student, as well as a successful executive. He was enthusiastic, an indefatigable worker, alert in the recognition of all that was valuable in new methods, and from his linguistic ability and wide reading thoroughly informed on the progress of geodesy and engineering both at home and abroad.

Under the stress of the Civil War, the Coast Survey was called upon for heroic and invaluable service in connection with southern

coast surveys and charts. The direction of the work was heavy, responsible and incessant; the anxiety, watchfulness and care were said to be as wearing on the chief as those of the commander of an army corps. Under this terrific strain the brilliant Bache's mind gave way, and double responsibility fell to his principal assistant, Hilgard, who met every requirement of the difficult position with credit and distinction.

After the breakdown of his chief, Hilgard might have had the superintendency for the asking, but he refused to ask for it as long as his broken chief lived, since the family of Bache were in such circumstances that his salary was necessary for their support. This disinterestedness and loyalty to his chief cost him dear. Bache lingered through four weary years, and when death finally took him there were several strong rival candidates in the field. After a prolonged struggle it was considered wise to appoint a "dark horse," Benjamin Peirce, of Harvard University, "the father of American mathematics."

It was not until 1881, after a lifetime of sacrificial and distinguished service, that Hilgard was finally appointed superintendent of the Coast Survey. He was then broken in health and suffering from the invasion of his household by death. The appointment seemed to give him new life, but it proved to be only a temporary stimulus. His working days were about over. Under the unfortunate political changes of 1884 he was compelled to sever his relations with the organization to which he had devoted a lifetime of loyal service. It was a crushing blow. Suffering with illness all the time, he never regained his health, although he lingered on until death finally came in May, 1891.

In 1862, in addition to his heavy work in the Coast Survey office, he was also supervisor of weights and measures for the treasury department. He was one of the members of the Metric Commission at Paris in 1872 and was made a member of the permanent committee. He took a leading part in preparing exact metric standards for distribution to the various states and territories. He was a member of the International Bureau of Weights and Measures, of which he declined the directorship. Typical of his many scientific contributions, may be mentioned one on the telegraphic determination of differences in longitude of Greenwich, Paris and Washington.

He was a charter member of the National Academy of Sciences and for some years its home secretary. In 1874 he was given distinctive recognition by his fellow-scientists when they elected him president of the American Association for the Advancement of Science.

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*ON THE RATE OF GROWTH OF THE POPULATION OF THE  
UNITED STATES SINCE 1790 AND ITS MATHEMATICAL  
REPRESENTATION<sup>1</sup>*

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It is obviously possible in any country or community of reasonable size to determine an empirical equation, by ordinary methods of curve fitting, which will describe the normal rate of population growth. Such a determination will not necessarily give any inkling whatever as to the underlying organic laws of population growth in a particular community. It will simply give a rather exact empirical statement of the nature of the changes which have occurred in the past. No process of empirically graduating raw data with a curve can in and of itself demonstrate the fundamental law which causes the occurring change.<sup>2</sup> In spite of the fact that such mathematical expressions of population growth are purely empirical, they have a distinct and considerable usefulness. This usefulness arises out of the fact that actual counts of population by census methods are made at only relatively infrequent intervals, usually 10 years and practically never oftener than 5 years. For many statistical purposes, it is necessary to have as accurate an estimate as possible of the population in inter-censal years. This applies not only to the years following that on which the last census was taken, but also to the inter-censal years lying between prior censuses. For purposes of practical statistics it is highly important to have these inter-censal estimates of population as accurate as possible, particularly for the use of the vital statistician, who must have these figures for the calculation of annual death rates, birth rates, and the like.

The usual method followed by census offices in determining the population in inter-censal years is of one or the other of two sorts, namely, by arithmetic progression or geometric progression. These methods assume that for any given short period of time the population is increasing either in arithmetic or geometric ratio. Neither of these assumptions is ever absolutely accurate even for short intervals of time, and both are grossly

inaccurate for the United States, at least, for any considerable period of time. What actually happens is that following any census estimates are made by one or another of these methods of the population for each year up to the next census, on the basis of data given by the last two censuses only. When that next census has been made, the previous estimates of the inter-censal years are corrected and adjusted on the basis of the facts brought out at that census period.

Obviously the best general method of estimating population in inter-censal years is that of fitting an appropriate curve to *all* the available data, and extrapolating for years beyond the last census, and reading off from the curve values for inter-censal years falling between earlier censuses. The methods of arithmetic or geometric progression use only two census counts at the most. Fitting a curve to all the known data regarding population by the method of least squares must obviously give a much sounder and more accurate result. In making this statement, one realizes perfectly, of course, the dangers of extrapolation. These dangers have been well emphasized by Perrin,<sup>3</sup> who used higher order parabolas to predict the future population of Buenos Aires. In keeping sharply before our minds the dangers of extrapolation from a curve, we are apt to forget that the methods of extrapolation by arithmetic or geometric progression have much less general validity than from a curve, and the inaccuracies are found in practice, except by the rarest of accidents, to be actually greater.

The first one to attempt an adequate mathematical representation of the normal rate of growth of the population of the United States was Pritchett.<sup>4</sup> Taking the census data from 1790 to 1880, inclusive, Pritchett fitted by the method of least squares the following equation:

$$P = A + Bt + Ct^2 + Dt^3 \quad (i)$$

where  $P$  represents the population and  $t$  the time from some assumed epoch. As a matter of fact, Pritchett took the origin of the curve at 1840, practically the center of the series. With this third-order parabola Pritchett got a very accurate representation of the population between the dates covered. As will presently appear this curve did not give, even within the period covered, as accurate results as a more adequate curve would have done, and it overestimated the population after a very short interval beyond the last observed ordinate as is shown in table 2.

Some 13 years ago one of the writers<sup>5</sup> demonstrated the applicability of a logarithmic curve of the form

$$y = a + bx + cx^2 + d \log x \quad (ii)$$

to the representation of growth changes, using the aquatic plant *Ceratophyllum* as material. Following the application of this curve to growth of this plant it was found equally useful in representing a wide range of other growth and related changes.<sup>6</sup> This list now includes, of matters

worked out in the Biological Laboratory of the Maine Experiment Station, such diverse phenomena as change of size of egg with successive layings, change of milk production with age, etc. Donaldson and Hatai<sup>7</sup> have demonstrated the applicability of this type of equation to bodily growth in the white rat and frog.

While the increase in size of a population cannot on *a priori* grounds be regarded, except by rather loose analogy, as the same thing as the growth of an organism in size, nevertheless it is essentially a growth phenomenon. It, therefore, seems entirely reasonable that this type of curve should give a more adequate representation of population increase than a simple third-order parabola. The actual event justifies this assumption, as will presently appear.

Table 1 shows the counted population as determined by the Census Bureau on the dates mentioned from 1790 to 1910. The exact dates were furnished in a personal communication from the present Director of the Census. These figures embody some adjustments and corrections made by the Census Bureau since the original censuses were made.

TABLE 1  
SHOWING THE DATES OF THE TAKING OF THE CENSUS AND THE RECORDED POPULATIONS  
FROM 1790 TO 1910

DATE OF CENSUS		RECORDED POPULATION (REVISED FIGURES FROM STATISTICAL ABST., 1918)
Year	Month and Day	
1790	First Monday in August	3,929,214
1800	First Monday in August	5,308,483
1810	First Monday in August	7,239,881
1820	First Monday in August	9,638,453
1830	June 1	12,866,020
1840	June 1	17,069,453
1850	June 1	23,191,876
1860	June 1	31,443,321
1870	June 1	38,558,371
1880	June 1	50,155,783
1890	June 1	62,947,714
1900	June 1	75,994,575
1910	April 15	91,972,266

To the data of table 1 the following equation was fitted by the method of least squares, taking origin at 1780, and making due allowance in the abscissal intervals for the actual dates of the several censuses:

$$y = a + bx + cx^2 + d \log x$$

where  $y$  denotes population and  $x$  time. The actual equation deduced was

$$y = 9,064,900 - 6,281,430x + 842,377x^2 + 19,829,500 \log x. \quad (iii)$$

The results are set forth in table 2, where Pritchett's figures are given for comparison.

TABLE 2

SHOWING (a) THE ACTUAL POPULATION<sup>1</sup> ON CENSUS DATES, (b) ESTIMATED POPULATION FROM PRITCHETT'S THIRD-ORDER PARABOLA, (c) ESTIMATED POPULATION FROM LOGARITHMIC PARABOLA, AND (d) (e) ROOT-MEAN SQUARE ERRORS OF BOTH METHODS

CENSUS YEAR	(a) OBSERVED POPULATION	(b) PRITCHETT ESTIMATE	(c) LOGARITHMIC PARABOLA ES- TIMATE	(d) ERROR OF (b)	(e) ERROR OF (c)
1790	3,929,000	4,012,000	3,693,000	+ 83,000	- 236,000
1800	5,308,000	5,267,000	5,865,000	- 41,000	+ 557,000
1810	7,240,000	7,059,000	7,293,000	- 181,000	+ 53,000
1820	9,638,000	9,571,000	9,404,000	- 67,000	- 234,000
1830	12,866,000	12,985,000	12,577,000	+ 119,000	- 289,000
1840	17,069,000	17,484,000	17,132,000	+ 415,000	+ 63,000
1850	23,192,000	23,250,000	23,129,000	+ 58,000	- 63,000
1860	31,443,000	30,465,000	30,633,000	- 978,000	- 810,000
1870	38,558,000	39,313,000	39,687,000	+ 755,000	+1,129,000
1880	50,156,000	49,975,000	50,318,000	- 181,000	+ 162,000
1890	62,948,000	62,634,000	62,547,000	- 314,000	- 401,000
1900	75,995,000	77,472,000	76,389,000	+1,477,000	+ 394,000
1910	91,972,000	94,673,000	91,647,000	+2,701,000	- 325,000
1920		114,416,000	108,214,000	935,000 <sup>2</sup>	472,000 <sup>2</sup>

<sup>1</sup> To the nearest thousand.

<sup>2</sup> Root-mean square error.

It is obvious from the data of table 2 that, with the same number of constants, the logarithmic parabola gives a distinctly better graduation than a third-order parabola.

The extreme precision of the present graduation is shown graphically in figure 1.

It is evident that as a purely empirical representation of population growth in the United States equation (iii) gives results of a very high degree of accuracy. Indeed, interpolation on this curve for inter-censal years may obviously be relied upon with a greater probability that the estimated figures approximate the unknown true facts than is afforded by any other estimating expedient hitherto applied to the known data. An indication of the general exactness of this curve (iii) for estimating future population by extrapolation may be got in the following way. Suppose a mathematician of the Civil War period had desired to estimate the population of the United States in 1910, and had fitted a curve of the type of (ii), by the method of least squares to the known data available

to him, namely, the census counts of 1790, to 1860, inclusive, he would have got this result:

$$y = 8,619,800 - 5,680,540x + 822,709x^2 + 16,987,200 \log x \quad (\text{iv})$$

If he had calculated from this equation the probable population in 1910, the figure he would have obtained would have been 92,523,000, a result only approximately a half million, or 0.6%, in error, as subsequent events proved. A prophecy less than 1% in error of an event to happen 50 years later is undeniably good predicting.

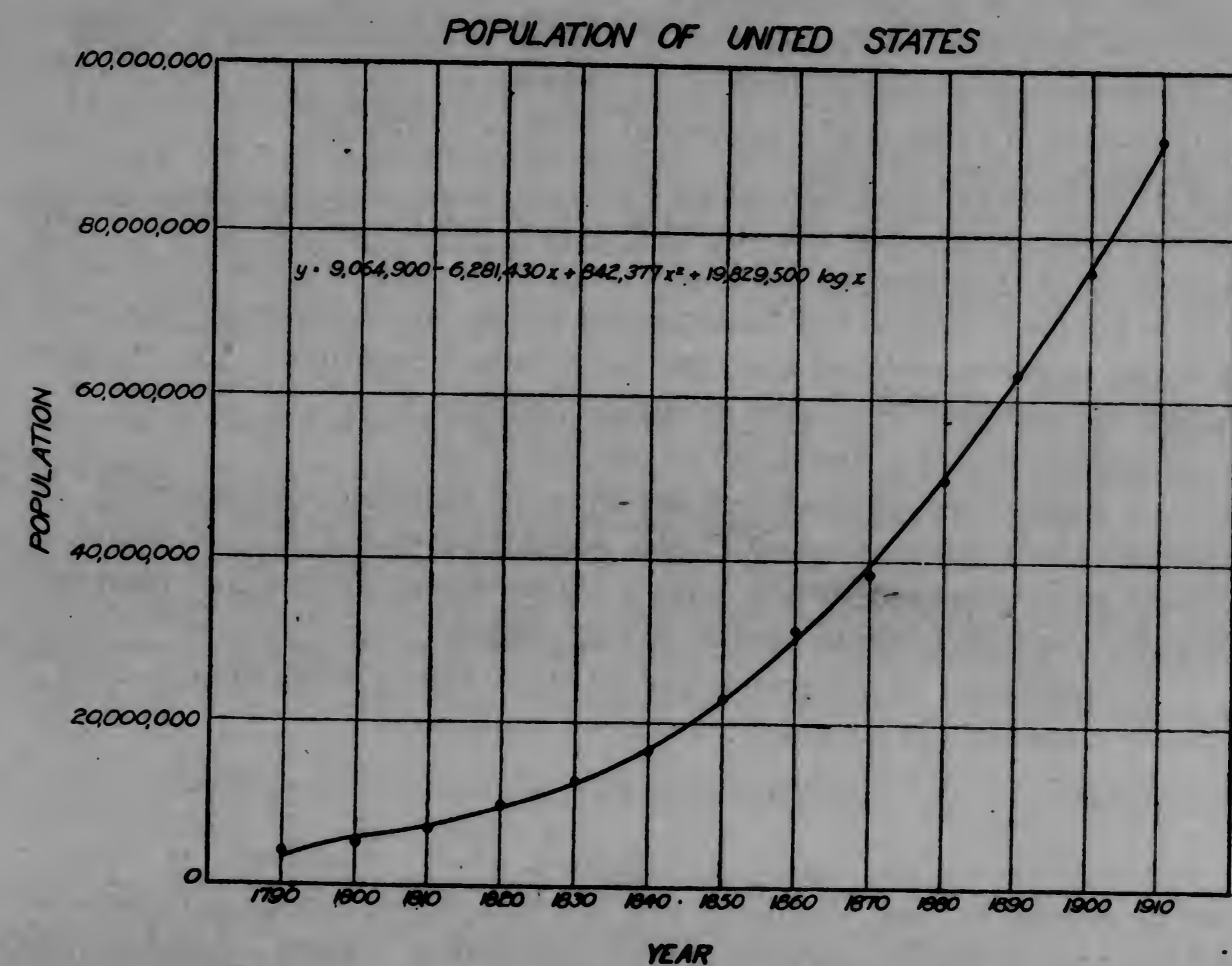


FIG. 1

Diagram showing observed and calculated populations (from logarithmic parabola) from 1790 to 1920.

It is of interest to exhibit the equations and results in predicting the 1910 population obtained by fitting our logarithmic parabola to the data available after the completion of each successive census from 1870 on. We have:

Data for 1790 to 1870, inclusive:

$$y = 8,287,700 - 5,300,270x + 795,540x^2 + 15,778,000 \log x \quad (\text{v})$$

Predicted population in 1910 = 91,201,000.

Deviation of prediction from actual, 1910 = - 771,000.

Percentage error = 0.8%.

Data for 1790 to 1880 inclusive:

$$y = 7,981,100 - 4,971,040x + 764,896x^2 + 14,993,500 \log x \quad (\text{vi})$$

Predicted population in 1910 = 89,128,000.  
 Deviation of prediction from actual, 1910 = - 2,844,000.  
 Percentage error = 3%.

Data for 1790 to 1890, inclusive:

$$y = 9,013,800 - 6,242,170x + 839,782x^2 + 19,744,300 \log x \quad (\text{vii})$$

Predicted population in 1910 = 91,573,000.  
 Deviation of prediction from actual, 1910 = - 399,000.  
 Percentage error = 0.4 per cent.

Data for 1790 to 1900 inclusive:

$$y = 8,748,000 - 5,880,890x + 821,001x^2 + 18,232,100 \log x \quad (\text{viii})$$

Predicted population in 1910 = 91,148,000.  
 Deviation of prediction from actual, 1910 = - 824,000.  
 Percentage error = 0.9%.

Beginning with 1860 (equation (iv)) and coming down to 1900, our hypothetical statistician would have been only once in error as much as 1% in his prediction of the 1910 population by this logarithmic parabola. The one larger error is for the 1880 curve, where apparently the aberrant counts of 1860 and 1870 exert an undue influence.

Altogether it seems justifiable to conclude that:

1. A logarithmic parabola of the type of equation (ii) describes the changes which have occurred in the population of the United States in respect of its gross magnitude, with a higher degree of accuracy than any empirical formula hitherto applied to the purpose.
2. The accuracy of the graduation given by this logarithmic parabola is entirely sufficient for all practical statistical purposes.

## II

Satisfactory as the empirical equation above considered is from a practical point of view, it remains the fact that it is an empirical expression solely, and states no general law of population growth. Insofar it is obviously an undesirable point at which to leave the problem of the mathematical expression of the change of population in magnitude.

It is quite clear on *a priori* grounds, as was first pointed out by Malthus in non-mathematical terms, that in any restricted area, such as the United States, a time must eventually come when population will press so closely upon subsistence that its rate of increase per unit of time must be reduced to the vanishing point. In other words, a population curve may start, as does that shown in figure 1, with a convex face to the base, but presently it must develop a point of inflection, and from that point on present a concave face to the  $x$  axis, and finally become asymptotic, the asymptote representing the maximum number of people which can be supported on the given fixed area.<sup>8</sup> Now, while an equation like (ii) can, and will in due time, develop a point of inflection and become concave to the base it never can become asymptotic. It, therefore, cannot

be regarded as a hopeful line of approach to a true law of population growth.

What we want obviously is a mathematical picture of the *whole* course of population in this country. It is not enough to be able to predict twenty or fifty years ahead as our logarithmic parabola is able to do satisfactorily, *in one portion of the whole curve*. How absurd equation (iii) would be over a really long time range is shown if we attempt to calculate from it the probable population in, say, 3000 A.D. It gives a value of 11,822,000,000. But this is manifestly ridiculous; it would mean a population density of 6.2 persons per acre or 3968 persons per square mile.

It would be the height of presumption to attempt to predict *accurately* the population a thousand years hence. But any real law of population growth ought to give some general and approximate indication of the number of people who would be living at that time within the present area of the United States, provided no cataclysmic alteration of circumstances has in the meantime intervened.

It has seemed worth while to attempt to develop such a law, first by formulating a hypothesis which rigorously meets the logical requirements, and then by seeing whether in fact the hypothesis fits the known facts. The general biological hypothesis which we shall here test embodies as an essential feature the idea that the rate of population increase in a limited area at any instant of time is proportional (a) to the magnitude of the population existing at that instant (amount of increase already attained) and (b) to the still unutilized potentialities of population support existing in the limited area.

The following conditions should be fulfilled by any equation which is to describe adequately the growth of population in an area of fixed limits.

1. Asymptotic to a line  $y = k$  when  $x = + \infty$ .
2. Asymptotic to a line  $y = 0$  when  $x = - \infty$ .
3. A point of inflection at some point  $x = \alpha$  and  $y = \beta$ .
4. Concave upwards to left of  $x = \alpha$  and concave downward to right of  $x = \alpha$ .
5. No horizontal slope except at  $x = \pm \infty$ .
6. Values of  $y$  varying continuously from 0 to  $k$  as  $x$  varies from  $- \infty$  to  $+ \infty$ .

In these expressions  $y$  denotes population, and  $x$  denotes time.

An equation which fulfils these requirements is

$$y = \frac{be^{ax}}{1 + ce^{ax}} \quad (\text{ix})$$

when  $a$ ,  $b$  and  $c$  have positive values.

In this equation the following relations hold:

$$x = + \infty \quad y = \frac{b}{c} \quad (\text{x})$$



$$x = -\infty \quad y = 0 \quad (\text{xi})$$

Relations (x) and (xi) define the asymptotes.

The point of inflection is given by  $1 - ce^{ax} = 0$ , or

$$x = -\frac{1}{a} \log c \quad y = \frac{b}{2c} \quad (\text{xii})$$

The slope at the point of inflection is  $\frac{ab}{4c}$ .

Expressing the first derivative of (xi) in terms of  $y$ , we have

$$\frac{dy}{dx} = \frac{ay(b-cy)}{b} \quad (\text{xiii})$$

Putting the equation in this form shows at once that it is identical

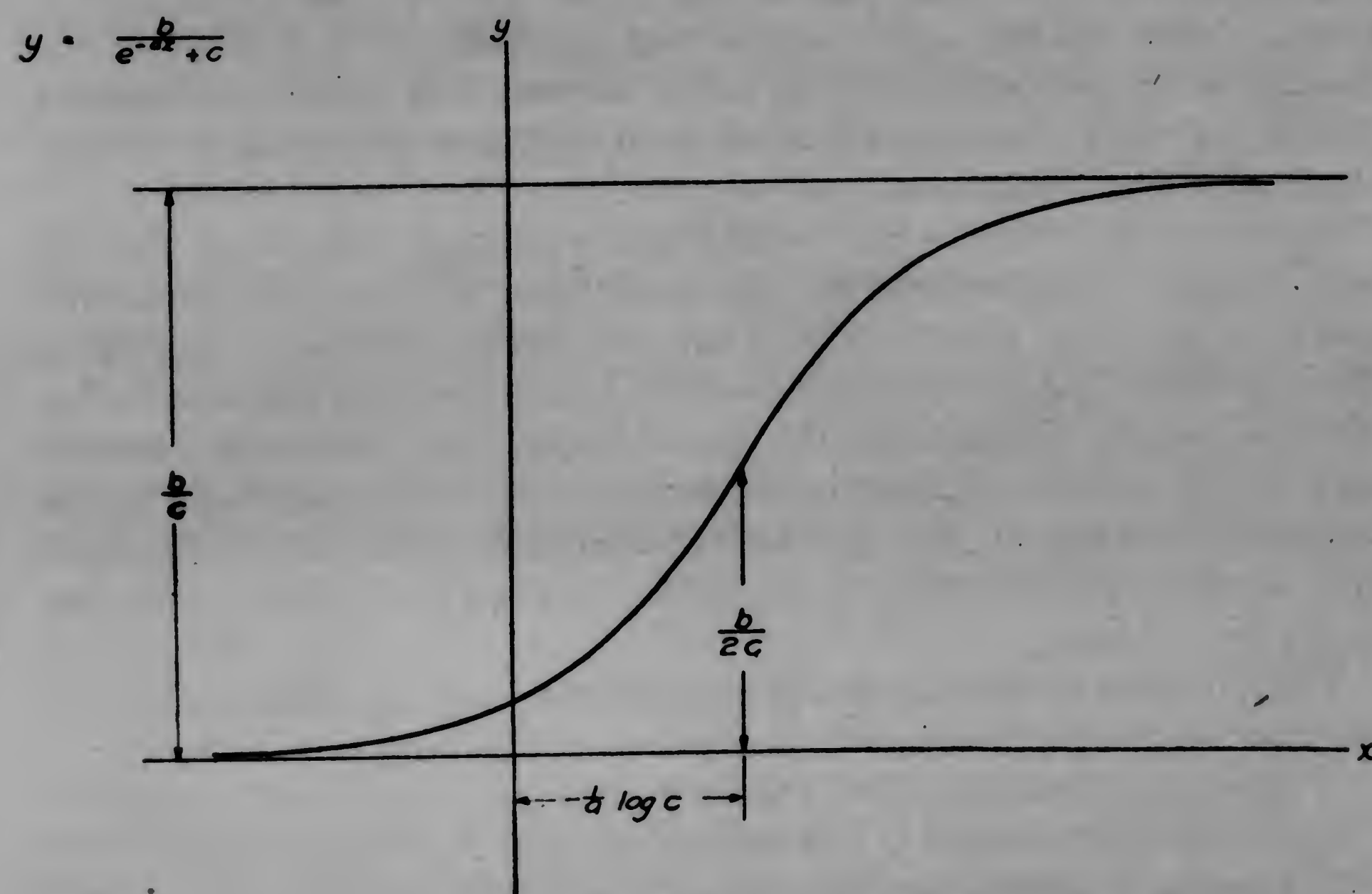


FIG. 2

General form of curve given by equation (ix).

with that describing an autocatalyzed chemical reaction, a point to which we shall return later.

The general form of the curve is shown in figure 2.

The question now is how well does (ix) represent the known historical facts as to the growth in population of the United States, and to what legitimate deductions as to the future course of population in this country does it lead?

It is obvious that equation (ix) as it stands cannot be fitted to observational data by the method of least squares. It is possible to write momental equations and fit by the method of moments, but at this time we do not care to develop that method because, as will presently appear,

we do not regard equation (ix) as the final development of this type of equation for representing population, and we have no desire to encumber the literature with a mathematical discussion which we expect later to discard.

For present purposes it will be sufficient to fit (ix) to the observations by passing it through three points. Given three equally spaced ordinates,  $y_1$ ,  $y_2$  and  $y_3$ , the necessary equations are:

$$\frac{b}{c} = \frac{2y_1y_2y_3 - y_2^2(y_1 + y_3)}{y_1y_3 - y_2^2} \quad (\text{xiv})$$

$$a = \log_{10} \frac{y_2 \left( \frac{b}{c} - y_1 \right)}{y_1 \left( \frac{b}{c} - y_2 \right)} \div h \log_{10} e \quad (\text{xv})$$

where  $h$  is the abscissal distance in years between  $y_1$  and  $y_2$ , or  $y_2$  and  $y_3$ .

$$c = \frac{1}{y_2 - y_1} \left( \frac{y_1}{e^{a\alpha}} - \frac{y_2}{e^{a(\alpha+h)}} \right) \quad (\text{xvi})$$

where  $\alpha$  is the abscissal distance in years from the origin to  $y_1$ .

Putting  $x_1$  at 1790,  $x_2$  at 1850, and  $x_3$  at 1910, and taking origin at 1780 we have

$$\begin{aligned} \alpha &= 10 & y_1 &= 3,929^0 \\ h &= 60 & y_2 &= 23,192 \\ & & y_3 &= 91,972 \end{aligned}$$

and taking (ix) in the form

$$y = \frac{b}{e^{-ax} + c} \quad (\text{xvii})$$

we find these values for the constants:

$$y = \frac{2,930.3009}{e^{-.0313395x} + 0.014854} \quad (\text{xviii})$$

The closeness with which this curve fits the known facts is shown in table 3.

The closeness of fit of this curve is shown graphically in figure 3.

Though empirically arrived at this is a fairly good fit of theory to observations. The root-mean square error from the last column is 463,000, or slightly smaller than that from the logarithmic parabola in table 2. It must not be forgotten, however, that the root-mean square error is reduced in the present case by virtue of the fact that in three out of the 13 ordinates theory and observation are made, by the procrustean method of fitting, to coincide exactly. The most that can be asserted is that

TABLE 3

RESULTS OF FITTING POPULATION DATA 1790 TO 1910 BY EQUATION (xviii)

YEAR	OBSERVED POPULATION	CALCULATED POPULATION BY EQUATION (xviii)	ERROR
1790	3,929,000	3,929,000	0
1800	5,308,000	5,336,000	+ 28,000
1810	7,240,000	7,228,000	- 12,000
1820	9,638,000	9,757,000	+119,000
1830	12,866,000	13,109,000	+243,000
1840	17,069,000	17,506,000	+437,000
1850	23,192,000	23,192,000	0
1860	31,443,000	30,412,000	-1,031,000
1870	38,558,000	39,372,000	+ 814,000
1880	50,156,000	50,177,000	+ 21,000
1890	62,948,000	62,769,000	- 179,000
1900	75,995,000	76,870,000	+ 875,000
1910	91,972,000	91,972,000	0

equation (xviii) gives nearly or quite as good a fit to the observations as does the logarithmic parabola. If we properly graduated the data, by the method of moments, we should probably get a result measurably better than that from equation (iii).

The significance of the result lies in this consideration. A curve which on *a priori* grounds meets the conditions which must be satisfied by a true law of population growth, actually describes with a substantial degree of accuracy what is now known of the population history of this country.

Let us examine some further consequences which flow from equation (xviii). The first question which interests one is this: when did or will the population curve of this country pass the point of inflection, and exhibit a progressively diminishing instead of increasing rate of growth? From (xii) it is easily determined that this point occurred about *April 1, 1914*, on the assumption that the numerical values of (xviii) reliably represent the law of population growth in this country. In other words, so far as we may rely upon present numerical values, the United States has already passed its period of most rapid population growth, unless there comes into play some factor not now known and which has never operated during the past history of the country to make the rate of growth more rapid. This latter contingency is improbable. While prophecy is a dangerous pastime, we believe, from the fragmentary results already announced, that the 1920 census will confirm the result indicated by our curve, that the period of most rapid population growth was passed somewhere in the last decade. The population at the point of inflection works out to have been 98,637,000, which was in fact about the population of the country in 1914.

The upper asymptote given by (xviii) has the value 197,274,000 roughly. This means that according to equation (xviii) the maximum population which continental United States, as now areally limited, will ever have will be roughly twice the present population. We fear that some will condemn at once the whole theory because the magnitude of this number is not sufficiently imposing. It is so easy, and most writers on population have been so prone, to extrapolate population by geometric series, or by a parabola or some such purely empirical curve, and arrive at stupendous figures, that calm consideration of real probabilities is most difficult to obtain. While, as will appear from the next section of this

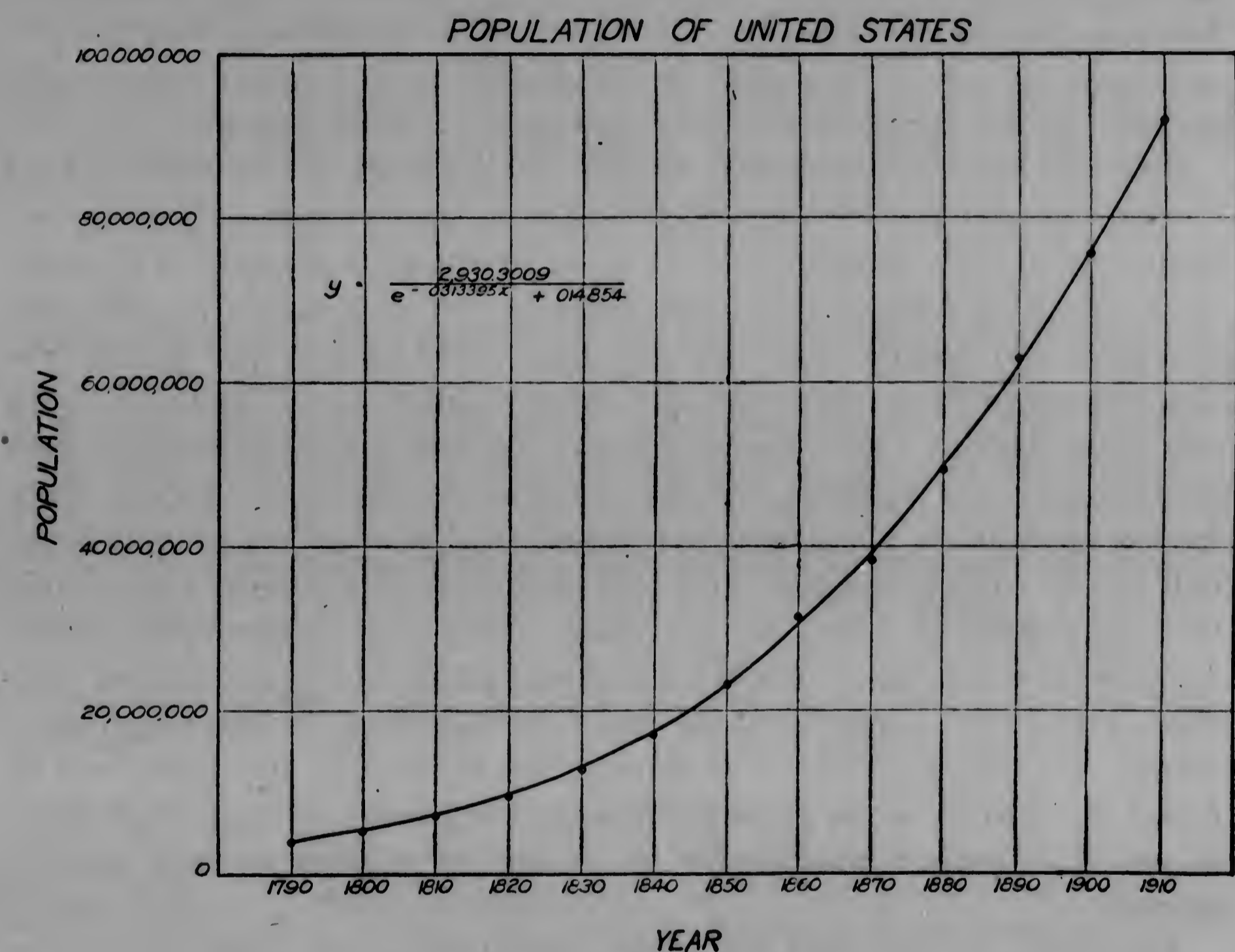


FIG. 3

Showing result of fitting equation (xviii) to population data.

paper, we have no desire to defend the numerical results of this section, and indeed ourselves regard them only as a rough first approximation, it remains a fact that if anyone will soberly think of every city, every village, every town in this country having its present population multiplied by 2; and will further think of twice as many persons on the land in agricultural pursuits, he will be bound, we think, to conclude that the country would be fairly densely populated. It would have about 66 persons per square mile of land area.

It will at once be pointed out that many European countries have a much greater density of population than 66 persons to the square mile,

as for example Belgium with 673, Netherlands with 499, etc. But it must not be forgotten that these countries are far from self-supporting in respect of physical means of subsistence. They are economically self-supporting, which is a very different thing, because by their industrial development at home and in their colonies they produce money enough to buy physical means of subsistence from less densely populated portions of the world. We can, of course, do the same thing, provided that by the time our population gets so dense as to make it necessary there still remain portions of the globe where food, clothing material, and fuel are produced in excess of the needs of their home population. But in this, and in any other scientific discussion of population, it is necessary to limit sharply the *area* one is to talk about. This paper deals with population, and by direct implication the production of physical means of subsistence, within the present area of continental United States.

Now 197,000,000 people will require, on the basis of our present food habits,<sup>10</sup> about 260,000,000,000,000 calories per annum. The United States, during the seven years 1911-1918, produced as an annual average, in the form of human food, both *primary and secondary* (i.e., broadly vegetable and animal), only 137,163,606,000,000 calories per year.<sup>11</sup> So that unless our food habits radically change, and a man is able to do with less than 3000 to 3500 calories per day, or unless our agricultural production radically increases,<sup>12</sup> it will be necessary when our modest figure for the asymptotic population is reached, to import nearly or quite one-half of the calories necessary for that population. It seems improbable that the population will go on increasing at any very rapid rate after such a condition is reached. And is it at all reasonable to suppose that at such time, with all the competition for means of subsistence which the already densely populated countries of Europe will be putting up, there can be found any portion of the globe producing food in excess of its own needs to an extent to make it possible for us to find the calories we shall need to import?

Altogether, we believe it will be the part of wisdom for anyone disposed to criticise out asymptotic value of a hundred and ninety-seven and a quarter millions because it is thought too small, to look further into all the relevant facts.

### III

With the above numerical results in hand it is desirable to discuss a little further the general theory of population growth set forth in the preceding section. At the outstart let it be said that we are convinced that equation (ix) represents no more than a first approximation to a true law of population growth. There are several characteristics of this curve which are too rigid and inelastic to meet the requirements of such a law. In (ix) the point of inflection must of necessity lie exactly half-way between the two asymptotes. Furthermore the half of the curve lying

to the right of the point of inflection is an exact reversal of the half lying to the left of that point. This implies that the forces which during the latter part of the population history of an area act to inhibit the rate of population growth are equal in magnitude, and exactly similarly distributed in time, to the forces which in the first half of the history operate to accelerate growth. We do not believe that such rigid and inelastic postulates as these are, in fact, realized in population growth.

The same objections apply to the use of the equation of an autocatalytic reaction to the representation of organic growth in the individual. This fact has been noted by Robertson<sup>13</sup> who was the first to discover that, in general, growth follows much the same curve as that of autocatalysis. What needs to be done is to generalize (ix) in some such form as will free it from the two restrictive features (location of point of inflection and symmetry) we have mentioned, and will at the same time retain its other essential features. We are working along this line now and hope presently to reach a satisfactory solution.

We attach no particular significance to the *numerical* results of the preceding section. They obviously can give only the roughest approximation to probable future values of the population of the United States. Our only purpose in presenting them at all at this time is to demonstrate that the hypothesis here advanced as to the law of population growth, even when fitted by a rough and inadequate method, so closely describes the known facts regarding the past history of that growth, as to make it potentially profitable to continue the mathematical development and refinement of this hypothesis further. There is much that appeals to the reason in the hypothesis that growth of population is fundamentally a phenomenon like autocatalysis. In a new and thinly populated country the population already existing there, being impressed with the apparently boundless opportunities, tends to reproduce freely, to urge friends to come from older countries, and by the example of their well-being, actual or potential, to induce strangers to immigrate. As the population becomes more dense and passes into a phase where the still unutilized potentialities of subsistence, measured in terms of population, are measurably smaller than those which have already been utilized, all of these forces tending to the increase of population will become reduced.

<sup>1</sup> Papers from the Department of Biometry and Vital Statistics, School of Hygiene and Public Health, Johns Hopkins University, No. 13.

<sup>2</sup> Cf. for a discussion on the relation of curve fitting to true organic laws of change, Pearl, R. "Some Recent Studies on Growth," *Amer. Nat.*, 43, 1909 (302-316).

<sup>3</sup> Perrin, E., "On Some Dangers of Extrapolation," *Biometrika*, 3, 1904 (99-103).

<sup>4</sup> Pritchett, A. S., "A Formula for Predicting the Population of the United States," *Quart. Publ. Amer. Statistical Assoc.*, 2, 1891 (278-286).

<sup>5</sup> Pearl, R., "Variation and Differentiation in *Ceratophyllum*," *Carnegie Inst. Washington, Publ.* 53, 1907 (136).

<sup>6</sup> Cf. the following papers:

Curtis, M. R., 1914, "A Biometrical Study of Egg Production in the Domestic Fowl. IV. Factors Influencing the Size, Shape, and Physical Constitution of Eggs," *Arch. Entwicklungsmech. Organ.*, B. **39**, Heft 2/3, pp. 217-327.

Pearl, R., 1909, "Studies on the Physiology of Reproduction in the Domestic Fowl. I. Regulation in the Morphogenetic Activity of the Oviduct," *J. Exp. Zool.*, **6**, No. 3, pp. 339-359.

Pearl, R., 1914, "On the Law Relating Milk Flow to Age in Dairy Cattle," *Proc. Soc. Expt. Biol. Med.*, **12**, No. 1, pp. 18-19.

<sup>7</sup> Donaldson, H. H., 1908, "A Comparison of the Albino Rat with Man in Respect to the Growth of the Brain and of the Spinal Cord," *J. Compar. Neurol. Psych.*, **18**, No. 4, pp. 345-389.

Donaldson, H. H., 1909, "On the Relation of the Body Length to the Body Weight and to the Weight of the Brain and of the Spinal Cord in the Albino Rat (*Mus norvegicus var. albus*)," *Ibid.*, **19**, No. 2, pp. 155-167.

Donaldson, H. H., 1910, "On the Percentage of Water in the Brain and in the Spinal Cord of the Albino Rat," *Ibid.*, **20**, No. 3, pp. 119-144.

Donaldson, H. H., 1911, "On the Regular Seasonal Changes in the Relative Weight of the Central Nervous System of the Leopard Frog," *J. Morph.*, **22**, pp. 663-694.

Donaldson and Hatai, Shinkishi, 1911, "A Comparison of the Norway Rat with the Albino Rat in Respect to Body Length, Brain Weight, Spinal Cord Weight, and the Percentage of Water in Both the Brain and the Spinal Cord," *J. Compar. Neurol. Psych.*, **21**, pp. 417-458.

Hatai, Shinkishi, 1909, "Note on the Formulas Used for Calculating the Weight of the Brain in the Albino Rats," *Ibid.*, **19**, No. 2, pp. 169-173.

Hatai, Shinkishi, 1911, "A Formula for Determining the Total Length of the Leopard Frog (*R. pipiens*) for a Given Body Weight," *Anat. Rec.*, **5**, No. 6, pp. 309-312.

Hatai, Shinkishi, 1911, "An Interpretation of Growth Curves from a Dynamical Standpoint," *Ibid.*, **5**, No. 8, pp. 373-382.

<sup>8</sup> Always, be it clearly understood, on the assumption that the average standard of living, method of agricultural production, etc., either do not further change at all in the period between the end of historical past record of fact and the time when  $dy/dx$  becomes negligibly small as the asymptote is approached, or that the net effective magnitude of any such changes as do occur will be relatively so small as to be negligible in comparison with the effect of such factors as reproduction and immigration in determining the relation between population and time in an area of fixed limits. In any mathematical treatment of the subject these factors of standard of living, methods of agriculture, etc., represent essentially constant (and hence omitted) parameters of any assumed functional relation between population and time.

<sup>9</sup> Omitting 000 here and in the subsequent calculations till the end.

<sup>10</sup> Cf. Pearl, R., *The Nation's Food*, Philadelphia (W. B. Saunders Company), 1920 (247).

<sup>11</sup> Pearl, R., *loc. cit.*, p. 76.

<sup>12</sup> As a matter of fact East, in his able presidential address on "Population," before the American Society of Naturalists has shown that the United States has already entered upon the era of diminishing returns in agriculture in this country.

<sup>13</sup> Robertson, T. Brailsford, "On the Normal Rate of Growth of an Individual and Its Biochemical Significance," *Arch. Entwicklmech. Organ.*, **25**, pp. 581-614.

Robertson, T. Brailsford, "Further Remarks on the Normal Rate of Growth of an Individual, and Its Biochemical Significance," *Ibid.*, **26**, pp. 108-118.

NOTES ON THE DEPOPULATION OF  
ABORIGINAL AMERICA

By MAURICE G. SMITH

WHEN James Mooney died he left unfinished the bulletin on the aboriginal population of America which he had promised us,<sup>1</sup> and on which he had spent many years of research. However, a briefer statement embodying the chief results of his careful investigation, prepared by him about twenty years ago, has recently (February, 1928) been published by the Smithsonian Institution.<sup>2</sup> In a preface, Dr. J. R. Swanton tells us regretfully that little can be expected in the future from the notes which constitute the greater part of the material left by Mr. Mooney on this important subject.

But, as Dr. Swanton says,

Mr. Mooney's work does, however, supply a want long felt by students of the American Indian: a set of detailed figures that give an approximate understanding of the relative strength of the several tribes, an understanding of the Indian population of the region taken as a whole, and the approximate losses and gains of both.

Some 268 tribal groups (and in many instances allies and associates have of necessity been put together) are classified in nine geographical divisions in the United States. Only in the case of California is a tribal list omitted and a total given alone; but this deficiency has been remedied by Dr. Kroeber's statistics.<sup>3</sup> Two estimates of population are given by Mr. Mooney for each tribal group in the United States, Canada, Alaska, and Greenland: (1) at the time of their first disturbance by white civilization; and (2) in 1907. For each section there is a discussion of the principal causes for the decrease of the Indians and in a few cases also, for the increase in numbers. It is needless to say, of course, that there is a good bibliography.

<sup>1</sup> Handbook of American Indians. B. A. E., Bull. 30, 2: 287.

<sup>2</sup> The Aboriginal Population of America North of Mexico. Smith. Misc. Coll., 80, no. 7.

<sup>3</sup> Handbook of the Indians of California. B. A. E., Bull. 78: 880-891, 1925.

In going over this valuable material with my students I have had occasion to select for emphasis certain items which are included in the large body of figures printed and to retabulate some of the statistics. What I have done by no means exhausts the possibilities of Mr. Mooney's material. For example: by giving us an idea of the size of the tribes this paper sheds light on some phases of their organization. Furthermore, while one must beware of placing too much reliance on a term like *tribe*, which has and has had a vague and shifting meaning, nevertheless I believe that it is not entirely due to the method of collecting the statistics that we find certain areas characterized by groups much larger or smaller than in other regions.

It should be pointed out that the figures given in this post-humous essay are almost identical, so far as totals go, with those given by Mooney in the *Handbook* article on Population, published in 1910, but written, of course, earlier; perhaps about the same time as this essay.<sup>4</sup>

	<i>Handbook</i>	<i>Essay</i>
Continental U. S.	846,000	849,000
British America	220,000	221,000
Alaska	72,000	73,000
Greenland	10,000	10,000
Total, North of Mexico	1,148,000	1,153,000

(The Handbook gave the "present figure" as 403,000, a decrease of about 65 percent; this essay gives the population in 1907 as 406,506, or a decrease of 64.7 percent.)

The contribution which this paper makes to our knowledge is, however, very great, because it gives us figures for each tribe and section. From this detailed information we can learn, among other things:

(1) What correlation, if any, is there between the length of the period of contact with Europeans and the decrease in the aboriginal population of each section?

(2) Which were the large tribes in each region before the advent of the white man, and their fate?

(3) What proportion of all the tribes found by the first explorers and colonists are now extinct?

<sup>4</sup> See Dr. Swanton's preface, 1.

(4) Which tribes have held their own, with regard to numbers, during the historic period?

Although Mr. Mooney discusses the reasons for the great decrease in numbers which everywhere occurred, he does not take up the matter of correlating the length of contact with the phenomena of depopulation. In fact, there is apparently no great correlation,<sup>5</sup> many and complex factors being involved. But this is not the place to go into the subject, and I merely present the figures (table 1) showing (1) the percentage of our aboriginal population surviving in each geographical area in 1907, together with (2) the date of the first great disturbance of native culture by the Europeans, or the date from which we first have information about the numbers of the Indians.

TABLE 1

<i>Area</i>	<i>1</i>	<i>2</i>
North Atlantic	39.4	1600
South Atlantic	4.2	1600
Gulf	54.8	1650
Central	61.0	1650
Plains, southern	7.0	1690
Plains, northern	50.0	1780
Columbia	17.3	1780
California	7.2*	1769
Central Mountain	60.0	1845
New Mexico and Arizona	74.8	1680
Total United States	31.3	
Eastern Canada	50.0	1600
Central Canada	56.5	1670
British Columbia	29.8	1780
Total Canada	45.7	
Alaska	39.0	1740
Greenland	110.0	1721
North of Mexico	35.3	

\* Because of a lower original figure, Kroeber shows 12.3 percent of the California Indians remaining in 1910.

<sup>5</sup> For California, however, says Kroeber (*Handbook of the Indians of California*, 888), "it is clear that, in general, decrease of the native race is directly in proportion to immediacy and fullness of contact with superior civilization."

It is a matter of common knowledge, of course, that there was a great difference in the size of the Indian tribes, but Mr. Mooney's statistics show what is not so well known—that there were 28 tribal groups in the United States which had 296,000 members, or about 50 percent of the population (589,000) in all regions, excluding California.<sup>6</sup> A list of these tribes follows (table 2), with the numbers they possessed (1) at the beginning of the historic period, and (2) in 1907:

TABLE 2

	1	2
Ojibwa (United States and Canada)	35,000	36,000(?)*
Sioux	25,000	28,000
Cherokee	22,000	25,000
Creek confederacy	18,000	13,200
Blackfoot	15,000	4,560
Choctaw	15,000	18,000
Coahuiltecan tribes	15,000	Extinct
Assiniboin	10,000	2,080
Pawnee	10,000	644
Powhatan confederacy	9,000	500(?)
Piros "province" Pueblos	9,000	60(?)
Caddo	8,500	555
Delaware and Munsee	8,000	1,850
Timucua, etc.	8,000	Extinct
Chickasaw	8,000	5,000
Illinois confederacy	8,000	50
Navaho	8,000	25,000(?)
Paiute, etc.	7,500	5,605
Apalachee	7,000	Extinct
Comanche	7,000	1,430
Osage	6,200	2,156
Montauk, etc.	6,000	30(?)
Papago	6,000	5,800
Iroquois confederacy, excluding Tuscarora	5,500	17,630
Tuscarora	5,000	700 <i>ca.</i>
Catawba, etc.	5,000	90(?)
Apache	5,000	4,500
Conestoga	5,000	Extinct
	296,700	198,440(?)

\* Question marks after figures are Mooney's.

<sup>6</sup> For California, as has been said, Mooney gives only totals for the population and no estimate even for the number of tribes. Kroeber reduces Mooney's figure

The devastating effect of white men and white culture upon the Indians, at least in the United States, is most strikingly illustrated by the large number of tribes which have been extinguished or nearly so. Of a total of 268 groups in this country, excluding California<sup>7</sup> again from consideration, 87 groups are reported by Mooney to have been wiped out by 1907 and 67, nearly so.<sup>8</sup> The extinct groups once totaled 129,250 members; the nearly extinct groups, 114,150, of which there were remaining in 1907 only 3,541 representatives. Thus, of a total aboriginal population of 589,000 in the 268 groups, 239,859 belonged to groups now extinct.<sup>9</sup>

TABLE 3

	Number of tribes in region	Extinct tribes	Nearly extinct tribes
North Atlantic	24	14	6
South Atlantic	35	20	14
Gulf	39	27	4
Central	12	2	1
Plains, northern	20	1	1
Plains, southern	12	5	0
Columbia	95	12	40
Central Mountain	6	0	0
New Mexico and Arizona	25	6	1
Totals	268	87	67

(Merriam's) from 260,000 to 133,000, divided among 45 tribal groups. But even in this region, there were nine groups with a population of 77,000 or 58 percent of the total. In 1770, it is estimated, the Pomó numbered 8,000; the Wintun, 12,000; the Maidu, 9,000; the Miwok, 9,000; the Yokuts, 18,000; the Costanoan, 7,000; and the Chumash, 10,000.

<sup>7</sup> In California, according to Kroeber, 18 of 45 tribes are extinct or nearly so. And these 18 groups had a population in 1770 of 53,500, or 40 percent of the total of this area. In 1910 there were remaining in California 1,050 individuals of this great mass in these 18 tribes, or 2 percent of the total in 1770.

<sup>8</sup> In 1914, of the 56 or more linguistic stocks north of Mexico, 8 had become extinct and 9 nearly so. (P. E. Goddard, *The Present Condition of our Knowledge of North American Languages*. *Am. Anthr.*, n.s., 16: 561, 565, 1914.)

<sup>9</sup> While the aboriginal population of Canada and Alaska decreased 55 and 61 percent respectively, there has been no such wholesale extinction of entire tribes in these countries as occurred in the United States. In fact, according to Mooney's figures, in all Canada only 5 of 67 tribal groups were wiped out; and in Alaska only 2 of 51.

Not all the tribes, however, melted away at the advance of the white man and his civilization.<sup>10</sup> And yet Mr. Mooney's figures show only 15 groups which have either held their own or have increased in numbers during the historic period—one in the North Atlantic, two in the Gulf, one in the Central, three in the Plains, one in the Columbia, one in the Central Mountain, and six in the New Mexico and Arizona region.

TABLE 4

	<i>Population, beginning historic period</i>	<i>Population, 1907</i>
Iroquois confederacy, without the Tuscarora	5,500	17,630
Cherokee	22,000	25,000
Choctaw	15,000(?)*	18,000
Ojibwa (U. S. and Canada)	35,000	36,000(?)*
Cheyenne	3,500	3,351
Ponca	800	845
Sioux	25,000	28,000
Salish	600	623
Jicarilla	800	776
Mohave Apache	600	655
Pima	4,000	4,037
Papago	6,000	5,800
Apache	5,000	4,500
Navaho	8,000	25,000(?)
Acoma "province" Pueblos	1,500	2,190

\* Question marks after figures are Mr. Mooney's.

The principal causes for this persistency of some groups were, according to Mooney, mixture with the whites and the incorporation of other Indians into the tribe. This was the case especially, he thought, with the Iroquois, the Cherokee, the Choctaw, the Sioux, the Navaho, and the Apache. Great resisting power and successful warfare also helped the Iroquois and the Sioux.

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BOULDER, COLORADO

<sup>10</sup> In California, however, there is not a single tribe that did not suffer great losses.



~~their lungs is shown by the fact that they would formerly remain under water twice as long as an American in diving for mussels. The extraordinary treatment their women undergo in childbirth at the hands of the midwives shows remarkable endurance. No American could dance as they do, all night for days together, sometimes for weeks. Their uniformly sweet breath and beautiful white teeth (so long as they continue to live in the aboriginal way) are evidences of good health. Smoked fish and jerked venison are eaten without further preparation, and there is a considerable amount of green stuff consumed raw in the spring; but four-fifths of their food is cooked and then eaten cold. An Indian is as irregular in his times of eating as a horse or an ox, which may have an injurious effect on his health or it may not. If an Indian can keep free from disease he lasts a long time; but when diseases get hold of him he goes off pretty easy, for their medicines amount to nothing.~~ Mr. J. J. Warner, in a communication to the *Los Angeles Star*, gives an account of an appalling pestilence which he calls "remittent fever", which desolated the Sacramento and San Joaquin Valleys in 1833, and reduced those great plains from a condition of remarkable populousness to one of almost utter silence and solitude. Their treatment in the shape of a hot-air bath, followed by a plunge into cold water, added to its fatality, until there was scarcely a human being left alive. But the plains were evidently soon re-peopled from the healthier mountain districts, for Captain Sutter and General Fremont, in their day, found tens of thousands there to fight or to feed. It is the testimony of the old pioneers that they were much subject to fevers and lung complaints even in primitive times, especially along the rivers. Being compelled to live near the streams to procure a supply of water, they were exposed to malarial influences. They sometimes threw up mounds for their villages to stand on, but these were rather for a defense against high water than against malaria. The old Indians protest that the present melancholy prevalence of ophthalmia, like some other diseases, is due to American influences, and that in old times they had good eyes. All things taken together, I am well convinced that the California Indians were originally a fruitful and comparatively a healthy and long-lived race. Mr. Claude Cheney, who was among them as early as 1846, on Bear River, states that, although they were rather

subject to summer fevers along that stream, large families of children were quite common. They sought as much as possible to avoid the unhealthy lowlands in the dry season by going up into the mountains.

But, after all, let no romantic reader be deceived, and long to escape from the hollow mockeries and the vain pomps and ambitions of civilization, and mingle in the free, wild, and untrammelled life of the savage. It is one of the greatest delusions that ever existed. Of all droning and dreary lives that ever the mind of man conceived this is the chief. To pass long hours in silence, so saturated with sleep that one can sleep no more, sitting and brushing off the flies! Savages are not more sociable than civilized men and women, but less; they talk very fast when some matter excites them, but for the most part they are vacuous, inane, and silent. Kindly Nature, what beneficence thou hast displayed in endowing the savage with the illimitable power of doing nothing, and of being happy in doing it! I lived nearly two years in sufficient proximity to them, and I give it as the result of my extended observations that they sleep, day and night together, from fourteen to sixteen hours out of the twenty-four. They lie down at night-fall, for they have no lights; and they seldom rise before the sun, in summer generally an hour or two after. During the day they are constantly drowsing. When on a march they frequently chatter a good deal, but when a halt is called they all drop on the ground, as if overcome by the heat, and sink into a torpid silence. They will lie in the shade for hours in the middle of the day, then slowly rouse up, commence chattering, and march until night-fall.

Literary Digest, Sept. 15, 1934.  
"Vanishing American" No Longer Vanishing

Studies of Indian Population Trends Indicate Aborigines Have Been Increasing For Forty Years, and There Soon May Be as Many on This Continent as There Were in 1492

FOR approximately forty years—since about 1895, the Indian population of the United States and Canada has been increasing. Far from being the "Vanishing American," the Indian is staging a most spectacular comeback, and the average birth-rate among Indians to-day is higher than in the white population.

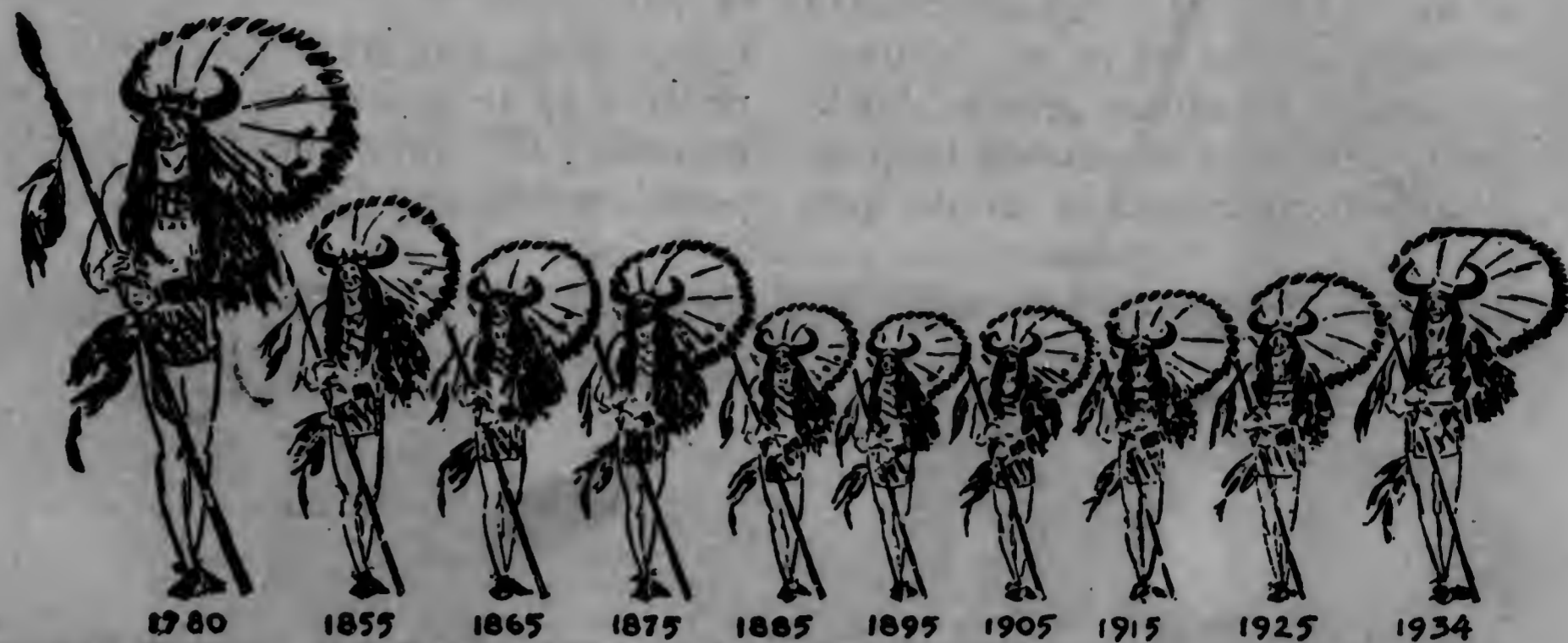
This increase in numbers is expected to be accelerated rather than otherwise by the coming New Deal for Indians, under liberal policies now being formulated by the Washington Administration. It is expected that the President will reverse the Indian policy of a century and a half, and start off in an entirely new direction.

Some of the proposals reported to be under consideration include the restoration of former Indian lands to tribal ownership, abandonment of the idea of allotting individual lands, and possibly increasing the present tribal lands by purchase or otherwise. Possibly each tribe or community will be organized into a self-governing political unit, to operate its land under a legalized corporation, restoring the original language, social customs, and religion of each tribe.

### Never Very Many Indians

What effect such changes will have on the Indian population may be a matter for conjecture. Speculating, Dr. Clark Wissler, Curator-in-Chief of Anthropology at the American Museum of Natural History, New York, recently pointed out in *Natural History* that there never were very many Indians in this country, as compared with the present white population. Estimates of the number of Indians in the United States and Canada in 1780 have approximated 1,000,000. Doctor Wissler is inclined to think this number too large, and placed it nearer 750,000.

The year 1780 is chosen because in the following year an epidemic of smallpox swept the Central United States and



Courtesy of Natural History

Trend of Indian population since 1780, based on figures and estimates for Plains Indians

Canada, and carried away more than half the population of the region. Nearly 100,000 Indians are believed to have perished, yet no tribe seems to have been wiped out completely. In a few years most of them regained their normal population.

It seems reasonable that the number of Indians in 1492 was not greatly different from that in 1780; somewhere between 750,000 and 1,000,000 in the United States and Canada. Doctor Wissler's figures show that the densest Indian population was on the West Coast, where there was about one Indian per square mile. In the Atlantic Coast area, next densest, there was about one Indian for every three square miles; in the Central and Plains area, eight square miles, and in Northwestern Canada, twenty-four square miles for each Indian.

The reason for the small population was the native way of life of the Indian. Doctor Wissler pointed out that had the Indian hit upon the way of life followed by whites in this country, his population probably would have been as great as the white population to-day. Actually, the country probably could not support more than about 1,000,000 nomadic, warlike hunters. Their number was limited, on

one hand, by the food supply and their ability to get enough to eat, and, on the other, by natural enemies, disease, and intertribal warfare. The whole number of Indians who could live in this great area was about the same as the population of Boston to-day.

The "golden age" of the Indians, in Doctor Wissler's opinion, was not the period before white men came, but the era of trading with the whites. It was a period of great economic prosperity for the Indian. He maintained his own tribal organization, moved about freely, and was able to buy European goods in proportion to his industry and skill.

### "Golden Age" Did Not Last

"On the whole, his life was richer and more interesting than before the whites came upon the scene," said Doctor Wissler. "He was now able to provide himself with firearms, steel tools, horses, and many other conveniences, all of which lightened the drudgery of daily routine, raised his standard of living, increased his ability to travel, and subjected him to considerable intellectual stimulus from contact with a new race and a new culture."

But like many a "golden age," this did not last long. The white settlers came, and, after protracted periods of warfare, the Indians finally were subjugated, and placed on "reservations," which, in the beginning, at least, were little more than prison-camps.

"The Indians were now in a state of economic collapse, since they no longer produced furs nor hunted for food. Many looked upon the situation as hopeless. It is recorded that in one tribe, at least, many young men committed suicide."

Then followed the long, heroic struggle of the Indians to rehabilitate themselves. The whites expected them to become farmers, but relatively few Indians ever had been agriculturally inclined. The



Publishers Photo Service

Modern Assiniboin Indians encamped at the foot of the Rockies

(Continued on page 32)

Sept. 15, 1934.

University of M Road-su

A type of road-surf to be virtually skid-resistant enough to wood, or cement, or even unskilled work



Courtesy of Steel

will be the subject of nificant experiment month. Engineers Minnesota expect to of cast-iron pavement

The experiment is road-surface which w manent than kinds it and, incidentally, to open an outlet for the vast iron-ore deposits in northern Minnesota. The idea of surfacing roads with iron, while apparently new in this country, is by no means untried. Iron-surfaced roads and streets have been in use in Europe for several years, the development of road-surfacing of this kind in England dating from 1928.

Two Different Systems Used

E. W. Davis, Superintendent of the Mines Experimental Station of the University of Minnesota, who has made a thorough study of the experiments abroad, recently reported in *Steel* that the largest and most recent installation was in the Mersey Tunnel, at Liverpool, opened recently. In this tunnel about three miles of pavement have been surfaced with square cast-iron blocks.

Two different systems are in use in England, Mr. Davis found. In one system, cast-iron sections are used as surfacing for concrete, somewhat as brick or wood blocks are used in this country. In the other system, cast-iron grids, supported directly on a crushed rock or gravel base, replace the usual concrete base, and asphalt mastic is placed directly on this cast-iron foundation.

Surfacing blocks of cast-iron are of various kinds, one type being twelve inches square, and another being in the form of an equilateral triangle ten inches on a side.

“Vanishing American” Not Vanishing, Science Finds

(Continued from page 17)

transition was a slow one, and various tribes had varying degrees of success at it.

The records of the United States Government show that in 1865 there were 294,574 Indians on reservations. In 1891, the number had dropped to 246,834, but, after that low point, the Indian staged a rally which brought his total population up to 320,454 in 1933. The total number of Indians in the United States and Canada to-day is 443,365, or more than half the number estimated to have roamed the Continent before the coming of the white man.

The rate at which the various tribes are coming back is not uniform. For example, the Dakota-Sioux now seem to be more numerous than ever before. In 1780, according to estimates, they numbered 25,000; at present, there are almost 36,000. The Navaho provide another example. In 1869, they were estimated at 9,000; at present, there are more than 22,000 of them.

Of course, all individuals listed to-day as Indians are not pure-bloods. Virtually all mixed-bloods are listed as Indians and enjoy full tribal rights. The United States Indian Service counts about 40 per cent. of the present population as being of mixed blood.

being nearly \$3.50 a yard. The cost of a brick pavement is about \$2.50 a square yard, but the difference is more than made up, in the opinion of some engineers, by the greater length of life of the iron pavement.

Mr. Davis reported that iron surfacing of various types also was in wide use on the Continent, especially in France and Germany. In fact, the French Government has devoted considerable study to a proposal for building a cast-iron road 500 miles long, from Paris to Marseilles.

“Counting” Bacteria

A new method of learning the number of bacteria or microscopic cells in a solution, “counting” them with the aid of a photoelectric cell, recently was described in *Science* by Andrew Moldavan, of Montreal.

A glass tube is drawn out until the opening in it is very small; so tiny that only a single cell can pass through at a time. The tube then is placed in the brightly illuminated field of a microscope, and the solution forced through it. A photoelectric cell placed at the eyepiece of the instrument registers the difference in the light when the opaque or stained cell passes by. In this way a bacteriologist can count some kinds of bacteria and other objects, as blood cells, as a ranchman counts his cattle passing through a chute.

ith a Type of broad

s are about two lowed out on the e weight, which tely twenty-five f paved surface.



studded with a, similar to that of non-skid auto-ordinarily are laid layer of concrete of asphalt mastic. approximately \$5 a he iron block alone

Science Snap-shots

A pneumatic tired milk-wagon, drawn by a horse with rubber shoes, recently tried out in New York City by a large milk company, proved so quiet it was necessary to equip the vehicle with a horn to avoid traffic accidents.

The horn chosen simulates the “Moo-o-o-o” of a cow.

\* \* \* \*

Moscow, rapidly becoming one of the most modern cities in the world, may have its first subway-line ready to open by November 7, anniversary of the Revolution, according to *The Transit Journal*. The first line will be about three miles long. Ultimately, six routes, serving the entire city, will be opened.

\* \* \* \*

Southern Newsprint paper from slash-pine, expected soon to be produced on a commercial scale, is only one of several onslaughts directed against the Northern newsprint industry. Experiments now are being made for Australian interests to develop a method of making such paper from Tasmanian eucalyptus trees, to supply the Australian trade.

\* \* \* \*

The earth is approximately 1,725,000,000 years old, according to computations just completed by Austrian physicists, from the radioactivity of old Canadian rocks. According to *Science Service*, the intricate weighing and computation went on uninterruptedly in strife-torn Vienna while troops roamed the streets outside the laboratory.

\* \* \* \*

“Element No. 93” may not have been discovered after all. Dr. O. Koblic, who thought he had extracted it from Czechoslovakian pitchblende, has withdrawn his claim, having learned that he had isolated a form of tungsten.

The identification of an element made artificially by bombardment by the Italian scientist, Prof. Enrico Fermi also has been put in doubt. Professor Fermi at first thought it was Element No. 93. The heaviest natural element is uranium, No. 92.

\* \* \* \*

The thermocouple, delicate instrument for measuring differences in temperature which hitherto has been most useful in determining the surface temperatures of the moon and planets, now has been used successfully in studying the formation of rocks below the surface by J. N. A. van den Bouwhuijsen, consulting geologist. The formations are revealed because some rock structures conduct heat faster than others, causing minute differences in temperature at the surface.

VII. POPULATION AND STATISTICS. A.

(481)

Schoolcraft, Indian Tribes

Vol. 1, 1851

## VII. POPULATION AND STATISTICS.

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THE aboriginal population of America was over-rated from the beginning; and the same spirit of exaggeration which actuated the early discoverers, has continued to throw its influence over every period of our history. It is not probable that, at the opening of the sixteenth century, or any other period which may be selected, the number of souls upon the Indian territory, bore any very considerable ratio to the number of square miles of country which they occupied in the shape of villages, or hunting grounds. The hunter state requires, indeed, that immense districts of forest should be left in the wilderness condition, that its objects may be properly accomplished. From some data that have been employed, it is doubtful whether an area of less than fifty thousand acres, left in the forest state, is more than sufficient to sustain by the chase a single hunter.

Most of the tribes living in districts where game abounded, relied almost exclusively upon that resource for a subsistence. The zea maize was cultivated in all the southern and middle latitudes of the territory of the United States, not as furnishing the staple of life, but as a mere subsidiary means of subsistence. This can be said of the ancient Floridians, amongst whom De Soto marched, and will hold good, if the remark be applied to the Muskogees, the Choctaws and Chickasaws, and the Cherokees, of the earlier periods of our history.

The common deer was found to inhabit all the latitudes from the Gulf of Mexico to the shores of the Great Lakes. The black bear extended its ranges to an equal extent. The elk (*C. Canadensis*) was an inhabitant of the North Atlantic forests, and was found by the hunter west of the Alleghanies, and as far south as the forests of Louisiana and the prairies of Texas.

The moose (*C. Alces*) was killed in Pennsylvania, and characterized the forests of New England and the entire range of the Lake States. To these animals, which furnished the common viands of an Indian's lodge, were added, for all the region west

1781, 1. 157

1781, 1. 157

of the Alleghanies, the bison of the west, (*Bos Americanus*), the prominent object and glory of the chase for the tribes of these latitudes. For these prime objects of prey, the Indian disputed with the wolf, the northern cougar, or panther, and the northern hyena.

If, with the ample means and sparse population of the continent, the Indian had devoted himself to the arts of peace, the aboriginal population would undoubtedly have far transcended any modern estimates that have been submitted. But the reverse was singularly true; and, while he maintained an active war on the native quadrupeds, this struggle was but secondary compared to his incessant, blood-thirsty, and perfidious war against his own species. Every element of tribal discord was there in active operation, long before the continent was discovered; and it is inferable that the population barely sustained itself, but did not advance, for centuries.

The Iroquois, who appear to have perceived this cause of depopulation, and adopted the principles of a confederacy, reaped the highest advantages from it, and, in a comparatively few years, extended the terror of their name from New York and New England, throughout all New France, quite to the shores of the Gulf of Mexico.

The discovery of America, and the planting of the colonies, put a new phasis on all this. By the introduction of fire-arms, and by creating a market for furs, the real objects of the chase were entirely changed. Hunting was altered from a manly pastime to a money-making pursuit. The beaver, otter, mink, musk-rat, and other small animals, which had before-time been sufficient for their food and clothing, acquired a sudden value, and the Indian's appetites were stimulated by every possible inducement of foreign production, to exert all his powers in the chase. The consequence was, that large tracts of land were soon exhausted, and remote forests invaded. The countries in which game failed became of little use to them, and were easily parted with for the means of gratifying their newly-awakened passions, and they retired farther into the wilderness. The Anglo-Saxon trod closely on their heels, following with the plough the circle before gleaned with the rifle, the gun, and the trap.

Amongst the inducements furnished the Indian, to urge him on in the chase of the furred animals, nothing has been so deleterious as the introduction of distilled spirits. A taste for this was soon created, and it has spread far and wide. Years have only confirmed the general habit. It has paralyzed his powers as a hunter, and done more than all other causes put together, to produce depopulation.

Another cause, which has but recently been demonstrated, though long suspected, is the payment of cash annuities to tribes per capita, or otherwise. The necessary result of the sale of their lands, of which the quantity held becomes excessive in their hands, by the failure of the chase upon them, is the accumulation of large sums, which it is customary, in general, to pay in the form of annuities. This custom is universal, it is believed, in our intercourse with the non-industrial or hunter tribes.

Reference to the following tables of statistics denotes that the hunter tribes, who rely, largely, on these cash annuities, become careless in their ordinary pursuit of the chase. The temptation to idleness is too strong for resistance in the Indian mind. While the use of the trap is neglected, debt is incurred for the means of clothing and subsistence. It is not to be expected that the ordinary principles of commerce will be intermitted in the intercourse of our frontier citizens with those moneyed tribes. Credit will follow, as in ordinary cases, the known means and disposition of payment.

The Indian is a man who, whatever may be his idiosyncracies, is prompt to acknowledge his obligations to discharge his debts, tribal and personal, and who is ever ready, when his means will permit it, to cancel them: *this* is characteristic of the moral sense of the tribes. No man, who has had opportunities of frequent observation of their character and customs, will, it is apprehended, deny this noble trait of tribal honesty and fair dealing. The history of our Indian treaties is a standing commentary upon its truth, in every age of our republic.

That these hunter tribes should not perceive that the annual distribution of the principal of their funds, instead of the interest of it alone, is certain, in all the cases of limited annuities, to deprive them, in a few years, of every agricultural and educational means of improvement, should not excite surprise. They have not yet reached a point of civilization from which they can, calmly and truly, estimate their position. They are, at the same time, urged to continue the system by considerations of self-gratification, which it is not easy for them to resist.

It will be further perceived, that those tribes whom we are to regard, if not in the mass, yet in their chieftaincies, governments, and leading men, as semi-civilized, have developed better fiscal abilities, while, in many instances, the principles of investment and funding, adopted by them, are replete with the best axioms of political economy.

While the hunter and barbarous tribes thus persist in a policy which must be fatal to their financial prosperity, it is a question of moment, whether the ready means thus supplied to them of self-indulgence, in the use of distilled spirits, is not hurrying them onward in a career that must end in their moral wreck. It is seen, from the inquiries that have been thus far made, that small tribes, who, but a few years ago, were prosperous, and had kept up, if not increased, from the era of 1814, in their numbers, have, under the influence of high cash annuities, and unlimited credit, been hurried on in the triple career of intemperance, depopulation, and moral degradation. Such, indeed, is their fearful progress in this course, that a few years must result in the entire extinction of some well-known tribes. Nations who were, but a few years back, fearful in their native strength, under the banners of a Tecumseh, a Little Turtle, and a Black Hawk, have fallen under influences more fatal to them than the rifle, the sword, and the camp-fever. If the Miamies, portions of the Sauks and Foxes, and the Winnebagoes, could be persuaded of the hasty and downward steps

which they are making in this descending moral scale, it is believed that they would pause in their alarming course of depopulation, and revert to a healthier policy.

The statistics which are presented have been wrung from the tribes. Conscious, themselves, of a paucity in their industrial means, and of a disregard of the soundest maxims of civilized life, they have resisted, if they have not often misunderstood, the humane policy which dictated the investigation. Instead of thereby seeking to acquire means of laying a tax on their property — an idea preposterous in itself, as none but citizens can, under the constitution, be taxed, the inquiry merely contemplated the acquisition of information which might show their condition, and would be of incalculable value to Congress, in more perfectly adapting its laws to it. I have, in a preceding place, adverted to the difficulties in the way of prosecuting the statistical inquiries among the tribes; but no obstacle is of sufficient weight to deter from the effort; nor can there be a reasonable doubt of ultimate and complete success.

The field of investigation has been enlarged by our recent acquisitions of territory on our southern and western boundaries, of the Indian tribes of which, we are comparatively uninformed. But this adds another reason to those previously existing, to sanction the original plan of the census and statistics. Whatever system may be adopted in relation to the cash-annuities paid to the hunter tribes, it is desirable that they should be prevented from dissipating their funds on objects not essential to their advance in agriculture, arts, education, morals, and christianity.

The progress which has been made in the aboriginal census and statistics, will be seen by referring to the subjoined tables, in which the facts have been carefully digested. These returns relate exclusively to tribes living east of the Rocky Mountains. Respecting the extreme western tribes situated within the chartered limits of Oregon, the latest official dates received denote fifty-nine tribes, and fragments of tribes, bearing specific names; of which number thirty-four tribes live south, and twenty-five tribes north of the Columbia River. (See Tables, No. 4.) The entire Indian population of this territory is now estimated at 22,033, where Lewis and Clark in 1806 reported 80,000. A great number of dialects are spoken. The constant tendency of the savage and hunter state, as observed in the west, is to make dialects, and to generate petty independencies. Even the Cherokees, Choctaws, and other semi-civilized tribes, resist confederation. Change of accent, and peculiarities of intonation, are perpetual and rapid causes of mutations in their languages.

Mr. Hale, the ethnographer of the United States Exploring Expedition, reports four divisions of Indian population by geographical boundaries, spreading along the Pacific coast, between California and the peninsula of Alasca, in north latitude 60°. They are as follows:—

1. North-west division.—Latitude 52° 2', to Charlotte's Sound and Alasca, 60°.
2. North Oregon division.—All north of the Columbia to latitude 52°, except Prince of Wales Island, and three or four south.

3. South Oregon division.—Sa-aptins, Walla-wallas, &c.

4. California division.—Darker shade — inferior physical type.

These divisions are not established physiologically: the era being prior to the settlement of the Oregon question, also renders the divisions imprecise for civil purposes. Division number one is wholly without the limits of the United States. Of division number two, extending north of the Columbia to latitude fifty-two degrees, three degrees of the coast have been assigned to British Oregon, or New Caledonia.

By dividing the American territory into North and South Oregon, by the line of the Columbia, as it has been done by Governor Lane, the results of whose reports are given in the statistical tables herewith, the tribes are now accurately designated, agreeably to our civil limits, as above expressed. (See Tables No. 5.)

In order to group the Oregon Indians agreeably to languages, our information is inadequate. Mr. Hale subdivides the leading coast divisions into thirteen sections; of which the thirteenth section, being the Blackfeet, or Satsika, comprises tribes who dwell wholly eastward of the Rocky Mountains, and are not, in any sense, properly considered as Oregon Indians. This section is redivided into Satsika, Blood Indians, Piekans, and Atsinas, or Fall Indians, who, speaking one generic language, (the Atsina-Algonquin,) constitute the chief known local divisions of the people. They dwell on the Saskatchewan, of the Great Lake Winnipeg, of Hudson's Bay, and on the Upper Missouri, and its higher north-eastern tributaries. They are found by their vocabulary, according to Mr. Mackenzie, to speak a dialect, much altered, of the Algonquin. It is certain that important portions of this tribe hunt the plains south of latitude 49°, and are therefore within the United States.

The Shoshonees who occupy the upper waters of the Lewis or Snake River, spread throughout the Great Salt Lake Basin, and cross the mountains south into Texas.

The Unikwa, the Contamis, or Flat-Bows, and the Salish families, (sections 1, 2, 3, of Mr. Hale,) are located wholly (or with the exception of g, h, j, k, l, of the latter) north of the boundaries of Oregon. Abstracting these families from the sections enumerated, we have pretty fully eight sections of tribes or families, estimated by him; or, agreeably to the late official statements of Governor Lane, fifty-nine local tribes, numbering 22,000 souls, as the subject of our future investigations in Oregon.



## Population

Pinto: C. A. Bateman in Ref. Corner.  
2d. affrs. for 1874, 281, 1874.

See also Powell & Gools Ref. in Ref. Corner.  
for 1873, 41 + 1874.

## Population

Western Shoshone

about 4000 in 1876 - Levi A. Sheen (agst)  
Ref. Corner: 2d affrs. for 1876, 117<sup>118</sup>, 1876

Population Colorado River Tribes  
in 1876. - Rept. Comm. Ind Affs.  
for 1876, 206, 1876.

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Mojaves at agency	820
Mojaves not at "	700
Chimehuevas	320
Hualapai	620
Yumas	930
Cocopahs	180
Coahuillas	150
	<hr/>
	3,720

Population in 1865:

Charles Maltby in Rept. Comm. Ind. Affrs.  
for 1865, 116, 1885, estimates Indian  
population of California at 30,000.

In 1853 to Comm.  
Ind. Affrs. estimated  
to Indian population of  
Calif at 100,000. —  
House Doc. 1, 33<sup>d</sup> Cong.  
1<sup>st</sup> sess. 243, 1853.

Weather

Pathological conditions do not persist and

T

Indian Population of U.S.

Report of John Eaton in Rept. Comm. Ind. Affs. for 1877, 487-520. 1877, entitled: are the Indians dying out?

California Indians: <sup>Abid</sup> 500-501.

Population Klamath [Lake] Agency in 1877

Klamath Indians	-	-	667	-	667
Mados	-	-	<del>93</del>	-	93
Snakes (Walpalla [=Walpappe] & Yahooskin)					137
Margin for missing	-	-	-	-	10
Employees & families	-	-	-	-	26
					<u>933</u>

Population      Non-Reservation Indians of Calif.  
Statement from Census for 1880 in Rept. Com. Ind. Affs. for  
1880, p. 8, 1880.

~~Wittels~~ that "of our 10,000 Indians in  
Yuba, Placer, Nevada, & Sierra counties in  
1849, not more than about 3,800  
remained in 1854." (Ibid, III, 917.)

California Indian Reservations in early days.

Hittell says that in nearly every case the Indians had to be driven to the reservations by force, & that "not infrequently only a remnant was left by the time the reservation was reached". (Hist. Calif. 3, 917.)

Epidemics & for reaching effect

Massacres { Humboldt Bay in 1860 (III, 920)  
Clear Lake  
Feather River (III, 892)  
San Joaquin  
✓

## Population

Stephen Powers, Overland Monthly IX: 306-307, Oct. 1872.

Original population of Rand Val. est. at 5000 to 20,000.

Population along Salmon streams 270,000

Total aboriginal population of California 1,520,000!

Indian Population:

Colusa 1000

Bidwell

1849

Round Valley

5 - 20 ~~th~~

Van Duzer

1000

1850

Lower Klamath (40 miles)

2700

1870

(houses)



Shuman Bull  
June 16, 1918

Statistics compiled show that there were 336,243 Indians in the United States June 30, 1918. The greatest number in any one state is 119,175 in Oklahoma; the least is five, in Delaware. Montana is listed as having 12,079 Indians. More than 8,000 Indians have taken their part in active service in the army and navy during the war. This is about twenty-four per cent of the number of Indians of military eligibility. The subscriptions of the Indians to the first three Liberty Loans amounted to approximately \$15,000,000, which is about \$50 for each man, woman and child of Indian blood. The Indians of the country joined in the country Red Cross work actively with a membership of 10,000 and furnished hospital garment and miscellaneous supplies totaling 100,000.

INDIAN POPULATION OF THE UNITED STATES, JUNE 30, 1923.

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TOTAL .....344,303.

Alabama:

Not under agent, 405

Arizona:

Camp Verde Agency:	
Mojave Apache,	496
Colorado River Agency:	
Mojave Chemehuevi,	1,130
Fort Apache Agency:	
White Mountain Apache,	2,590
Havasupai Agency:	
Havasupai,	184
Hopi Agency:	
Hopi,	2,336
Navajo,	2,500
Kaibab Agency:	
Kaibab Paiute,	198
Leupp Agency:	
Navajo,	980
Navajo Agency:	
Navajo,	11,280
Pima Agency:	
Maricopa (Gila River),	267
Pima,	4,629
Papago,	1,104
Salt River Agency:	
Maricopa,	127
Mojave Apache,	212
Pima,	963
San Carlos Agency:	
Apache and Mojave,	2,518
Sells Agency:	
Papago,	4,568
Truxton Canon Agency:	
Walapai,	440
Western Navajo Agency:	
Hopi,	307
Navajo,	5,989
Paiute,	197
	<hr/>
	43,015

Recd. Dec. 12, 1923.

Arkansas:

Not under agent,

106

California:

Bishop Agency:

Moache, 107  
Paiute, 1,268  
Shoshoni, 103

Fort Bidwell Agency:

Digger, 5  
Paiute, 211  
Pit River, 386

Fort Yuma Agency:

Cocopah, 27  
Yuma, 826  
Paiute, 2  
Mojave, 2

Greenville Agency:

Redding district (various tribes), 729  
2,248

Hoopa Valley Agency:

Bear River, Crescent City,  
Eel River, Hupa, Klamath  
River, Smith River, Blue Lake, 1,913

Mission Agency:

Mission Indians and remnants  
of other small bands in southern  
California, 2,807

Round Valley Agency:

Concow, Ukie, etc. 2,017

Tule River Agency:

684 13,335

Colorado:

Consolidated Ute Agency:

Southern Ute, 344  
Ute Mountain, 437 781

Connecticut:

Not under agent,

159

Delaware:

Not under agent.

2

District of Columbia:

Not under agent,

37

Florida:

Seminole Agency:  
Seminole, 461

Georgia:

Not under agent, 125

Idaho:

Coeur d'Alene Agency:  
Coeur d'Alene, 601  
Kalispell, 78  
Kootenai, 129  
Fort Hall Agency:  
Bannock, Shoshoni, and Skull Valley, 1,761  
Fort Lapwai Agency:  
Nez Perce, 1,415 3,984

Illinois:

Not under agent, 194

Indiana:

Not under agent, 125

Iowa:

Sac and Fox Sanatorium, 354

Kansas:

Potawatomi Agency:  
Iowa, 338  
Kickapoo, 277  
Potawatomi, 803  
Sac and Fox, 93 1,511

Kentucky:

Not under agent, 57

Louisiana:

Not under agent, 1,066

Maine:

Not under agent, 839

Maryland:

Not under agent, 32

Massachusetts:

Not under agent,

550

Michigan:

Mackinac Agency:

L'Anse, Vieux Desert, and  
Ontonagon Bands of Chippewa,

1,214

Not under agent:

Scattered Chippewa, Ottawa,  
Potawatomi, and others,

6,417

7,631

Minnesota:

Consolidated Chippewa Agency:

Fond du Lac,

1,269

Grand Portage,

356

Nett Lake,

602

Leach Lake,

1,856

White Earth,

7,635

Pipestone Agency,

303

Red Lake Agency,

1,633

13,654

Mississippi:

Choctaw Agency,

1,439

Missouri:

Not under agent,

171

Montana:

Blackfeet Agency:

Blackfeet,

3,124

Crow Agency:

Crow,

1,777

Flathead Agency:

Flathead,

2,650

Fort Belknap Agency:

Assiniboine,

591

Crosventre,

586

Fort Peck Agency:

Assiniboine,

809

Yankton Sioux,

1,375

Rocky Boy Agency:

Rocky Boy Band,

479

Tongue River Agency:

Northern Cheyenne,

1,417

12,808

Nebraska:

Omaha Agency:

Omaha,

1,441

Winnebago Agency:

Winnebago,

1,096

2,537

Nevada:

Fallon Agency,	367	
Fort McDermitt:		
Paiute,	314	
Moapa River Agency:		
Paiute,	124	
Reno Agency:		
Scattered bands,	8,813	
Walker River Agency:		
Paiute and Washo,	851	
Western Shoshone Agency:		
Hopi, Paiute, Shoshoni, and		
Shoshoni Paiute,	<u>675</u>	11,144

New Hampshire:

Not under agent,		44
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New Jersey:

Not under agent,		99
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New Mexico:

Jicarilla Agency:		
Jicarilla Apache,	608	
Mescalero Agency:		
Mescalero Apache,	642	
Northern Pueblo Agency,	3,154	
Pueblo Bonito Agency:		
Navajo,	2,800	
San Juan Agency:		
Navajo,	7,000	
Southern Pueblo Agency;	5,361	
Zuni Agency:		
Pueblo,	<u>1,911</u>	21,476

New York:

New York Agency:		
Cayuga,	187	
Montauk,	30	
Oneida,	245	
Onondaga,	565	
Poospatuck,	20	
Seneca (Allegany),	971	
Seneca (Cattaraugus),	1,393	
Seneca (Tonawanda),	539	
St. Regis (not part of Six		
Nations),	1,613	
Tuscarora,	376	
Shinnecock,	<u>200</u>	6,139

North Carolina:

Cherokee Agency:		
Eastern Cherokee,	2,515	
Not under agent,	<u>9,368</u>	11,883

North Dakota:

Fort Berthold Agency:		
Arikara,	426	
Grosventre,	547	
Mandan,	273	
Fort Totten Agency:		
Sisseton, Wahpeton, and		
Cuthead Sioux (known as		
Devils Lake Sioux),	938	
Standing Rock Agency:		
Sioux,	3,588	
Turtle Mountain Agency:		
Chippewa,	<u>3,635</u>	9,607

Ohio:

Not under agent,		152
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Oklahoma:

Cantonment Agency:		
Arapaho,	216	
Cheyenne,	508	
Cheyenne and Arapaho Agency:		
Arapaho,	480	
Cheyenne,	717	
Kiowa Agency:		
Apache,	187	
Comanche,	1,697	
Kiowa,	1,679	
Wichita and affiliated tribes,	1,201	
Apache (Geronimo's band),	85	
Osage Agency:		
Osage,	2,099	
Pawnee Agency:		
Pawnee,	773	
Kaw,	420	
Ponca Agency:		
Ponca,	721	
Ojce,	598	
Tonkawa,	62	
Seger Agency:		
Arapaho,	137	
Cheyenne,	606	
Quapaw Agency:		
Eastern Shawnee,	166	
Modoc,	40	

Oklahoma (continued):

Quapaw Agency (continued):

Ottawa,	274	
Quapaw,	347	
Seneca,	526	
Wyandotte,	502	

Shawnee Agency:

Absentee Shawnee,	551	
Citizen Potawatomi,	2,227	
Mexican Kickapoo,	200	
Sac and Fox,	673	
Iowa,	82	

\*Five Civilized Tribes:

Cherokee Nation:

By blood,	36,432	
By intermarriage,	286	
Delawares,	187	
Freedmen,	4,919	

Chickasaw Nation:

By blood,	5,659	
By intermarriage,	645	
Freedmen,	4,662	

Choctaw Nation:

By blood,	17,488	
By intermarriage,	1,651	
Mississippi Choctaw,	1,660	
Freedmen,	6,029	

Creek Nation:

By blood,	11,952	
Freedmen,	6,809	

Seminole Nation:

By blood,	2,141	
Freedmen,	986	

119,280

Oregon:

Klamath Agency:

Klamath, Modoc, Paiute (Pit River),	1,201	
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Siletz Agency:

Confederated Siletz,	440	
Grande Ronde,	332	
Fourth Section allottees,	368	

Umatilla Agency:

Cayuse,	337	
Umatilla,	145	
Walla Walla,	628	
Other tribes,	17	

Warm Springs Agency:

Wasco, Tenino, Paiute, and others,	1,094	
Scattered Indians on public domain,	2,200	

6,762

\* Five Tribes population taken from 1920 Indian Office Report.



Pennsylvania:

Not under agent,

358

Rhode Island:

Not under agent,

106

South Carolina:

Not under agent,

Catawba, Cherokee, Oneida, and others,

304

South Dakota:

Cheyenne River Agency:

Blackfeet, Miniconjou, Sans Arc, and  
Two Kettle Sioux,

2,904

Crow Creek Agency:

Lower Yanktonai Sioux,

928

Flandreau Agency:

Flandreau Sioux,

297

Lower Brule Agency:

Lower Brule Sioux,

539

Pine Ridge Agency:

Oglala Sioux,

7,455

Rosebud Agency:

Rosebud Sioux,

5,572

Sisseton Agency:

Sisseton and Wahpeton Sioux,

2,392

Yankton Agency:

Yankton Sioux,

1,954

Santee Sioux,

1,212

Ponca,

372

23,625

Tennessee:

Not under agent,

56

Texas:

Not under agent,

22,110

Utah:

Goshute Agency:

Goshute, Cedar City, Indian Peak,  
Kanosh, Koosarum, Warm Creek,  
Washakie,

349

102

Shivwitz,

Uintah and Ouray Agency:

468

Uintah Ute,

421

Uncompahgre Ute,

252

White River Ute,

1,592

Vermont:

Not under agent,

24

Virginia:

Not under agent,

822

Washington:

Colville Agency:

Confederated Colville,

2,515

Neah Bay Agency:

Hoh,

41

Makah,

418

Ozette,

7

Quileute,

195

Spokane Agency:

Chewelah,

6

Spokane,

669

Taholah Agency:

Chehalis,

89

Nisqually,

72

Skokomish,

187

Squaxon Island,

57

Quinalt Reservation,

719

Unattached:

Cowlitz,

490

Clallam,

535

Fuyallup,

152

Other tribes,

298

Tulalip Agency:

Iummi,

505

Port Madison (Susquanish),

204

Swinomish,

221

Tulalip (remnants of many tribes  
and bands),

404

Muckleshoot,

183

Yakima Agency:

Confederated Yakima,

2,939

10,906

West Virginia:

Not under agent,

7

Wisconsin:

Grand Rapids Agency:

Winnebago,

1,292

Hayward School:

Chippewa,

1,309

Keshena Agency:

Menominee,

1,838

Wisconsin (continued):

Koshena Agency (continued):

Oneida,	2,657	
Stockbridge and Munsee,	606	
Lac du Flambeau Agency:		
Chippewa,	825	
Laona Agency:		
Potawatomi,	390	
LaPointe Agency:		
Chippewa at Bad River,	1,116	
Red Cliff School:		
Chippewa,	<u>559</u>	10,592

Wyoming:

Shoshone Agency:

Arapaho,	921	
Shoshoni,	<u>916</u>	1,837

Ranherias

C. Hart Merriam  
Papers  
BANC MSS  
80/18 c

[Patwin]

KO-ROO RANCHERIAS

Too-too . . . W side 2 m above Princeton

Ket-te de-he . . . Princeton

Chah-met-ko . . .  $1\frac{1}{2}$  m E of Princeton

Chah de-he . . .  $1\frac{1}{2}$  m S of Princeton

Wi-ter-re . . . 5 m below Princeton and 9 m above Colusa

Si-e . . . W side between Kahchil and Witterre

Kah-chil . . . W side 6 m above Colusa

Saw-mah . . . W side south Hamilton Bend

Si-ko-pe . . . E side S of Hamilton Bend

Taht-nah . . . W side 3 m N of Colusa

Til-til . . . W side above Colusa near Taht-nah

Kow-pek . . . Opposite Colusa (Green)

Ko-roo . . . Colusa

Dok-dok . . . Just below Colusa

Koo-koo'e . . . E side nearly opposite Colusa. Next below Dok-dok (Green)

No-pah . . . E side at Meridian

Kah-pi'-ah . . . W side at Sycamore

? Kopte . . . "near Marysville Buttes"--Bidwell

Patwin 2 m N of Williams Slough on E side {Got from Peter Wilson  
a fullblood Patwin}

1) Ka-sim-po 6 m to Grimes - on Sac E side same language as Grimes  
around E to near Yula - apparently Sahip in Sutter Basin  
taken down to Knights Ldg.

2) No-we'kla-ah - Williams slough

3) Hol'-lup-pi - E side abt 3 m below Williams slough + 5 below Ka-sim-po -

4) Ko'-pah-de-he - E side 3-4 m below Hol'-lup-pi

✓ Wahr'-ser-rah <sup>was</sup> tribe below Knights Ldg. (= Posewin)

✓ Yo'-doi Kcha w side Sac <sup>River</sup> right at Knights Ldg. {not same as}

✓ Lok-lok'-mah <sup>ditto</sup> just 1/4 m below Grimes w side. de-he = home

✓ Sah'-kah W side - abt 1 1/2 below Grimes w side.

✓ Yal'-le-de-he E side opposite Sah'-kah [near "leaving home"]

✓ No'-de-he just 1/4 m N of Sah'-kah (W side)

✓ Tow'-oot-de-he - w of Knights Ldg near or at Yo'-lo [Posewin]

✓ Pa'-lah w side <sup>way</sup> below Grimes (15-16 m) at Howells Ldg.

✓ Chah'-kah de-he - w side 2 1/2 m above Pa'-lah {Howells Ldg.}

flood land Sutter Basin to tribe E. (Posewin)

Justus H. Rogers in his Colusa  
County History in a chronological  
record of events under date of  
Oct. 23, 1872 says:

"Indians from Clear Lake, Eel  
River, Shasta and Cortinez<sup>[Cortina]</sup> Valley  
gather at Hyde's rancheria, an  
Indian settlement on the river  
4 miles above Colusa, to indulge  
[in] dances and 'sweat-house'  
ceremonies generally."--J.H.

Rogers, Colusa County, Its History  
and Resources, p. 131, 1891.

Goroy.. Rancheria on Sacramento River near a hill & alameda; 1000 inhab. in 1821 (Arguello)  
Guritoy (Guitistoy).. Rancheria on Sacramento River near an alameda of large oaks stretching  
with a lesser: 1000 inhab. in 1821 (Arguello)

Hutulrabe.. Rancheria in Sacramento Valley visited by Arguello in 1821.

Boat ~~Arguello~~  
Oct 1821

San Raf

Carquines Rv

Ukulatas & canucaynes  
afford (visit)

Oct 22

To Suisun

23. Marched 8-3 (= 7 hrs)

to Reba Ukulatas

Oct 6 P. after steep climb - almost  
not over 2 hrs march

reached Reba Libaytos on  
Riv named for Pedro [Lutaher]

24. 4-5 hrs reached Ehita  
on river (900 people) Chichu cr.

25 3 hrs to Goroy

identified by boat as Sac River  
delta N. of Suisun. (1000+)

26 - To Guritoy (1600+)

incl 3 ranches in Antelope

27 reached Caha'

28 " " cha (1400+?)

29 passed Tereti, Nutalrabe,  
Dardae, Pachi to Suisun

La prairie  
undisturbed



BANDS OF RANCHERIAS MENTIONED BY ARGUELLO  
IN OCTOBER 1821

Overland Journey from Strait of Carquinas  
Northerly to Cheno (on south side of mouth  
of Stony Creek) and Return via Coast Ranges  
to San Rafael.

Pulpunes

Ululatos 18-20 m N of Suisun plain

Canucaymos

Poza de San Blas

Suisun

Gualactos

Libaytos E of Winters [Li, wai + Li bayto Expedt]  
winters

Ehita 15 N of Libaytos

Goroy Sacra Riv 12-15 N of Ehita, Big - 1000 people + stockaded.

Guiritoy { 1600+ people  
25-30 N or NW of Goroy (3 rchs) on W bank Sacra Riv

Capá 8-10 from Guiraton

(Kah pah' ?)

✓ Corú - site of Caluca (large)

Cha 15. N of Cafay [Boggs Road] Chah'de.ka (Maxwell sht.)

Teroti

Hutulrabe [hūlū pūlū lake 3m N woodland]  
[Chū-rūp Lake Yolo

Dacdac Bet. Caluca & Sunus

Pachi

✓ Sunus Parrot Ldg. (N of Jacinto) [Soo-noos]

✓ Cheno Near Munroe Rd., mouth Stony Cr. ✓ [Tsen'no]

Llali at "ft. Sierra Madre" [Lilá'dehe ??]  
Cautin bal

Tuyaja apparently 10-12 west of Llali.

Lonita

Gapetely

{ [Pah kah lulu - fr Little Stony & Ld. Crs]  
[Kaipetel - on Stony Cr N of Stony Road]

Poquetoe

Benenuc

[Sta. Chatalina val - not rcha.]

[Na. Sa. del Carmen val - not rcha]

Chugelempa

[Maltrato *mt*]

[Arroyo de Sal si Pudes]

Chuguelempa

Caguillome

Satumtutillami

Gualactole

Guiaguillomi

Catalillomi

Oleyomi [maybe Freestone] [Pentah or no Buena]

Chiyasayucume

El Espinazo del Diablo

Magma

Buena Esperanza

San Ygnacio

Libantiliyami [NE Sebastopol - from near Mt. San "Russian Besidia"]

Buen Retiro Mt.

San Jorge (spring)

Olompali "6 league from San Rafael" [actual distance 17 miles]

Hock Rancheria

"20 mud ovens" + about 300 inhabitants

Description of people + village + acorn caches +

Gen. H. Derby, 31<sup>st</sup> Cong. 1<sup>st</sup> Sess. Length Doc. 47,

p. 9, June 1850

---

Much on Sacramento River Indians in  
same report -

Cite

Aguas Calientes - Gakoojin

At the Agua Calientes, was a  
very populous rancharia called  
Gakoojin Id. May 11-1860.

Bancroft, Nat. Races

---

See also article on ~~Wacame~~ Ranch Indians  
by Miss DuBois

---

Ranchos (Spanish)

C. Hart Merriam  
Papers  
BANC MSS  
80/18 c

Santa Barbara Ranchos - IV

Camulus 4 1843 642

Cieneguilla 1845

Cuyama 5 1843

Perisima, Nojoqui 3 '43 643

Santa Ines<sup>s</sup> or Cañada de las Pinos 6 '44  
or Collipe Ranchos

Santa Paula 4 '43

Semi or S Juan de Grecia '42

Temiscal 3 43

Tequepis 2 45

Cayucos 655

Cholam 6

Moro y Cayucos 2 1842

Ojitos 2 1842

Paicines 2 1842

Sayanti - A. G. (655)  
656



~~Pancho~~ **IV**  
Ranchos (contd)

672

Nemshas 4 1844

Olampali (marin) 2 1843

Omochumne (Sac) 5 44 (<sup>Grain</sup> ~~Shilo~~)

Orestimba (Tualuma) 6 '44 [672 + 874]

Pitaluma 15 '43-44

Pogolomi (cañada marin) 2 '44

Posolomi + Pozito (Sto Clara) 44

Proquelomine Ind. 4 1844

Sucayac

---

Tulucay (Nepa) ↑ 2 1841  
(Cayetano Suarez)

674

Rancho - Rancho IV 674

Solano Co. 674

Putas, Potos, Tamales 5 1845

Suisun 4 1842

Soscol 1843

Talena 3 1840

Ulpino <sup>(Solano)</sup> 4 1844 John Bidwell 674

" (contra Costa) 1845

Sonoma Co. 674

Callayami

Cotati

Guense

Huichicho

Jonive

Lac

Laguna

Malacoma

Pitaluma

Seno

Sotoyomi 8 1841

Tzabaco 4 1843

Yulupa 3 1844

Bimcroft IV 673

Santa Clara Co. Roches:

Calzoncillos

Capitancillos

Coches

Pilarcitos

Posolami

Quito

S. Capitanos

Ulistoe [673+674] 1/2 1845

Uvas 3 1842

---

Sancoos (Tehama Co) 5 1844 673

Sanel (Tehama Co) 4 - 1844 "

Seno de Malacomes (Tehama) 4, '43 "

---

Socayac (Tahoe?) 3 1844 674

---

Tache Laguna (Tehama Co) 11 1843 674

Bancroft IV

672

Nicasio

Alamfali

Pogolomi

Pt Reyes

S Antonio

S Gerónimo

S Pedro

Soulañule

Tamalpais

Tinicasia

Tamals

Marin

672

Las Gallinas (Marin) 673

Muñiz

Sanel

Yokaya (Mendocino Co) [672+674] 8-1845

672

Moguelumnes - see Sanjon

Moristal - Malacomes

672

Llajomi

Yocoallomi

Lupyomi

Tulucay

672

Rancho of N Calif - IV.

P. 670

Boga (Butte Co) or Flüggel Rancho 5 ' 44  
670 + 671

Bolsa (Tombes) 670

Bolsas (Humbre) "

Borras (Pastoria) "

Bosquejo (Tehama) .. [670, 674]

Briesgan (Shasta) 5 " 1844 670

671

Esquon

Hancut

Willy [671 + 674] 4 1844

Callayomi (Sonoma) 3 1845

Regolomi [671 + 672]

Cafay 10 1844

Cataculia (Napa) 2 1844 [671 + 672]

Castamayome <sup>or Laguna de los Gentiles</sup> (Sonoma) 8 ' 44

Cochee (Sta Clara) 1/2 1844

Colus (Colusa) 2 1845 y Bidwell

Ulpinos

Cosamnes 1 1844 671

Esquimon (Butte) 5 44

Guemoc (Lake Co) 6 1845

Guesesosi (or Quesesosi)

Huichicha (Sonoma) 2 1841

Jacinto (Calusa) 8 1844

Jimeno " 11 '44

Jorive (Sonoma) 2 '45

Jota (Napa) 1 '43 (young) [671]  
[672]

Llajomi (Napa) 1/2 '41 [671+672]

Locoallome (Napa) 2 '41

Lupyomi (Napa) 14 '44

malacomes or moristal (Sonoma) 2 '43

Calif. Ranches named  
 for Indian tribes or  
 rancherias } from Bancroft  
West, Calif.

[See Vol III, 611 for ranches prior to 1840]

From Vol. IV (See page omitted)

Agua Caliente [Warner Road] 6 leagues granted in 1844. p. 620

Agua Hedionda 3 leagues 1842

Cajon 11 leagues 1845

Cuca 1/2 " 1845 621

Cuyameca 11 " 1845

Guajome 1 " 1845

Laguna 3 " 1844

Pauma 3 1844

Rincon del Diablo 3 1843

San Bernardino 4 1842, 1845

Los Dieguito 2 1845

San Jacinto 4 1842

San Jacinto 3 leagues 1843

(Ranchos 2

Mision Vieja in La Paz

IV, 621

Santa Laabel 4 leagues 1844

"

Santa Margarita + La Flores 1841

"

Temecula 6 1844

"

Valle de Pamo 4 1843

"

Refers to Land Com. records - Hoffman's  
Reports; also, San Diego Index, MS, 119-123

Ranchos Los Angeles dist 1841-45 - Ser III  
Chap XXIII for grants 1831-1840

Cahuenga 6 1845, 1843

634

Jurupa (referred)

635

Muscupiate 12 1843

San Emigdio 4 1842

San Pascual 3 1/2 1843

Tejon 2 1/2 1843

Torobuco 5 - 1841

Yucaipa (referred) 1841



Miami to

Soulajule 20 1844

---

Yolo to

Quesesosi

Ranchos San Diego Dist. 1846  
Manuscript HC V. 619

---

Monserate 32 1846 619

Otay 2 "

Pala

Palomar

Potrero <sup>de</sup> (San Jacinto)

San Felipe (de Valle)

Solwante (de San Jacinto)

---

Ranchos Los Angeles Dist. 627

Cahuenga 42 1846 "

---

Cuyama 11 leagues 1846 632

Soleta 1 " "

Sta Inez Miss. " "

---

Laguna de Tache 112 1846 637

---

Calaveras 8 1846 665

---

Bessant NE V

669

---

Chimiles (Nefa) 4l 1846 669

---

Perreyessa

---

Rincon de Musulacon 2 1846 669

---

Yucuy (Lake) 8 " "

Baulines 2 " 670

---

Buacocho 2½ "

---

---

San Joaquin + Sac. Valley Ranches 1846

---

Cafay (Cañada) 9 1846 675

Moquelamo (Colones) 11l. 1846

## CHINO PIÑA'S RANCHO

Lieut. J. W. Revere in his Tour of Duty  
in California, published in 1849 (pages  
143-144), mentioned the rancho of Chino  
Piña, but does not give its location.

It appears to be in Russian River Valley,  
south of Hopland.

## RANCHO OF DON FERNANDO FELIZ

Lieut. J. W. Revere in his Tour of Duty in California, published in 1849 (pp 140-141) mentions the Feliz Ranch.

This ranch was on the west side of Russian River at or near the site of the present town of Hopland. *cm*

## RANCHOS OF SAN GABRIEL MISSION

"The principal ranchos belonging at that time to San Gabriel were, San Pasqual, Santa Anita, Asuza, San Francisquita, Cucumonga, San Antonio, San Bernardino, San Gorgonio, Yucarpa, Jurupa, Guapa, Rincon, Chino, San Jose, Ybarras, Punte, Mission Vega, Serranos, Rosa Castillo, Coyotes, Saboneria, Las Bolsas, Alamites, and Serritos."

--A. S. Taylor in California Farmer, Feb. 1860.

*(In trust of Padre Juan Maria Salvadea)*

## RANCHOS OF SAN GABRIEL MISSION

"The principal ranches belonging at that time to San Gabriel were, San Pasqual, Santa Anita, Azusa, San Francisquita, Cucamonga, San Antonio, San Bernardino, San Geronimo, Yucarpa, Jurupa, Guapa, Rincon, Chino, San Jose, Ybarras, Puente, Mission Vega, Serranos, Rosa Castillo, Coyotes, Sabonaria, Las Bolsas, Alamitos, and Territes."

--A. S. Taylor in California Farmer, Feb. 1860.

Ranchos 1827 (Hoyes) Bancroft II 553 (first)  
 San José del Valle [=Woman's hills] "  
 San Bernardo "  
 San Dieguitos "  
 Saguay [=Lamay] "  


---

Los Coyotes gained in 1819 II 568

In 1828 Mission ranches:  
 Turunfa "  
 S Remedios "  
 San Timoteo "  
 San Sofonis "  
 Los Cervinos "  
 Sta Gertrudis "  


---

Camulus occupied by about 1824 570  
 Cahuengal (perhaps not ranch) "  


---

Ranchos granted previous to 1830 Bancroft II 663

Pinaquitos 1823 }  
 San Andrés before 1828 } La Sierra dist.  
 Olaj 1829 }  
 Temascal before 1828 }  
 Portezuelo about 1795, p. 663 }  
 Refugio about 1797 " }  
 Simi 1795 " } Santa Barbara dist.  
 Conejo 1803 . 664 }  
 La Pasa 1828 " }  
 Pajaro Castro 1830 " }  
 Pinaritos before 1830 " } Monterey dist.  
 Salinas " " }  
 San Cayetano 1824 " }  
 Saugual 1823 " }  
 Tucho before 1830 " }



Rancho prior to 1830 Manuscript II

Tularcitos 1820 (see dist) p. 664  
 " " " "

Balbores 1828

San Diego dist. vol III

Agua Caliente 1840 p. 611  
 Jamacha " "  
 Jamul " "  
 Meludo 1833 612  
 Paquai 1839 " "  
 San Siquita 1831 " "  
 Secotan 1836 " "

Salidad (part of town common to San Diego)

Temucula 1835  
 Tecate 1836  
 Tia Juana 1829

Los Angeles dist. III, 633

Arroyo 1837 " "  
 Ballona 1839 " "  
 Cajon de Musenfiaba 1839 " "  
 Civitas 1834 " "  
 Coyotes 1834 " "  
 Cuati (Huerta) 1830 " "  
 Cucamonga 1839 " "  
 Jurupa 1838 " "  
 Rincon 1839 " "  
 San Lascual 1840 634  
 Tejuca 1840 " "

Santa Barbara dist 655

Calleguas 1837 " "  
 Lemfoc " " "  
 Nipomo " " "  
 Ojai 1838 " "  
 Saca " " 656  
 Sespe in San Capitano " "  
 Simi " " "  
 Tepusquet 1833 " "  
 Tineguai 1827 656

Monterey dist. III 677

Chualar 1839 677  
 Escarpinas 1837 " "  
 Laguna de los Calleguas 1833 677  
 Laguna Seca 1834 " "  
 Laureles 1839 " "  
 Legas 1834 " "  
 Pilarcitos 1835 678  
 Pericoma (= Canada Verde) " "  
 Zampores (Pescadero del) 1840 " "  
 Salinas 1833 " "  
 Salisfundos 1834 " "  
 San Felipe (Kaler) 1840 " "  
 Santa Cruz Co 1837 679  
 Sayanta + Shagunt 1837 " "  
 Tule 1834 " "

Ranchos SF Dict III 711

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- Acalanes (Cintu Carta) 1834 711  
Arroyo de las Nueces y Bellenas (Cintu Carta) 1834"  
Aucaymas (Tuluma) 1836 711  
Cafay (Calusa C) 1835 "  
Caymus (Mifa) 1836  
Girliceros (Lanona) 1837 712  
Juristas (Lutalera) 1835 "  
Llagas (Lutalera) 1834 "  
Lozitas (Alamda) 1839 "  
Cochiyunes (= de Alh) 1834 713  
Juristas (Lutalera) "

• Tayaja

Lonita

Sonita?

Gafetely

poquetal

Benenuc

Chugelempa

Caguitloma

Satumtutillami

Gualactal

Guiaquilloma

Oleyomi

Catalillomi

Chiyasayacumi

Magma

San Francisco

? see 648

Rancho in Los Angeles district, So. Calif., "granted in 1839 to Antonio del Valle, much against the wishes of the San Fernando Indians."--Bancroft, Hist. of Calif., III, 633,<sup>636</sup> 1885.

## SACRAMENTO RIVER--EARLY RANCHES

Among the most notable of the ranches of the early pioneers along or near Sacramento River were the following:

Lassen Ranch (of Peter Lassen) . . . On east side Sacramento

River 1-1/2 miles south of mouth of Deer Creek. In 1850

Lassen sold his Deer Creek ranch and moved to Indian Val-

ley, Plumas County, and later (1855) moved to Honey Lake.

In 1859 he bought another ranch which was south of Susan-

ville on the east side of the Sierra (Fairfield's Hist.

Lassen Co.).

Munroe Ranch . . . On west side Sacramento just south of mouth of

Stony Creek. (Shown on manuscript sketch map by Major

P. B. Redding, now in my Winton file.)

Redding Ranch (of Major P. B. R.--whose name is spelled both

Reading and Redding) . . . On west side Sacramento 2 miles

north of mouth of Cottonwood Creek. (Shown on manuscript

sketch map by Major P. B. Redding, now in my Winton file.)

1100

WINTON  
BOND

San Carlos Mission in Jan. 1827.

A league south of Presidio of Monterey. contained 260 Indians.  
Beechey's Voyage of Blossom, Pt. II, p. 408, 1831.  
'Eleven dialects' spoken at San Carlos. - Ibid, 398.

Grindstone Rancheria ceremony

1923

Photos of the ceremony to Peabody Division

GRINDSTONE RANCHERIA CEREMONY, MAY 15-18, 1923.

1

May 15, 1923.

Started early [from camp on mesa above Stony Creek] & drove about 3 miles north to the junction of Grindstone Creek with Stony Creek, forded Grindstone about 1/4 mile above the junction, and drove up the short grade to the Indian Rancheria on the bench overlooking the eastward turn of Stony Creek.

Here we camped under a Blue Oak on the flat grassy bench just outside (west of ) the rancheria grounds, first driving in to unload the supplies we brought the Indians. Among those who came out to greet us were E.M. Lafonso and wife and 2 little girls, and Lafonso's mother Mrs. Santa Wilson, all Mitchopdo from Chico; and Alfred Gillis, Winton, from Mc Cloud River.

The ceremonies began about nine o'clock in the morning and continued at intervals through the day and all night long. We stayed in the roundhouse (partly under ground) till about 3 in the morning, when we crawled into our sleeping bags for a little rest, but the 'dancing' kept on until after daylight.

The costumes of the performers are wonderfully spectacular consisting of extraordinary feather headdresses & belts--similar in a general way tho differing in details from those seen and photographed by me 16 or 17 years ago at Stony Ford rancheria.

Four men did most of the ceremonial dances today, dressing in a clump of brush near by.

The roundhouse is of the circular type, about 50 ft. in diameter, occupying an excavation about 3 feet deep and with earth thrown up on the outside to cover the side wall up to the roof as shown in my photograph. The side wall measured on the inside, is 5 1/2 - 6 Ft. high.



There is a very large and high center post (a little behind the actual center) 15-18 inches in diameter and about 16 or 18 ft. high, consisting of the trunk of a Blue Oak with the bark peeled off; and there are 6 interior posts (3 on each side), each 8<sup>to</sup> 9 ft. in height & forked at top, on which the roof poles rest.

The fire is directly in front of the center post and about 1/3 the distance from center post to front entrance, with the rectangular (nearly square) smoke hole above it.

The front and main entrance faces south and slopes down from the surface level outside to the floor. It is a roofed passage 12 ft. in length by 5 in width (inside measure). The rear entrance (for the women) fronts north and is much shorter and steeper.

The drum (or alter as some call it) is a plank box about 7 ft. in length by not quite 2 in width placed over a deep excavation immediately west of the rear door.

The roof is conical & shingled with shakes. It has a central boxed up place over the peak, where the flagpole stands. The outer wall posts are 25 in number--12 on one side and 13 on the other, while the radiating roof poles running from the outer wall to the peak number 16 or 17.

The horizontal spaced boards to which the roof shakes are nailed are in 6 or 7 complete circles, resting on the radiating roof poles.

From center post to front (south) doorway is 27 ft.; to rear (north) doorway 21 ft.

The orientation of the roundhouse is by the Great Dipper rather than by the North star. They call the Dipper Law'-kah.

The roundhouse flag is yellow-orange with 4 red stripes and 4 white stars & a gray bar at far end and a red bar with 7 points at the pole end--the triangles between the points yellow. [Am not certain of the number of points on the stars.] It was flying when we arrived, before the ceremony began, and remained flying to the end, several days later.

Another flag, larger and wholly different, was fastened to the outside flagpole, at some distance in front (south of) the main entrance, and was tied to the middle--not the top--of the pole. It is red, white and blue. The blue is a square (or squarish rectangle) at the top of the pole side, with a large red 5-point star in the center, surrounded by a circle of 14 or 15 small white stars. The background or groundwork is white, with 3 broad red stripes-- two abutting against the blue square of the stars, the 3rd at the bottom, as here shown.

At the top of the outside pole floated the "Redcross" flag of San Diego McDaniel, Chief of the Stony Ford Shamen or Shoteah. This is a simple white ground marked with 5 rows of small horizontal red crosses, 5 in each row, as here shown. It was flying before the ceremony began and remained up till the Red Cross Dance took place on the last day, when it was at once taken down.

The performers or 'dancers' as they are commonly called wore splendid feather headdresses and feather belts and in some cases also feather girdles and collars. The headdresses are of three types: (1) monstrous sub-globular creations 5 or 6 feet in

diameter consisting of a multitude of long slender rods tipped with feathers or imitation California golden poppies; (2) fan-shaped vertical affairs of 12 slender rods each, standing upright from the back of the head; and (3) white down skull caps with a horizontal brilliant red flicker frontal band & 3 white feathers standing out on each side. Those of the first and second types had hanging from the back of the head long red flicker bands, usually 4 on each, which reached nearly to the ground. In fact, several had to be turned back & fastened in order not to drag.

Some of the dancers carried split elder clapper sticks and all or nearly all had double bone whistles in their mouths. Some carried a red staff, and some carried cocoon rattles buried in white feathers.

The man who beat time on a plank drum did not stamp with his bare feet--as is done in many places--but stood on the plank and pounded down on it with a club 4 or 5 feet long, making a muffled sound.

The singers faced the drum, standing with their backs toward the center pole and performers.

The performers moved rapidly to and fro and back and forth around the fire, never going as far back as the centerpole or farther forward than the front pair of posts. They were tremendously energetic and always beat the ground hard with their bare feet, sometimes alternately, often jumping so as to strike the ground with both feet together. Their movements were rapid and graceful.

The audience reclined on the straw covered ground at the foot of the back or outer wall, all the way round.

There were usually 100 Indian onlookers in the Roundhouse and about 150 present all together, counting the numerous children.

All of the performers on approaching the Roundhouse blew their bone whistles and ran or danced from their dressing place in the bushes to and around the flagpole in front, and then came to the front entrance.

Owing to the great size of the large headdresses, the performers had to back in--often helped by an assistant-- in order to press together the long slender plumbed rods in such a way that they would not be broken--for the breadth of their spread is considerably greater than that of the 5-foot wide passageway. Several wore willow bark short skirts.

The bodies of all were naked except for the certain feather collars, girdles and belts, and certain breech cloths and drawers which some of them wore-- the drawers a foolish conformity with the assumed needs of civilization. But not all of the

dancers wore them--some painting their legs red. All were bare footed of course.

During all the performances silence prevailed--no talking or whispering being proper while a ceremony is in progress.

From time to time one of the rancheria dogs, usually a pup, crept into the roundhouse and was promptly expelled.

Many children were present both day and night, often falling asleep, but never crying or making any noise.

The meals, cooked by the Indian women, were served at a long table in one of the nearby houses.

May 15-18, 1923.

Clear and warm except one day (Thursday 17th) when it was cold and partly cloudy.

Continued at camp at the Grindstone Rancheria, called Pom te'-te-te (meaning shaking ground), watching the various ceremonies and talking with the Indians.

The first night I stayed up till 3 in the morning, when I quit the Roundhouse and went to bed, but the so called 'dancing' of the actors kept up till sometime after daylight and I

missed several. The second and third nights I was too tired and left the Roundhouse between 10 and midnight, but Elizabeth and Zenaida stayed later and saw some which I missed entirely.

The fire in the Roundhouse was larger than any I have previously seen and gave off too much heat so the actors were continuously wet with sweat.

Certain features are the same as I have noted in this general region-- the loud expiratory breathing, the blowing of the bone whistles held in the mouth, the singing of the singers the muffled pounding of the drum, about the drum, the violent stamping of the bare feet on the bare ground, the vibration of the elder wood clapper sticks, the periodic shaking of the feather-encased cocoon rattles-- all keeping perfect time with the drum.

The rapidity and grace of movement of the actors, as well as the energy displayed, were most impressive, while the headdresses and other parts of the costumes were truly spectacular.

We congratulated ourselves on the privilege of witnessing so extraordinary a spectacle, which I heard of from the Chico Mitchopdo Indians last week.

May 18, 1923.

Mainly clear and fine and not too warm.

Most of the visiting Indians left Grindstone Rancheria this morning--some going as far north as the Wintoon country, some as far south as Lower Lake and Middletown, several to Paskenta, and several to Kah'-chil on Sacramento River between Colusa and Princeton, and one load to Cortena Valley ('Klet).

We followed suite, breaking camp and pulling south. ....

California Journal Vol.1,p.12-18,23,  
1923.

The Hes'-se Dance Ceremony of the Ko-roo Wintoon  
Indians on Sacramento River  
California

Hes'-se, the War Dance.

The Hes'-se Dance was a Sacramento River Ceremony--never held elsewhere. It belongs to the Sacramento River people--no other country.

It lasted four days and was ~~danced~~ originally <sup>was held</sup> in the spring only, to ~~make seed and acorns~~ <sup>bring good crops of</sup> ~~grow~~ <sup>and seeds</sup>. Later it was given at other times ~~of the year~~, sometimes ~~it was held~~ in July. One was given in Lake County not long ago, but only the old people know the Hes'-se dance now.

It originated in a dream of an old man on <sup>(The Sacred Buttes)</sup> O-nol-li <sup>(now known as)</sup> (Marysville or Sutter Buttes). In his dream he saw it danced by Sturgeons--for then the people were Sturgeon People. It was held in the Southeast Butte now called Sweathouse Hill. The Buttes were sacred and no women were allowed to go there or to sing the songs.

It was danced the first time at Ko'-doi-de'-he a long time ago. [Ko'-doi de'-he was where Landle Browning's house now stands--2 miles south of No-wid' de'-he.]



From Bill Wiley, at Kah'-chil near Colusa, Calif. Sept. 20, 1936

During <sup>the Hesse</sup> ~~ceremonials~~ the performers in the roundhouse had separate places according to their degrees. These places were the sections <sup>(interspaces)</sup> between the posts of the roundhouse.

The performers ate and drank all they could the day before the ceremony ~~because for the reason that~~ they then had to fast for three days during the continuance of the ceremony. For the secret order, called Hesse ceremony, they fasted 2½ days.

The feast before the ceremony consisted of game and acorn soup. A deer was hung up for the chief.

Ko-roo from Bill Wiley, at Kah-chil near Colusa, Calif.

Sept. 19-20, 1936

HES'-SE CEREMONY

Hesse ceremony lasted three days, ~~and~~ women could not attend it ~~only~~ <sup>except</sup> on the last afternoon.

Before the ceremony a large feast was prepared. The food was portioned out by the chief. The performers ate their fill and then went to the river and bathed. From that time until the dance was over (three days ~~later~~) they neither ate nor drank. They used <sup>a</sup> scratching stick during this time.

Shown a picture taken <sup>by me (CHM)</sup> at the Hesse dance at Cortena in 1923, Wiley gave the following names and information:

Performer wearing Bighead Headdress called--

Too''yeh (old original name)

Tahm'-pa Sahl'-too (present name)

Performer wearing tights and carrying quiver--

Cheh-lē'-too--- Leader

also called To-nē'-les-too

In ~~the~~ <sup>my</sup> picture of the Cortena dance of 1923 this man is Henry Pulsifer.

Cheh-lē'-too or leader is the one who leads the Bighead ~~in the~~ dancers. He goes before the Bighead into the round-house. Inside they circle around once, then separate and go half way around. Then Leader calls Bighead to him - - - -

(Carr)

Ko-roo from Bill Wiley at Kah-chil near Colusa, Calif.

Sept. 19-20, 1936

Parts of Bighead Headdress and costume as shown in picture of Cortena ceremony, 1923:--

Bighead Headdress - - - - Lel'-loo-nahn  
{<sup>Rays</sup> Sticks in headdress - - - - Poo'-koom  
Feather tips on <sup>rays</sup> sticks - - Chah'-lahk  
Feather collar - - - - -E'-chuck  
Feather belt - - - - -De'-ahk  
Tule skirt - - - - -Laws'

This skirt is made of tule, ~~which is~~ stripped until ~~it is~~ fine and soft. (Called Paw-sahk.) Used also to wrap babies in.

Flicker bands down back . . Pit'

Two pieces on back of)

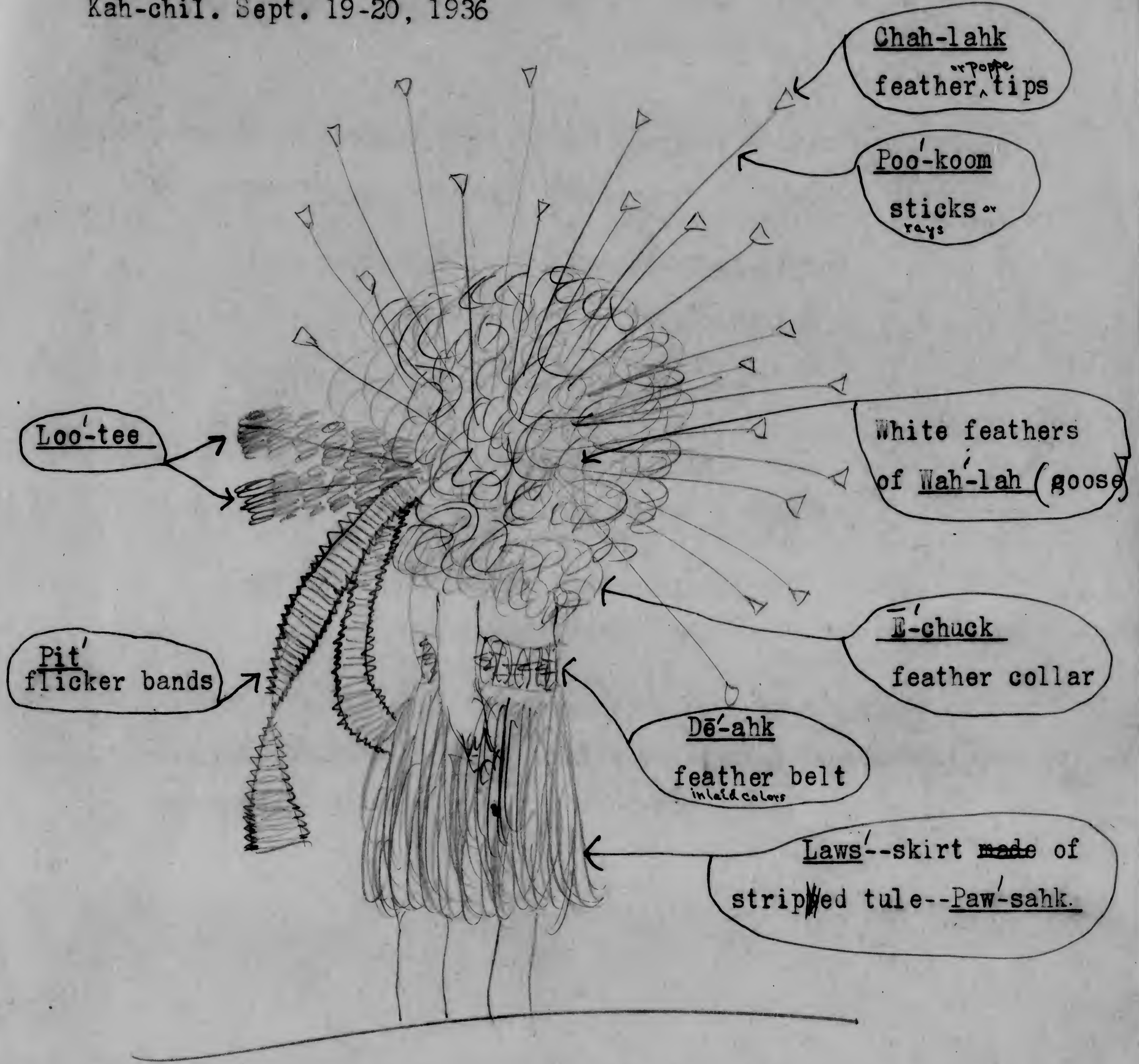
headdress . . . Loo'-tee

The foundation of the headdress is a hairnet, <sup>oo-yu cap</sup> made of hemp cord which fits tightly to the head. Through this are interwoven pieces of stripped tule (Paw-sahk). This is the foundation into which the white ~~underwing~~ feathers of the goose (Wah'-lah) are stuck, and also the <sup>rays</sup> sticks (Poo'-koom) tipped with feathers (Chah'-lahk). The two <sup>large side</sup> ~~back~~ pieces (Loo'-tee) are attached by wooden pins ~~which are~~ stuck into the tule foundation.

CARR

Bighead headdress of Hesse ceremony. Names from Bill Wiley.

Kah-chil. Sept. 19-20, 1936



Performer wearing this headdress called Too"-yeh; also in modern times called Tahm'-pa-sahl'-too

Name of headdress--Lel'-loo-nahn

Foundation of headdress is hairnet ~~made~~ of hemp cord intertwined with tule into which the white goose feathers and sticks are held. Loo'-tee attached with wooden pins.

(Carr)

Ko-roo from Bill Wiley at Kahchil near Colusa, Calif.

Sept. 19-20, 1936

Parts of costume worn by man carrying quiver in pictures of Cortena Hesse ceremony, 1923:--

This performer is the Leader--Cheh-lē'-too  
also called -- To-nē'-les-too

Quiver of fox or coyote--Kahl'-che

Back piece of headdress--Toi'-te  
~~made~~ of tail feathers of magpie

Flicker band around head--Ter'-rah-pah

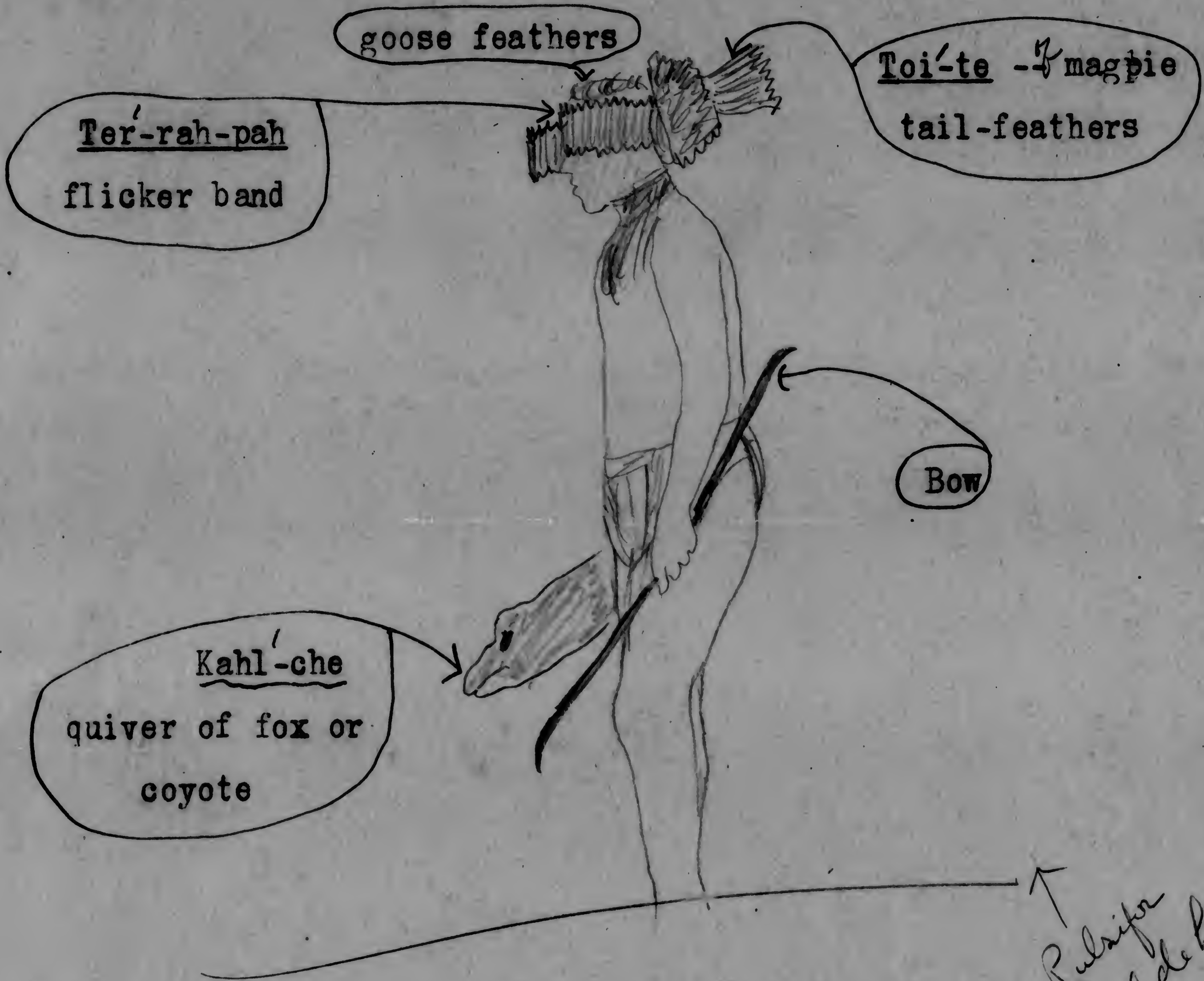
The foundation of this headdress (is also) a hairnet of hemp cord bound with tule. White under-wing feathers of the goose (Wah'-lah) are used to cover the crown.

CARR

Performer or Leader in Hesse dance at Cortena, 1923

Names from Bill Wiley, Kah'-chil, Sept. 19-20, 1936

Foundation of this headdress is a hemp cord hairnet <sup>loo-yu</sup> ~~which~~ fits <sup>it is</sup> tightly to head. <sup>the</sup> Intertwined with tule into which white under-wing feathers of Wah'-lah (goose) are placed for crown piece. Called Poo'-te



Name of performer -- Cheh'-le-too or Leader; also called To-nē'-les-too

now at Henry Pulisfor Kah-chil de la

{Information from Koro of  
Calusa region}

## Hesse ceremony (Bull-head)

was a Sacramento River Ceremony - never held elsewhere. It took 4 days.

Given to bring good crops of acorns & seeds. Originally held in Spring only. Latterly at any time.

Now extinct - not held since -

Hesse ceremony originated in the <sup>South</sup> Buttes - O-nolli-

now called Sutter or Marysville Buttes. No woman was allowed to go there <sup>at to sing the song</sup> the people were Sturgeon people. Ceremonial house on SE side - called Sweethouse Hill. All war dances & songs originated here.

## Kuk'su (Bighead ceremony)

Kuk'su: Name of Spirit and Ceremony ("dance").

It was staged by men and for men.

Only a few high up social women allowed to be present. If anyone told, she was killed.

The last Kuk'su was held at Tatino ranch very many yrs ago - "before I was born" & said old man Tony Mitchell of Siyi.

This would mean 75-80 yrs ago.

Bill Wiley

1935  
c

### HESSE CEREMONY

The Hesse Dance <sup>and</sup> lasts four days ~~and~~ begins in the evening.

The first day the people gather food---acorns, fish, berries, and bring them to the head man who portions them out to the dancers. The next day at two o'clock a big fire is made outside the roundhouse and each one cooks his food and eats, after which they enter the roundhouse and sweat. When they come out again they go to the river and bathe and drink. After this they have no more food or water until the ceremony is finished. The second night they rehearse the dance in the roundhouse.

The dance is announced to the people by a runner who goes to each family and presents a bunch <sup>or string</sup> of beads. If the family or person expects to attend the ceremony he retains the beads; if not, he gives them back to the runner.

Inside the roundhouse the space is separated into divisions by posts. These divisions, called Wah-le, represent different degrees of high or low standing and are allotted accordingly.



## Hesse Ceremony

Members are allowed to sit only in the Wah'-le to which they belong. Advancement from a low to a higher degree is obtained by payment of money, ~~by someone in the higher order~~, or by seniority.

The "Bighead" headdress of this Hesse Dance is called-- Too-oo'-ya, and is fashioned after the flower of the Button Willow (Cephalanthus occidentalis)

The performers are called Tum'-pah Sahl'-to.

Wampum belt called De'-haht (worth \$80). White, black, green, and red feathers used in belt, shaped into stars and sometimes squares.

The headgear, called Tah'-raht is made from the red feathers of the woodpecker's head and green <sup>mallard</sup> drake feathers.

The Hesse Dance originated in the Buttes, <sup>(ō'-nō-li)</sup> where strange people were seen dancing it., long long ago. Not danced now.

## THE COMING OF THE INVITED GUESTS

When the invited guests from other tribes and ranch-  
eries are approaching, the head Chief, Sak-to, stands on  
top of the roundhouse and addresses them, repeating over  
and over again the words:

Ha<sup>Ha</sup> pe-coo-ro wer-re, pe-coo-ro wer-re, pe-coo-ro wer-re.  
*He then come on then come on*  
Yen-ne li-yook ar-ro' ba-te.

Ha, all right, come, all right, come.

The road is good

MUNICIPAL MUSEUM  
BOSTON  
MASS.

## ACTORS IN A CALIFORNIA INDIAN CEREMONY

Procession of the five impersonators in the sacred spring ceremony (called Hesse) of the Southern Wintoon Indians, as they approached the underground roundhouse where the rites were performed.

The spectacular costumes consist of elaborate headdresses of feathers and California poppies, broad belts of inlaid feathers and beads, skirts of frayed inner bark of willow, and beautiful scarlet bands of yellowhammer tail-feathers that float freely from the back of the head.

Two of the actors, with the white "Bighead" headdresses, are holding the sacred music sticks of split elder. Two others, wearing the red crown with fan-shape upright headpiece, are carrying ceremonial flags; the one at the rear, a foxskin quiver of arrows.

Photograph taken by Dr. C. Hart Merriam at Grindstone Creek Rancheria, Glenn County, California, in the early evening of May 16, 1923.

*C. Hart Merriam*

People at Grindstone Bancharia 1923

Tom Bailey (Chief) - - Originally from Newville

William Bush (Laura Thatcher's husband)

Orra Smith (large fat man) lives at Garden  
across creek {Choohelmensel  
of Pak-kah-hlab-be

Johnny Wilson from Stony Ford {His father Choohelmensel  
from I-de-he near Ladoga.

Mike Jeffreyson {Mitchopda  
of Chico {Leads Red-cap dance (lines at Chia)  
man of High Orders

Alfred Bennet - - - Kenkew

Jeff Davis - - - - - Yuke

Jeff Jones

Woody - takes care of Mrs. Brown (mother probably Yuke)

Old Mrs. Brown - - Originally from Orland (only one left)

Old Blind Marie - - Dab'-chin-ohin-ne (She and Chief San  
Diego of Stony  
Ford are only  
ones left who speak  
this dialect)

Maggie Hoxie - - Paskenta (lives with Tom Bailey)

Amelia {Choohelmensel  
{Lewis James' sister - {also speaks Grindstone  
{and Pashenta languages

Laura Thatcher (now Mrs. Wm. Bush) Nõm-lak'-ke from  
Pashenta

gundstone Rancheria - May 15-18, '23

Red Fox skin quiver?

leader - Henry Pulsifer - Coyote skin & bow, - flicker  
band around head & black feather bunch behind

actors entered Round house before guests & latter not  
immediately admitted.

MUNICIPAL  
BOND

Actors in sacred Spring ceremony of  
Calif. Wintoon Indians at Grindstone  
Creek Rancheria Glenn Co. Calif. May. 1923

---

The spectacular costumes comprise  
elaborate feathers & poppy headdresses, mink  
feather belts, frayed bark skirts, & floating  
scarlet flicker bands.

---

Photoed by CSM

Photo by CSM 1923

Colored by Hashime Marayama

N. Y. Soc artist

mch 36

Grindstone Ceremony

actors in sacred Spring ceremony of Calif. Union

Ind. at Grindstone Creek Rancheria, Glenn Co., Calif. May 23

"The spectacular costumes comprise elaborate feather  
& poppy headdresses, inlaid feather belts, frayed bark  
skirts, & floating scarlet flicker bands.

colored by Hashime Maragana  
+ photo by Clou,

Ind. baskets - Am Mus. Nat Hist.

Med. Books - Stanford Med. College

Rancherías : Santa Barbara Channel 1796, n.d.

80/18  
c



RANCHERIAS OR VILLAGES ON MAINLAND SANTA BARBARA CHANNEL

Listed by Cabrillo (or diary of his voyage, translated by R.S. Evans, in Archaeology Wheeler Survey, 307 and 309, 1879); Bancroft (Hist. Calif., I, 73 ft. note, 1884); Yarrow (Appendix H of Wheeler Survey, p. 319 of pamphlet, 1876); and Eisen (Acct. of Indians of Santa Barbara Islands, 16, 1904).

[Apparently all taken from Cabrillo.]

From Buenaventura to Pt Conception, <sup>apparently</sup> in order.

Evans.	Bancroft.	Yarrow.	Eisen.
Xucu (= Ventura) [Shucu, Taylor]	Xucu	Xuco * Sucu	[Villages E of Goleta not given]
Bis	Bis	Bis	
Sopono	Sopono	Sopono	
? [Misesopano, Missopano, Pona]?			
Alloc	Alloc	Alloc	
Xabaagua	Xabaagua	Xabaagna Sumogna	
Xotococ [= Xotococ, Henshaw]	Xocotoc	Xocotoc	
Potoltuc	Potoltuc	Potoptuc	
Nacbuc	Nacbuc	Nacbuc	
Quelqueme	Quelqueme	Omlqueme	
Misinagua <i>Miscanata?</i>	Misinagua	Misinagua	
Misesopano [Misisissepono, Misesopano, Missopano, Pona]	Misesopano	Misisopano { Misopano Mishopano	
Elquis	Elquis	Elquis	
Coloc [Kolok]	Coloc	Colve Coloc	
Mugu - [mu-wu]	Mugu	Mugu Mugu	
Xagua [Xaqua. Sajay?]	Xagua	Xagna Chahua	
Anacbuc [Anacarb, Taylor]	Anacbuc	Anacbuc	
Partocac [= Paltocac, "near islet of La Patena", Taylor]	Partocac	Partocac	
Susuquey [Susaquey]	Susuquey	Susuquiy Sisulcui Sisul	
Quanmu } or Quannuegua	Quanmu } or Quanmugua	Omanmu	
Gua	Gua	Gna	
Asimu	Asimu	Asimu Aquisum	
Aguin	Aguin	Agnen Aquam (Ahvam)	
Casalic [Casil or Nueva (Jopis)] [Kasil, Kusil]	Casalic	Casilic { Castec Casitec	

RANCHERIAS OR VILLAGES ON MAINLAND SANTA BARBARA CHANNEL

Listed by Cabrillo (or diary of his voyage, translated by R.S. Evans, in Archaeology Wheeler Survey, 307 and 309, 1879); Bancroft (Hist. Calif., I, 73 ft. note, 1884); Yarrow (Appendix H of Wheeler Survey, p. 319 of pamphlet, 1876); and Eisen (Act. of Indians of Santa Barbara Islands, 16, 1904).

[Apparently all taken from Cabrillo.]

From Buenaventura to Pt. Concepcion, <sup>apparently</sup> in order.

<u>Evans.</u>	<u>Bancroft.</u>	<u>Yarrow.</u>	<u>Eisen.</u>
Isen (Ventura)	Xuxu	Xuco	* Sucu [Villages E of Goleta not given]
Bis	Bis	Bis	
Sopono	Sopono	Sopono	
? [Misopano, Misopano, Pona]?	Alloc	Alloc	
Iabaagua	Iabaagua	Iabaagna	Sumogna
Xotococ [Xotococ, Henshaw]	Xocotoc	Xocotoc	
Potoltuc	Potoltuc	Potoptuc	
Nacbuc	Nacbuc	Nacbuc	
Quelquene	Quelquene	Qalqueme	
Misinagua Misca naka?	Misinagua	Misinagua	
Misesopano [Misisisopano, Misopano, Misopano, Pona]	Misesopano	Misisopano	{ Misopano Mishopano
Elquis	Elquis	Elquis	
Coloc [Kolok]	Coloc	Colve	Coloc
Mugu [Mu-uui]	Mugu	Mugu	Mugu
Iagua [Xagua, Sejay?]	Iagua	Iagna	Chahua
Anacbuc [Anacorch, Taylor]	Anacbuc	Anacbuc	
Partocac [Paltocac, "near islet of La Patera", Taylor]	Partocac	Partocac	
Susuquey [Susuquey]	Susuquey	Susuquiy	Sisulcui Siseul
Quannu } or Quannuegua	Quannu } or Quannuegua	Omanmu	
Gua	Gua	Gna	
Asimu	Asimu	Asimu	Aguisum
Aguin	Aguin	Agnem	Aguam (Ahvam)
Casalic [Casil or Nueva (Cepis)]	Casalic	Casilic	{ Castec Cashtec
[Casil, Casil]	* Arc		

de la Mision de San Buenaventura, Libros de Copied for Bancroft Library, p. 27

Retake of Preceding Frame

Sta Barbara Channel 2

<u>Evans.</u>	<u>Bancroft.</u>	<u>Yarrow.</u>	<u>Eisen.</u>
Tucumu [Sucremu, Jih-mu]	Tucumu	Tucumu	
Incpupu (said to be 18 leagues W of Ventura and appar- ently 4 E of Dos Pueblos.)	Incpupu	Incpupu	
Cicacut (Sardinas, =Goleta) [Cicaut]	Cicacut (Sardinas)	Cincacut	Cicacut
Ciucut [Cicut, Cuisut]	Ciucut	Cincut	Ciucut
Anacot	Anacot	Anacot	Anacat
Maquinanoa [Maquin, Nanao-Taylor]	Maquinanoa	Maqumanoa	Maquinanoa
Paltatre	Paltatre	Paltated	Paltare
Anacoat (or Anacoac) [almacoac]	Anacoat (or Anacoac)	Anacoat	Anacvat
Olesino	Olesino		Olesino
Caacat (or Caacac) [Cancac, Taylor] [Caacat, Cincacac]	Caacat (or Caacac)		Coaacac
Paltocac	Paltocac	Paltocac	Paltocac
Tocane [Tolane]	Tocane	Tocani	Tocane
Opia	Opia	Opia	Opia
Opistopia	Opistopia	Opistopia	Opistopia
Nocos	Nocos	Nocos	Nocos
Yutum	Yutum	Yutum	Yutum
Quiman [Yutum, Taylor] [Yutum]	Quiman	Iniman	Auiman
Micoma	Nicoma	Micoma	Micoma
Garomisopona	Garomisopona	Garomisopona	Caromisopona
Xexo (Coxo) <sup>(Taylor says</sup> <sub>under Cape</sub> <sub>Gallera... now Coxo</sub> )	Xexo (now Coxo)	Xixo	Xeno

Note.-Xexu is province from Ventura to Pt. Concep. (308). Xucu (or Xuca) is prov. from Sardinas to Ventura (309).

Note.-Xexu general name of province, which has over 40 towns. From Ventura to Conception is 30 leagues.

Sta Barbara Channel 3

Taylor, Calif. Farmer, Aug. 21, 1863 (quoted in Bancroft, Native Races, I, 458, 1874) locates some of the foregoing as follows:

Xucu, or Shucu, on Ortega farm, near Rincon Point

Missisisepono on Rafel Gonzale's rancho on Saticoy River, near sea, sometimes called Pono

Coloc, "near Carpentaria beach" and "in the Rincon".

Mugu, below Saticoy some 30 miles, near the sea; <sup>(458)</sup> on coast near sea on Guadaluca rancho, not far from point so called. (459).

Anac buc or Anacarck, near the islet of La Patera, near sea shore

Partocac or Paltocac, the Indian cemetery on the Mesa of La Patera, near sea [Cabrillo's diary, and authorities following him, gives these as two places.]

Aguin at the beach of Los Llagos Canada

Casalic, at the Refugio Playa and Canada

Tucumu or playa of Arroyo Honda

Xocotoc, Cojo, or Cojotoc, near Pt Conception

[Putting Xocotoc here would seem to be error, it being sixth on list.]

---

Alloc, "on Rancho Ortega, near the beach". (Apr. 17, 1863)

Anacoac, written Almacoac and located near Pt Conception (Apr. 17, 1863)

Anacot, between Santa Barbara and Pt Conception (Apr. 17, 1863)

Asimu, " " " " " " " " " " " "

Misinagua, near San Marcos

Ciucut, about 10 mi. W of Santa Barbara

Opia, near Pt. Conception

Opistopia, near Pt Conception

Garomisopona, W of Santa Barbara

Lacuppu

GOYCOECHEA'S REPORT ON RANCHERIAS OF SANTA BARBARA CHANNEL, 1796

Distance from one mission to another	Rancherias	Chiefs	Distance from one rancheria to another	Number of People	
10	No.1 {	Sisolopo in Buenav.	Liguiguiyá		86
		El Rincon	(has none)	5[leagues]	68
		La Carpinteria	{ Pachajaguay Ysanuna Nemaita	1	97
	....2	El Paredon	Atasuit	1-1/4	31
		El Montecito	Sagapueje (woman)	1-1/4	62
		Yuctu (In Presidio)	Yanonali	1-1/2	125
		Sacpili	Yuyunachet	2-1/2	202
		Alcas	Sumumaguit		51
		Gelijec	Ajuiait		66
		Geloó	Guiguinahuit		101
		Miguigui (dos <sup>[2]</sup> pueblos)	{ Ygumaitu Tenuaquiachet [over]	3	210
		Casil (en la nueva)	Siesanapaciet	3	142
		La Quemada	Snigulaiasu	1	250
	La Gaviota	Asiquiyaut	3	99	
18	...3 {	El Bulito. Estait	Tulalá	2	68
		Sta. Tescas [Teresa?]	Suluguapuyaut	2	30
		El Cojo Sisilopo	Cuyayamahuit	1-1/2	72
		Espada	Siguiguimacita	1-1/2	12
		Pedernales	Noctó	1-1/2	12
28.....	To La Purisima Mission by Camino Real				
		Total	31	1,783	

Phelipe de Goycochea, Report to Foria, March 12, 1796, On Rancherias of Shore of Santa Barbara Channel, from San Buenaventura Mission to that of La Purisima. -- Archives of Calif., State Papers, Extracts made for Bancroft Library, Missions, Vol. II, p. 94.

Bancroft says Goycochea also mentions rancherias of Najalayegua, Matita, and Somes. -- Bancroft, Hist. of Calif. I, 672, 1884

Tenuabucat was chief of Cuyamu rancheria of Dos Pueblos on the coast, according to Tapis, letter to Arrilliga, June 30, 1803. (Copy in Archivos de la Misión de Santa Barbara, VIII, 180, Bancroft Library, 1877).

RANCHERIAS, SANTA BARBARA REGION

Baptisms recorded in Santa Barbara Mission Records, giving rancheria names:

Man called Catgyer by his people from the ran- [17]  
cheria of Guanonaso; Boy called Sioche by his people  
of the rancheria of Sesabanonas; Boy called Mumiyan t  
by his people of the rancheria of Janaya.

Archivos de la Mision de Sta Barbara, Libro de  
Bautismos. Extract made for Bancroft Library, Vol.  
VII, p. 17, 1876.

Merriam Studies p. 198 =

Sisabanonade, 1 convert, 1786.

RANCHERIAS

SANTA BARBARA CHANNEL, CALIF.

The following is a comparison of reports on Rancherias of the Coast of Santa Barbara Channel -- names, distance from one another, and population -- according to diaries of the Portola Expedition, 1769, and Goycochea's Report, 1796. The localities given were determined by C. Hart Merriam from data in the several diaries of the Portola Expedition (Crespi, Costanso, Portola). -- S.R.Clemence, 1917.

NAMES		LOCALITY	LEAGUES APART		POPULATION		
Portola Expd.	Goycochea		Portola	Goycochea	Portola	Goycochea	
					People	Verres	People
La Assumpta	Sisolopo in Buenav. <sup>XUCU</sup>	Ventura	4		300 400	30	86
Pueblo del Bailarin or Santa Clara de Monte Talco	El Rincon	Rincon Pt.	4	5	300	60	68
La Carpinteria or San Roque	La Carpinteria	Carpinteria	1	1	300	32 38	97
"Ruined village"	El Paredon	[Probably near Loon Pt.]	1	1/4			31
"Ruined village"	El Montecito	[Probably at Montecito]	1 1/2	1/4			62
Pueblo de la Laguna or Laguna de la Concepcion	Yuctu (in the Presidio)	Santa Barbara	1 1/2	1 1/2	600	40	125
Mencaltitan or Pueblo de Isla or Sta Margarita de Cortona	<sup>Cicut</sup> Sacpili	Island in big lagoon N of Goleta Pt.	3	2 1/2		over 100	202
Costanso says there were two other villages on the banks of the estuary	Alcas Gelijec Geloó	[Around Goleta Pt.]					51 66 101
San Luis Obispo (2 towns)	Miguigui (2 towns)	At mouth Dos Pueblos Cañon	2,3	3	1000		210
San Guido de Cortona (perhaps 2 towns)	Casil (in la Nueva)	Apparently on Tajiguas Resugio? Creek	3	3	800	80	142
	La Quemada	[Arroyo la Quemada]		1			250
La Gaviota or San Luis Rey	La Gaviota	At mouth Gaviota Cañon	3	3	300	50	99
San Z[S]eferino, Papa	El Bulito. Estait	El Bulito Ck.	2	2	200	24	68
Sta. Teresa or Pueblo del Cojo	<sup>Gomomisopota</sup> Sta. Tesca [Teresa?]	[Probably near site of present Concepcion]	2	2	150	24	30
	<sup>Yeco</sup> El Cojo Sisilopo	[On, or not far from Jalama Creek]		1 1/2			72
La Espada, or Concepcion de Maria Sancta.	Espada	[Apparently at mouth of Cañon de el Jolloru]	2	1 1/2	250	20	
Pedernales	Pedernales	Rocky Pt.	2	1 1/2	200	30	



## RANCHERIAS

## SANTA BARBARA CHANNEL, CALIF.

The following is a comparison of reports on Rancherias of the Coast of Santa Barbara Channel -- names, distance from one another, and population -- according to diaries of the Portola Expedition, 1769, and Goycochea's Report, 1796. The localities given were determined by C. Hart Merriam from data in the several diaries of the Portola Expedition (Crespi, Costanso, Portola). -- S.R. Clemence, 1917.

NAMES		LOCALITY	LEAGUES APART		POPULATION		
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					People	Acres	People
La Assumpta	Sisolopo in Buenav. <sup>Xueu</sup>	Ventura	4		300 400	30	86
Pueblo del Bailarin or Santa Clara de Monte Talco	El Rincon	Rincon Pt.	4	5	300	60	30 68
La Carpinteria or San Roque	La Carpinteria	Carpinteria	1	1	300	32 38	97
"Ruined village"	El Paredon	[Probably near Loon Pt.]	1	$\frac{1}{4}$			31
"Ruined village"	El Montecito	[Probably at Montecito]	$1\frac{1}{2}$	$\frac{1}{4}$			62
Pueblo de la Laguna or Laguna de la Concepcion	Yuctu (in the Presidio)	Santa Barbara	$1\frac{1}{2}$	$1\frac{1}{2}$	600	40	125
Mencaltitan or Pueblo de Isla or Sta Margarita de Cortona	<sup>Ciueut</sup> Sacpili	Island in big lagoon N of Goleta Pt.	3	$2\frac{1}{2}$		over 100	202
Costanso says there were two other villages on the banks of the estuary	Alcas Gelijec Geloó	[Around Goleta Pt.]					51 66 101
San Luis Obispo (2 towns)	Miguigui (2 towns)	At mouth Dos Pueblos Cañon	2,3	3	1000		210
San Guido de Cortona (perhaps 2 towns)	Casil (in la Nueva)	Apparently on Tajiguas <sup>Resugio?</sup> Creek	3	3	800	80	142
	La Quemada	[Arroyo la Quemada]		1			250
La Gaviota or San Luis Rey	La Gaviota	At mouth Gaviota Cañon	3	3	300	50	99
San Z[S]eferino, Papa	El Bulito. Estait	El Bulito Ck.	2	2	200	24	68
Sta. Teresa or Pueblo del Cojo	<sup>Gamomisopona</sup> Sta. Tesca [Teresa?]	[Probably near site of present Concepcion]	2	2	150	24	30
	<sup>Yeco</sup> El Cojo Sisilopo	[On, or not far from Jallama Creek]		$1\frac{1}{2}$			72
La Espada, or Concepcion de Maria Santa.	Espada	Apparently at mouth of Cañon de el Jolloru	2	$1\frac{1}{2}$	250	20	12
Pedernales	Pedernales	Rocky Pt.	2	$1\frac{1}{2}$	200	30	12

Cards from San Carlos Mission Records

Rancharias

Cards from San Carlos Mission Records

Not yet completed or corrected/

Atchasta

Atchasta: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Achasta

Arxastra

Arxastra: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Achasta

Cappanai

Cappanai: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Capanay

Ecgeagan

Ecgeagan: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Ecgeajan

Egeajan

Egeajan: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Ecgeajan

Ejeajan

Ejeajan: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Ecgeajan

Eggeaja

Eggeaja: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Ecgeajan

Ajeajan

Ajeajan: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Ecgeajan

Etchilatca

Etchilatca: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Echilat

Esexen

Esexen: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Excelen



Essexen

Essexen: Rancharia mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Excelen

Excsalen

Excsalen: Rancharia mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Excelen

Excereem

Excereem: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Excelen

Exelen

Exelen: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Excelen

Eslonajan

Eslonajan: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

Guacharrones

Guacharrones, Guacchirrones, Guachirones: Spellings for  
Rancheria mentioned in Libro de Bautismos, Mision de  
San Carlos, MS, 1770-1820.

See Guatchorron

Xummis

Xummis: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Jummis

Katlenda-Ruc

Katlenda-Ruc: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Kalenda-Ruc

Calendaruc

Calendaruc, Calenda Rucca, Calenda-Ruc: Spellings for rancheria mentioned in Libro de Bautismos, Mision de San Carlos, MS, 1770-1820.

See Kalenda-Ruc

Locuyusta

Locuyusta: Rancheria mentioned in Libro de Bautismos, Mision de San Carlos, MS, 1770-1820.

Muthesum

Muthesum: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Mutsun

Pajsin

Pajsin: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Pagchin

Patsin

Patsin: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Pagchin

Piis

Piis: Rancheria mentioned in Libro de Bautismos, Mision  
de San Carlos, MS, 1770-1820.

See Pis

Chocorronta

Chocorronta: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Socorronda

Tiuyta

Tiuyta: Rancheria mentioned in Libro de Bautismos, Mision  
de San Carlos, MS, 1770-1820.

See Tiubta



Tiupta

Tiupta: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Tiubta

Tucotnot

Tucotnot: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Tucutnut

Yxenta

Yxenta: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Ychxenta

Yschenta

Yschenta: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Ychxenta

Ymmunacam

Ymmunacam: Rancheria mentioned in Libro de Bautismos,  
Mision de San Carlos, MS, 1770-1820.

See Ymunajan

Reservations

80/18  
c

in 1855  
Every attempt <sup>in 1855</sup> to induce Dah'-chin-chin'ne Indians to remove  
to NOME LACKE RESERVATION

Justus H. Rogers in his Colusa County History writes as follows concerning an attempt to remove the Indians of a Salt Creek rancheria to the Nome Lacke Reservation.

"In 1854 the government made a reservation of [87]  
land near Paskenta (now in Tehama County) for the Indians, who were, up to that time, scattered all over the Coast Range and foothills, and were the cause of much annoyance to the settlers. The same year the work of gathering the Indians together and placing them on the reservation was begun. In June, 1855, Captain Williams, assisted by Joseph James, who now lives at Orland, went to a rancheria on Salt Creek, in the mountains about 10 miles west of the present town of Elk Creek, to persuade the Indians it was better for them to move to the reservation. The Indians, who numbered about 14, attacked and surrounded Williams and James, shooting at them with arrows. The two men fought for their lives, and succeeded in getting away only after killing 7 of the aborigines. James received an arrow wound in the breast, which proved almost fatal, and the mule Captain Williams rode was killed by an arrow"--Justus H. Rogers, Colusa County, Its History and Resources, p. 87, 1891

Keep

LANDS PURCHASED FOR CALIFORNIA INDIANS, 1906-1921

County	Band	No. of Indians	Acres
Butte	Enterprise No. 1	51	40
Butte	Enterprise No. 2	8	40
Butte	Mooretown	53	80
Calaveras	Sheep Ranch	12	2
Colusa	Colus	63	40
Colusa	Cortina	47	480
Del Norte	Crescent City	50	100
Del Norte	Smith River	163	163
Eldorado	Eldorado	53	80
Eldorado	Sacramento (Verona)	34	160
Fresno	San Joaquin or Big Sandy	114	280
Fresno	Table Mountain	90	160
Glenn	Grindstone	56	80
Humboldt	Bear River	29	15
Humboldt	Blue Lake or Mad River	45	26
Humboldt	Lower Bel River	60	20
Humboldt	Trinidad	43	60
Inyo	Bishop		15
Inyo	Piutes (Under Bishop Sch.)	200	80
Lake	Big Valley	92	80
Lake	Cashe Creek	32	160
Lake	East Lake	134	88
Lake	Middletown or Loconami	51	108.70
Lake	Scotts Valley	60	56.68
Lake	Upper Lake	285	143

LANDS PURCHASED FOR CALIFORNIA INDIANS, 1906-1921

County	Band	No. of Indians	Acres
Madero	North Fork	200	80
Madero	Polasky or Millerton	55	140.86
Mendocino	Cahto Laytonville	98	200
Mendocino	Coyote Valley	48	100
Mendocino	Guideville		34.12
Mendocino	Guidiville	92	50
Mendocino	Hopland	120	630
Mendocino	Point Arena		40
Mendocino	Point Arena or Manchester	84	75
Mendocino	Potter Valley	72	16
Mendocino	Redwood Val. & Little Riv.	51	80
Mendocino	Sherwood	41	60
Mendocino	Sherwood	92	230.72
Mendocino	Ukiah or Pineville	130	95.28.
Modoc	Cedarville	82	17
Placer	Auburn	25	20
Placer	Colfax	64	40
Riverside	Palm Springs	35	800
Riverside	Pechanga or Temecula	179	235
Riverside	Santa Rosa	70	640
San Bernardino	San Manuel	56	5.13
San Bernardino	San Manuel	56	7.5
San Diego	Campo	165	720
San Diego	Campo	165	160
San Diego	Campo	165	160

LANDS PURCHASED FOR CALIFORNIA INDIANS, 1906-1921

County	Bands	No. of Indians	Acres
San Diego	Los Coyotes	165	160
San Diego	San Pasqual	66	120
San Diego	San Pasqual	66	80
Shasta	Montgomery Creek	62	72
Shasta	Pit River	55	40
Shasta	Pit River	30	80
Siskiyou	Etna & Ruffey's	56	480
Sonoma	Alexander Valley or Wappo	74	24
Sonoma	Dry Creek	75	75
Sonoma	Sebastopol	76	40
Sonoma	Sebastopol		15.45
Sonoma	Stewart's Point	118	40
Sonoma	Wappo		30
Tehama	Paskenta		111.72
Tehama	Paskenta		148.16
Tuolumne	Tuolumne	78	289.52
Yolo	Rumsey	48	75
Yuba	Strawberry Valley	14	1/2



## INDIAN RESERVATION ON THE LOWER KLAMATH

A pamphlet entitled "Del Norte County as It is", published by John L. Childs, publisher of the "Crescent City News" in September, 1894, contains certain information in regard to the Indians of the northwestern corner of California. In this document the following statement occurs:

"The Klamath Indian Reservation, or rather the ex-reservation, is included in Klamath supervisor and school districts, and for many years was a great drawback to the development of the country around the river especially. The Reservation consisted of a mile in width from each bank of the river, and for a distance of 20 miles up from its mouth. The early settlers first located on the lands in the sixties, believing that the Reservation was abandoned by the government. However, shortly after they settled, the Indian Agent at Fort Gaston, Hocpa Reservation, Humboldt Co., sent down a squad of soldiers and evicted the settlers from their improvements, but it was of no avail for these trusty pioneers were not to be daunted by the threats of a little U. S. A. Captain, and immediately the soldiers left they returned to their homes. For quite a number of years this was the program on the part of the government, until finally a sergeant and two privates were located on the land permanently. The citizens still continued to reside on the land, and about 1886 a saltery was built by John Bomhoff & Co., they having received permission from the Indian Agent to build. This one-sided affair proved too much for other capital to stand, and in 1887 R. D. Hume, Esq., of Gold Beach, Or., sent down a scow, on which a house was built with complete equipments to carry on the business of general merchandize and salting salmon. This outfit was, in 1887-8, seized by a U. S. Marshal and the case was taken to Court. After a lengthy litigation the case was decided in favor of Hume, and he proceeded to build a cannery on the bank about one-half mile from the cannery built in the preceding year by John Bomhoff & Co. This cannery was finally washed away,

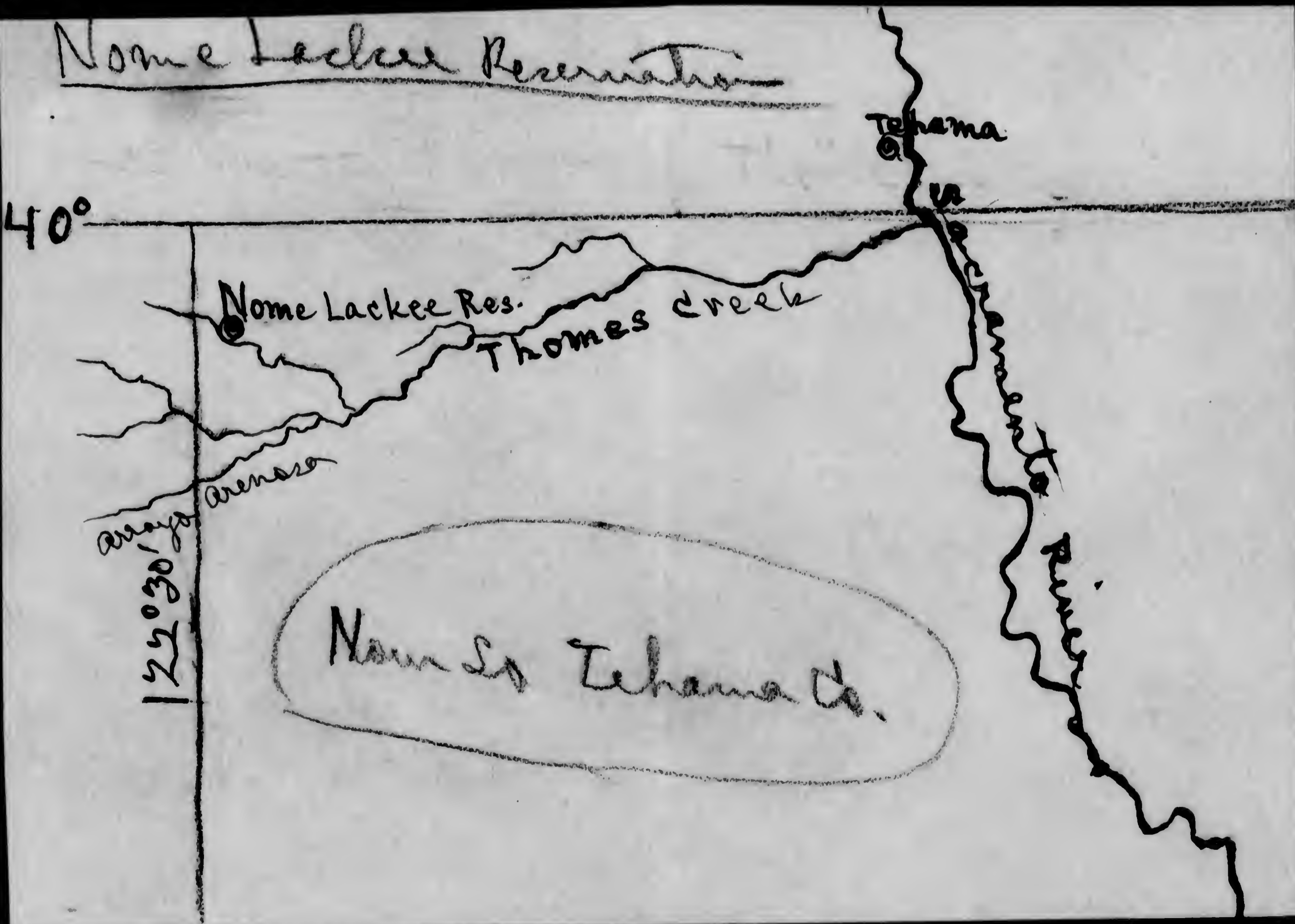
and the two companies, after much rivalry, consolidated and opened under the name of the K. P. & T. Co.

By the untiring efforts of Congressman Geary, the Reservation was declared open to settlement and one year granted in which to allot the Indians. This was done last year by Special Agent, A. H. Hill, assisted by County Surveyor P. D. Holcomb, and on May 21 of this year, the settlers were allowed to file. " (pp. 120-122)

Smith River Reservation

Rept. Comm. Ind. Affs. for 1863, 405, 1864.  
" " " " 1865, 113-114, 1865.

Nome Lackee Reservation



## Mendocino Reservation

In 1858 embraced a strip on the coast 10 miles long by 3 wide, extending from Hare Creek to a short distance above the **Bedatoe**.

Rept. Commr. Ind. Affairs for 1858, p.653. Mess.  
& Docs. H.R. 35th Cong. 2d Sess. Ex.Doc.2, 1858.

## CONDITION OF CALIFORNIA RESERVATION INDIANS IN 1861--J. Ross Browne

At Nome Cult Valley [Round Valley], during the winter of 1858-9, more than 150 peaceable Indians, including women and children, were cruelly slaughtered by the whites who had settled there under official authority, and most of whom derived their support either from actual or indirect connection with the reservation. Many of them had been in public employ, and now enjoyed the rewards of their meritorious services. True, a notice was posted up on the trees that the valley was public land reserved for Indian purposes and not open to settlement; but nobody, either in or out of the service, paid any attention to that, as a matter of course. When the Indians were informed that it was their home, and were invited there on the pretext that they would be protected, it was very well understood that as soon as Government had spent money enough there to build up a settlement sufficiently strong to maintain itself, they would enjoy very slender chances of protection. It was alleged that they had driven off and eaten private cattle. There were some 300 or 400 head of public cattle on the property returns, all supposed to be ranging in the same vicinity; but the private cattle must have been a great deal better, owing to some superior capacity for eating grass. Upon an investigation of this charge, made by the officers of the army, it was found to be entirely destitute of truth: a few cattle had been lost, or probably killed by white men, and this was the whole basis of the massacre. Armed parties went into the rancherias in open day, when no evil was apprehended, and shot the Indians down--weak, harmless, and defenseless as they were--without distinction of age or sex; shot down women with suckling babes at their breasts; killed or crippled the naked children that were running about; and, after they had achieved this brave exploit, appealed to the State Government for

aid! . . . They did it, and they did more! For days, weeks, and months they ranged the hills of Nome Cult, killing every Indian that was too weak to escape; and, what is worse, they did it under a State Commission, which in all charity I must believe was issued upon false representations. A more cruel series of outrages than those perpetrated upon the poor Indians of Nome Cult never disgraced a community of white men. The State said the settlers must be protected, and it protected them--protected them from women and children, for the men are too imbecile and too abject to fight. The General Government folded its arms and said, "What can we do? We cannot chastise the citizens of a State." . . . .

At the Mattole Station, near Cape Mendocino, a number of Indians were murdered on the public farm within a few hundred yards of the head quarters. The settlers in the ~~walley~~ valley alleged that the Government would not support them or take any care of them; and as the settlers were not paid for doing it, they must kill them to get rid of them.

At Humboldt Bay and in the vicinity, a series of Indian massacres by white men continued for over two years. The citizens held public meetings and protested against the action of the General Government in leaving these Indians to prowl upon them for support. ~~≠~~

~~During the winter of last year~~ . . . During the winter of last year a number of them were gathered at Humboldt. The whites thought it a favorable opportunity to get rid of them altogether. So they went in a body to the Indian camp, during the night when the <sup>poor wretches</sup> ~~Indians~~ were asleep, shot all the men, women, and children they could at the first onslaught, and cut the throats of the remainder. Very few escaped. Next morning 60 bodies lay weltering in their blood--old and young, male and female-- . . . Children climbed upon their mother's breasts and sought nourishment from the fountains that death had drained; girls and boys lay here

and there with their throats cut from ear to ear; men and women, clinging to each other in their terror, were found perforated with bullets or cut to pieces with knives--all were cruelly murdered! Let any who doubt this read the newspapers of San Francisco of that date. It will be found there in its most bloody and tragic details. Let them read of the Pit River massacre, and of all the massacres that for the past three years have darkened the records of the State. . . . . It was repeatedly represented that unless something was done the Indians would soon all be killed. They could no longer make a subsistence in their old haunts. The progress of settlement had driven them from place to place till there was no longer a spot on earth they could call their own. Their next move could only be into the Pacific Ocean. If ever an unfortunate people needed a few acres of ground to stand upon, and the poor privilege of making a living for themselves, it was these hapless Diggers. . . . .

I am satisfied, from an acquaintance of eleven years with the Indians of California, that had the least care been taken of them these disgraceful massacres would never have occurred. A more inoffensive and harmless race of beings does not exist on the face of the earth. But wherever they attempted to procure a subsistence they were hunted down; driven from the reservations by the instinct of self-preservation; shot down by the settlers upon the most frivolous pretexts; and abandoned to their fate by the only power that could have afforded them protection . . . . .

Of late years, however, they have been so harshly dealt with by the settlers that it is with great difficulty they can procure a scanty subsistence. They are in constant dread of being murdered, and even in the vicinity of the reservations have a startled and distrustful look whenever they are approached by white men."--J. Ross Browne in *Harpers Monthly Magazine* of August, 1861 (pp 306-315).



ONE OF THE MANY VIEWS AT SHERMAN BEAUTIFUL

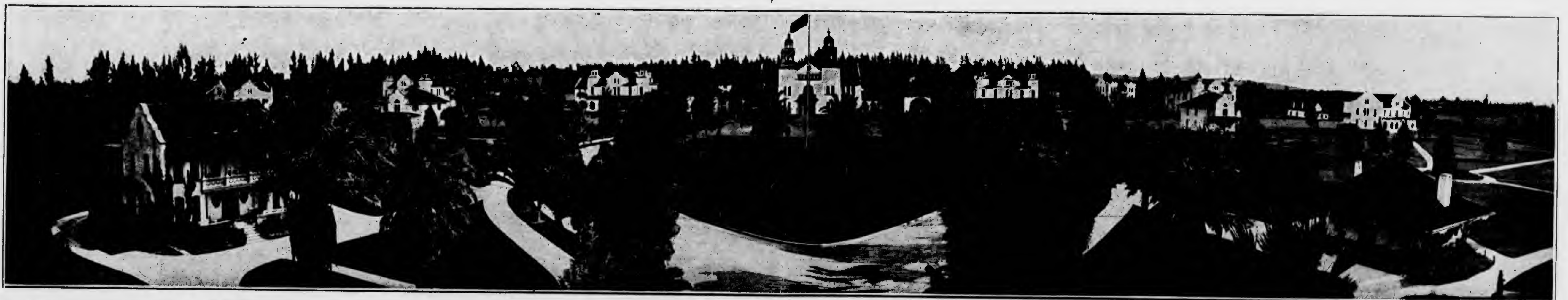


TWO BEAUTIFUL SCENIC DRIVES NEAR SHERMAN





Regimental Parade, A Weekly Feature at Sherman



[Moapa]

Pi-Ute Reservation

S Nevada

This reservation is mentioned by Powell in 1874  
as being in Southern Nevada on the Moapa Creek.

Statement of Maj. J. W. Powell before Com. on  
Ind. Affairs, H. R. Mis. Doc. 86, 43d Cong. 1st Sess. p. 2,  
Jan. 1874.

MOAPA RESERVATION

S Nevada

Powell in 1874

Fort Hall Reservation

Idaho

Powell in 1874 mentions <sup>Powell</sup> ~~this~~ reservation for the Shoshones and Bannacks as being on ~~the~~ Port Neuf River and extending to ~~the~~ Shoshone River. [1037 Indians in 1873]

Statement of Maj. J. W. Powell before Comm. on Ind. Affairs,  
H. R. Mis. Doc. 86, 43d Cong. 1st Sess. 2, 5, 1874.

MOAPA RESERVATION

S Nevada

Powell in 1874 states that on this reservation were 1,850,000 acres of land, of which 10,000 or 12,000 were fit for agricultural purposes on the Moapa; all the rest was desolate.

Statement of Maj. J. W. Powell before Comm. on Ind. Affairs, H. R. Mis. Doc. 86, 43d Cong. 1st Sess. p.2, 5 Jan. 1874.

MALHEUR RESERVATION

East Central Oregon

Powell stated in 1874 that there were about 500 Indians on this reservation, consisting of Pah-Utes, Bannacks, and Shoshones.

Statement of Maj. J. W. Powell made before the Comm. on Indian Affairs, Jan. 1874, pp. 2,6. H.R.Mis.Doc.86  
43d Cong. 1st Sess.

## San-Pete Creek Farm

This farm was situated in the west end of San-Pete valley and county. It was opened about 1856 under the directions of Agent Hurt for a band of the Utahs under Chief Arapeen, a brother of San-Pitch. One hundred and ninety-five acres of land were under cultivation 1858.

Mess. & Docs. H.R. 35th Cong. 2d Sess. Ex. Doc. no. 2  
1858. Rept. Commr. Indian Affairs, p. 563.

## Mendocino Reservation

In 1858 embraced a strip on the coast 10 miles long by 3 wide, extending from Hare Creek to a short distance above the Bedatoo.

Rept. Commr. Ind. Affairs for 1858, p.653. Mess.  
& Docs. H.R. 35th Cong. 2d Sess. Ex.Doc.2, 1858.

Nome Lackee Reserve

20 miles W of Tehama, in edge of foothills

In 1858 1500 Indians, remnants of various tribes from valley and foothills of the Sacramento, including Nome Lackees 1000; Feather River and Yubas (Noi-yu-cans), 220; Uye Lackees, remnants of Battle Creek, Trinity, and tribes from Upper Sacramento, 250; Noi Mucks, 100.

Rept. Commr. Ind. Affrs. for 1858, pp. 640, 651. Mess.  
& Docs. H.R. 35th Cong. 2d Sess. Ex. Doc. 2, 1858.



## Nome Cult Indian Farm

Established in 1856 by Simmon P. Storms and a few whites and 'Nevada' Indians whom he brought with him.

In 1858: 20 log houses for the Nevadas and Yubas, together numbering about 200. About 3000 Yukas made the valley their headquarters.

Rept. Commr. Ind. Affairs for 1858, pp. 636, 640, 641, <sup>652, 658-</sup> 659.

Nome Cult Indian Farm (Round Valley)

A few whites and Nevada Indians under leadership of  
Simon P. Storms founded the Nome Cult Indian Farm in 1856.-

Rept. Comm. Ind. Affairs for 1858, p.658, 1858.

Mess. & Docs. H.R. 35th Cong. 2d Sess. Ex. Doc. 2, 1858.

## Nome Cult Indian Farm

Established in 1856 by Simon P. Storms and a few whites and 'Nevada' Indians whom he brought with him.

In 1858: 20 log houses for the Nevadas and Yubas, together numbering about 200. About 3000 Yukas made the valley their headquarters.

Rept. Commr. Ind. Affairs for 1858, pp. 636, 640, 641, 659.

## Klamath [River] Indian Reservation

Boundaries recommended by Sub Agent H.P. Heintzleman in 1858: Northern boundary to commence at O-men on the coast (as recommended by S. G. Whipple) and continue in a direct line to a point opposite and distant 5 miles from Ter-war; from this point to within 1 miles of Klamath River, and thence to its eastern terminus.

Rept. Commr. Ind. Affrs. for 1858, p. 639, Mess. & Docs. H.R. 35th Cong. 2d Sess. Ex. Doc. 2, 1858.

M A P S

MENOMINI INDIANS (Map of part of Wisconsin showing  
location of Menominee Reservation).--

W.J.Hoffman: 14th Ann.Rept.Bur.Eth.for 1892-93:

Pl.I, facing p.33, 1896.

## Treaties with Indian Tribes

Complete list of 370 treaties ratified by Senate.  
Rept. Comm. Ind. Affs. for 1903, 469-474,  
1904.

Followed by Agreements ratified by Congress,  
Ibid, 475-479.

SURVEY OF BOUNDARIES OF INDIAN RESERVATIONS.

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L E T T E R

FROM THE

ACTING SECRETARY OF THE INTERIOR,

RELATIVE TO

*An appropriation for the survey of exterior boundaries of Indian reservations and subdividing portions of the same.*

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JANUARY 7, 1873.—Referred to the Committee on Appropriations and ordered to be printed.

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DEPARTMENT OF THE INTERIOR,  
*Washington, D. C., January 6, 1873.*

SIR: I have the honor to transmit herewith a copy of a letter from the Acting Commissioner of Indian Affairs, of the 3d instant, inclosing an estimate for an appropriation of \$500,000 for the survey of exterior boundaries of Indian reservations and subdividing portions of the same. This estimate also includes the amounts required for the survey of reservations in Oregon and the Territory of Washington.

The subject is submitted with the recommendation that it receive the favorable consideration of Congress.

Very respectfully, your obedient servant,

B. R. COWEN,  
*Acting Secretary.*

Hon. JAMES G. BLAINE,  
*Speaker of the House of Representatives.*

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DEPARTMENT OF THE INTERIOR,  
OFFICE OF INDIAN AFFAIRS,  
*Washington, D. C., January 3, 1873.*

SIR: I have the honor to submit herewith an estimate for an appropriation of \$500,000 for the survey of exterior boundaries of Indian reservations and subdividing portions of the same; which estimate I respectfully recommend be submitted to Congress for favorable action by that body. It is estimated that this amount will be required during the next fiscal year for the payment of surveys to be made west of the

ninety-sixth meridian in Indian Territory, and to provide, also, for the execution of such surveys as will probably be required east of that meridian in said Territory of the Choctaw, Creek and other reservations. Included in this estimate are also the amounts required for surveys of Indian reservations in the State of Oregon and Washington Territory, estimates of which have been submitted by the respective superintendents of Indian affairs for this State and Territory; the estimate for Oregon being \$17,000, and the estimate for Washington Territory being \$20,450.

Very respectfully, your obedient servant,

H. R. CLUM,  
Acting Commissioner.

The Honorable SECRETARY OF THE INTERIOR.

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*Estimate of appropriation required for the surveys of Indian reservations  
for the fiscal year ending June 30, 1874.*

For the surveys of the exterior boundaries of Indian reservations and subdividing portions of the same ..... \$500, 000



## California Indians in 1853.

The act making appropriation for Indian Dept. for year ending June 30, 1854, authorized the President to establish 5 military reservations in California, not to exceed 25,000 acres each, of public domain, "for Indian purposes", and provided for the abolition of the 3 then existing Indian Agencies in California.

On April 13, 1853,  
Edward F. Beale was charged with the duty of carrying this law into effect, and instructed to proceed to California without delay. - House Doc. 1, 33<sup>d</sup> Congress, 1<sup>st</sup> Sess., Pt. 1, 465, 1853.

Nome Ladies Resurrection

See reft. of Vincent E. Geiger, 2d. Jct., in  
Reft. Comm. 2d. Affs. for 1859, 806-808,  
1860.

# Tejon Reservation

J. R. Vanevard, Indian Agent at the Tejon, states in his report for 1859: "The extent of the Tejon or Sebastian reservation, when first established, was 50,000 acres of land, surveyed and set apart for the exclusive use of the Indians. This quantity was reduced by Congress to 10,000 acres, and, after a short lapse of time, increased to 25,000 acres. These changes have set aside the first survey, and have left what is reserved land entirely without meter or bounds. Neither the 10,000 acre nor the 25,000 acre tract has ever been surveyed." - Rept. Comm. Indian Affrs. for 1859, 811-812, 1860.

# Treaties

1	Treaty of Camp Fremont	March 19, 1851	} Senate Dec. 4, Special Session 1853 p. 239
2	Camp Barlow	Apr. 29, 1851	
3	Lu-pi-yu-ma	Aug. 20 "	
4	Fernando Felice	Aug. 22 "	
5	Klamath	Oct 6 "	
6	Coratom (supplemental to 5)	Oct. 12 "	
7	Scott Valley	Nov. 4 "	

act ff. 252 - 256

288 La. Calif Santa Isabel, Temecula &c

374 allusion to rejection

# Hoopa Resurrection

Rept. Comm. 2nd Apper. for 1866, 92, 1866.  
Ibid 95-96, 106, ~~107~~

Ibid for 1867, 106-107, 125-127, 1868.

Ibid for 1868, 125-126; 127; 132-134, 1868.

Ibid for 1869, 15; 16, 178; 190-191; 1870. 1870

Ibid for 1870: 77-78; 82-85, 1870

Ibid for 1871: 156-157; 157-160 (important as to condition + treatment of Indians); 324-325; 329-335, 1872.

Ibid for 1872: 66-67; 374, 376; 380; 1872

Ibid for 1873: 344, 1874.

Ibid for 1874: 73 (Hoopa, Redwood, + Siakh bands), 311-312. 1874

## Smith River Reservation

Rept. Comm. Ind. Affairs. for 1866, 93, 1866.  
Ibid 98-99, 106,

Ibid for 1867, 108-110, ~~129~~ 130, 1868.

Smith River Reservation about 10 miles NE of Crescent City, ~~located~~ from  
the ocean, + near to Oregon line (Ibid 129).

1868.

Ibid for 1868, 128-130, 1868.

Ibid for 1869, 15, 178, 195-199 <sup>(details of)</sup> ~~(abandonment)~~ 1870

## Brief History of California Indian Reservations

Rept. Comm. Ind. Affairs. for 1866, 105-107, 1866.

Important.

Rept for 1869, 15-17, 1870

## Tule River Reservation in Form

Rept. Comm. Ind. Affs for 1866, 93<sup>98, 107</sup>, 1866.  
Ibid 98, 107.

Ibid for 1867, p. 8, 105-106, 130-131, 1868.

Ibid for 1868, 134-136, 1868.

Ibid for 1869: 16-17, 182<sub>+</sub>-183; 187-188; 191-192; 193, 1870.

Ibid for 1870: 78-81; 87-90, 1870.

Ibid for 1871: 327-328; 338-341, 1872

Ibid for 1872: 67; 376; 381-382.

Ibid for 1873: 326-327, 1874 (speaks of prospect of early removal to new reservation [in So. Fk. Tule])

Ibid for 1874: 73-74; 315-316, 1874 (more about removal to new reservation) 1874

## Mendocino Reservation

Abandoned March 31, 1866. <sup>Charles Melby in</sup> (Rept. Comm. Ind. Affs  
for 1866, 91; description & remarks Ibid 92.  
Ibid 97, 105, 106.

Ibid for 1867, 134<sup>1868</sup> (Located by Henley in 1855; abandoned  
March 1, 1866) ↙ ↘

## Name Ladder Resurrection

Reft. Comm. 2d. apprs. for 1866, 107, 1866.  
Located about Sept. 1, 1854 by Capt. Henley.

Ibid for 1867, 122-123, 1868.

## San Pasqual & Pala Resurrections

Established Jan 31, 1870 by Executive order

Reft. Comm. 2d. apprs. for 1870, 72, <sup>74,90-94</sup> 1870.

Failure of project, Ibid for 1871, 328, 1872. Reft. of app. Ibid 341-346, 1872.

"San Pasqual ad Pala were established as *haciendas* under the secularization law of 1834" - B. C. Whiting, Reft. Comm. 2d. apprs. for 1871, 691, 1872. See also Ibid 692.



Ramona Reservation, So. Calif. -

Francisco Estudillo in Rept. Commr. Ind. Affs.,  
for 1893, 126, 1893.

## Mendocino Reservation

Early order of 1856 - restored to public domain by act Congress  
of July 27, 1868. - Refs. Comm. Ind. Affs. for 1886,  
303-304, 1886

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# Klamath River Reservoirs

- Reft. Comm. Ind. Affairs for 1884, XXXVIII-XXXVIII, 10, 1884  
Ind for 1885: XLVIII; 264-268 (tribes 266); 1885
- " 1886: XLIII; 43; (<sup>Exec. order of</sup> 302-3 Nov 1855); 1886
- " 1887: 9 (alt. 1200 hft); 1887
- " 1892: 230 (<sup>exec. i</sup> <sub>cess making</sub>); Act Cong. funding for 1892  
710 alt. + opening of river
- " 1894: 117; 1895 1895
- " 1895: 130. 1896
- " 1896: 125 1897
- " 1897: 115-116 1897
- " 1900: 204 1900

Nevada Reservoirs

Es. orders. Carlin Farms (of May 10, 1877 & Jan. 16, 1879).

Rpt. Comm. Ind. Affs. for 1886, 342-343, 1886.

Sage Valley Reservoir, Ibid 343

Hoopa River Reservoir, Ibid 343-345

Pyramid Lake or Truckee Reservoir, Ibid, 345

Walker River Reservoir, Ibid 345-346.

Smith River Revenue

Official recommendations of April 9, 1862.

Revenue discontinued by act Congress approved July 27, 1868.

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Fort Bidwell School, Modoc Co. Calif.

Joint Resolution of Congress authorizing use of  
abandoned military reservation for an Indian  
Training School -

Rept. Comm. Ind. Affs. for 1897, 397, 1897.

Greenville School, Plumas Co., Calif.

Deeded to Govt. by Women's Nat. Ind. Assoc.

Rept. Comm. Ind. Affs. for 1897, 421, 1897.

Reft Comm and affrs for 1863 }  
1864:

Con-Cow 93 } 350 of these left  
Hat Gal 93 } Round Valley Reservation  
in Oct. 1862 + wintered on  
Bidenell place on accounts  
(doubtless Chris)

Troubles at Ft Tejon & White River

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See Report of Lt Col B. L. Beall in House Rep.  
Doc. 76, 34<sup>th</sup> Cong. 3<sup>d</sup> Sess. 119-121,  
1857 (dated Ft. Tejon, May 3, 1856).



## Tejon Resurrection - 1856

Rept of B.L. Beall, Lt. Col. Commanding Post.

House Ex. Doc. 76, 34<sup>th</sup> Cong. 3<sup>d</sup> Sess. 139-141, 1857.

## Marie Locke Reservoir

Letter of Gen. John E. Wool, Commanding Pacific Div.  
U.S. Army, Benicia, Calif. dated Oct 5, 1856. - House Ex.

Doc. 76, 34<sup>th</sup> Cong. 3<sup>d</sup> Sess. 143-144, 1857.

# Nonelacher Reservation

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[name not used, but place located]

1854

Capt. E. D. Keyes in House Doc  
76, 34<sup>th</sup> Cong. 3<sup>d</sup> Sess. 88-89,  
1857.

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Nonelacher Reserve [name used]

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Aug. 1855

Thomas Henley in House Doc 76, 34<sup>th</sup>  
Cong. 3<sup>d</sup> Sess, p. 94, 1857.

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ibid, mention of Nonelacher by Gen.  
John E. Wool, ibid p. 95, 105,

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Reservations - Calif &c

See Royce, Indian Land Cessions,

Rept. Bur. Eth. for 1896-97, "1899" [= Dec. 1901].

contains data & boundaries of reservations &  
details as to curtailments & expansions -

# Klamath [River] Reservation

Rept. Comm. Ind. Affs. for 1866, 106, 1866.

Ibid for 1867, 108 (top of page), rept. of B.C. Whitier, Rept. Ind. Affs. for California, who states:

"Soon after the great freshet in 1861 which swept away the arable land and buildings belonging to the Klamath Reservation, the Indians were removed from the Klamath to Hunter River". (p. 108).

The Mendocino Reservation

Hutchings' Calif. Magazine, III, 157-160, 177-179,  
Oct. 1858.

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Tyle Indian Reservation--error for Tule

Yokut

Tyle Indian Reservation: 16 miles east of Porterville.--  
San Diego Sun, April 19, 1930.

See Tule River Reservation

Calif.: Smith River Valley (proposed Reservation)

Reft. Comm. Ind. Affrs. for 1862 <sup>317-318, 321-322,</sup> 389-310,  
1863; ~~and 321, 322 1865.~~

Calif. Reservations

Norme Lacker Resurrection

Abandoned. — Right Corner. Ind. Refs  
for 1882, 312, 314, ~~1883~~ 323-324, 1883

MARYSVILLE DAILY APPEAL (CONT.)

Sept. 30, 1862

[Con-cow]

Grand stampede from Nome Culte Indian Reservation--Cow Cow  
and Hat Creek Indians--crops not sufficient for winter [at the Reservation]



RIGHT TO FISH--KLAMATH RESERVATION

Treaty with the Klamath, etc., 1864 (Extract)

Article 1. . . . .

It is further stipulated and agreed that no white person shall be permitted to locate or remain upon the reservation, except the Indian superintendent and agent, employes of the Indian department, and officers of the Army of the United States, and that in case persons other than those specified are found upon the reservation, they shall be immediately expelled therefrom; and the exclusive right of taking fish in the streams and lakes, included in said reservation, and of gathering edible roots, seeds, and berries within its limits, is hereby secured to the Indians aforesaid: Provided, also, That the right of way for public roads and railroads across said reservation is reserved to citizens of the United States.--Indian Affairs, Laws and Treaties, Kappler, Vol. 2, P. 866, 1904.

RIGHT TO HUNT AND FISH--BLACKFEET RESERVATION.

Treaty with the Blackfeet, 1855. (Extract).

Article 3. The Blackfoot Nation consent and agree that all that portion of the country recognized and defined by the treaty of Laramie as Blackfoot territory, lying within lines drawn from the Hell Gate or Medicine Rock Passes in the main range of the Rocky Mountains, in an easterly direction to the nearest source of the Muscle Shell River, thence to the mouth of Twenty-five Yard Creek, thence up the Yellowstone River to its northern source, and thence along the main range of the Rocky Mountains, in a northerly direction, to the point of beginning, shall be a common hunting-ground for ninety-nine years, where all the nations, tribes, and bands of Indians, parties to this treaty, may enjoy equal and uninterrupted privileges of hunting, fishing and gathering fruit, grazing animals, curing meat and dressing robes. They further agree that they will not establish villages, or in any other way exercise exclusive rights within ten miles of the northern line of the common hunting-ground, and that the parties to this treaty may hunt on said northern boundary line <sup>and</sup> within ten miles thereof.

Provided, That the western Indians, parties to this treaty, may hunt on the trail leading down the Muscle Shell to the Yellowstone; the Muscle Shell River being the boundary separating the Blackfoot from the Crow territory.

And provided, That no nation, hand or tribe of Indians, parties to this treaty, nor any other Indians, shall be permitted to

establish permanent settlements, or in any other way exercise, during the period above mentioned, exclusive rights or privileges within the limits of the above-described hunting-ground.

And provided further, That the rights of the western Indians to a whole or a part of the common hunting-ground, derived from occupancy and possession, shall not be affected by this article except so far as said rights may be determined by the treaty of Laramie.

Article 4. . . . .

Provided also, That the Assiniboins shall have the right of hunting, in common with the Blackfeet, in the country lying between the aforesaid eastern boundary line, running from the mouth of Milk River to the forty-ninth parallel, and a line drawn from the left bank of the Missouri River, opposite the Round Butte north, to the forty-ninth parallel.

Article 5. The parties to this treaty, residing west of the main range of the Rocky Mountains, agree and consent that they will not enter the common hunting ground, nor in any part of the Blackfoot territory, or return home, by any pass in the main range of the Rocky Mountains to the north of the Hell Gate or Medicine Rock Passes. And they further agree that they will not hunt or otherwise disturb the game, when visiting the Blackfoot territory for trade or social intercourse.

Article 6. The aforesaid nations and tribes of Indians, parties to this treaty, agree and consent to remain within their own respective countries, except when going to or from, or whilst hunting upon, the "common hunting ground," or when visiting each other for the purpose of trade or social intercourse.--Indian Affairs Laws and Treaties, Kappler, Vol.2, 1904, P. 737.

RIGHT TO FISH--FLATHEAD RESERVATION.

Treaty with the Flatheads, etc., 1855 (Extract).

Article 3. . . . .

The exclusive right of taking fish in all the streams running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places, in common with citizens of the Territory, and of erecting temporary buildings for curing; together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land.--  
Indian Affairs, Laws and Treaties, Kappler, Vol. 2, 1904, P.723.

RIGHT TO FISH--QUINAIELT, RESERVATION.

Treaty with the Quinaielt, etc., 1855 (Extract)

Article 3. The right of taking fish at all usual and accustomed grounds and stations is secured to said Indians in common with all citizens of the Territory, and of erecting temporary houses for the purpose of curing the same; together with the privilege of hunting, gathering roots and berries, and pasturing their horses on all open and unclaimed lands. Provided, however, That they shall not take shell-fish from any beds staked or cultivated by citizens; and provided. . . . . --Indian Affairs, Laws and Treaties, Kappler, Vol. 2, 1904, P. 719-720.

Mendocino Reservation

Rept. Commr. Ind. Affs (for 1862) 313, 1863.

Nome Lacke Reservation

Zone to fires & its abandonment recommended.

Rept. Ind. Commr. for 1861, 22-23, 1861.

Reid 147 (population decreased from 2000-3000 to 200)

Apparently the first Indian Agents in  
California, <sup>under the United States</sup> were appointed by <sup>the military</sup> Governor Mason  
in 1847 or 1848 (Hittell, Hist. Calif. II, 675.)

Calif. Reservations in 1857.

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Calif Farmer Mar. 23, 1860.

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Calif Reservations

Diablo foothills - Senate Doc. 4, Special Sess. 75, 1853. Ibid 94, 95,  
105, 120-121,

Humboldt Co. 153

1<sup>st</sup> Indian Commrs, to California  
as provided by act of Congress approved Sept. 30,  
1850, Reuben McKee, Geo. W. Barbour, and  
O.M. Wozencraft were appointed by the President  
Commissioners "to hold treaties with various  
Indian tribes in the State of California."  
Senat Ex. Doc 1, 31<sup>st</sup> Cong. 2<sup>d</sup> Sess., 152, 1850.

Nome-Lake Reservation in 1863.

Rept. Commr. Ind. Affrs. for 1863, 399, 1864.

Calif. Reservations

Fresno, Kings River, Tulsi River, & Tejon.

- Rept. Commr. Ind. Affrs. for 1861, 142-3,  
1861. Ibid 145

Klamath River, Ibid 147.

Mendocino Ibid 148

Round Valley 148-49.



In 1853 the Commr. Ind. Affairs wrote:

"In conformity with a provision in the law, the 3 agencies in California have been abolished, leaving the agent only to manage & control the 100,000 Indians in that State. However active & energetic he may be, the utter impracticality of his being able, unaided and alone, to discharge even a material part of the numerous & complex duties towards the Indians and the government, necessarily incident to the new system of operations, must be too manifest to need the least argument. - House Doc. 1, 33<sup>d</sup> Cong. 1<sup>st</sup> sess. Pt. 1, 259, 1853.

# History of Calif. Reservations

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Rept. Comm. Ind. Affairs for  
1864, 12<sup>3</sup>, 1865.

"It is now proposed to establish not  
~~the~~ <sup>to</sup> ~~reserving~~ four reservations for the use of  
the Indians of California, from which all  
whites except government employes are to  
be excluded."

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Ibid <sup>126-129</sup> 117, 133, 134-136

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Reservations - 1865. - Rept. Comm.  
Ind. Affairs. for 1865, 111-116, 1865.

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In Nome Lacke Reservation in 1856.

4 tribes:

Nome-Lackes

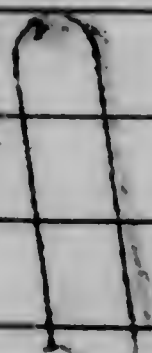
Nome-Cults

Nir-mucks (Noi-mucks)

Wye-Lackes (Wi-Lacke)

and until 'recently' a 5<sup>th</sup> tribe - the Nevadas (Yubas).

E. A. Stevenson in Rept. Commr. Indian Affairs  
for 1856, 802, 1857.



Indians on "Nome Lackee Indian Reservation" in 1859

Remnants of tribes of

✓ Nome-Lackees

✓ Wye-Lackees

✓ Noi-mucks

✓ Noi-Yucans

✓ Noi-Sas

Card

Rept. of Vincent E. Seiger, Agt. in Rept. Commr. Ind.  
Affrs. for 1859, 806-807, 1860.

↑ Senate Doc. 2, 36<sup>th</sup> Congress, 1<sup>st</sup> Sess.

Indians on Nome Lacks Reserve, July 1858

✓ Nome Lackees 1,000

Feather River & Yubas (Noi-yu-cans) 220

✓ Uye Lackee, Batter Creek, & Upper Sacramento Indians 250

✓ Noi Mucke 100

*figures in right column. 2nd. offers. for 1858.*

Senate Ex. Doc. 1, 35 = Lang. 2<sup>d</sup> Dec. 640, 1858.

✓ Yukas of Nome Cult (= Round Valley) 3000

2<sup>nd</sup> id. p. 641.

✓ Youkas of Nome Cult, 3. Bailey, 2<sup>nd</sup> id. 652.

2000

Early Resumptions [Senate Doc. 4, Special Sess.  
1853]

Description of them at west base Sierra along  
edge Sacramento valley Wegmcraft - 207-208

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Scott val. (224-225 <) mekel

La Joaquin val. + west foothills Sierra Sd of  
Stanislaus Riv. to Kings Riv. Adam Johnston 242.

Sarabla 244 + 248

288 (Sr. Calif. Santa Isabel <)

299.

327.

328

Ind. Apts, Calif -

Senate Ex. Doc. 1<sup>st</sup> Sess. 32<sup>d</sup> Cong. Vol. I, no. 1, p. 61. 1851-52.

Reservations in Calif

Wooppa (establishment of)

Rept. Comr. Ind Affs. for 1864, 13-14,  
~~1865~~ 117, 133, ~~134-135~~, 1865. Ind 119 (600 Indians in)

Date of formal establishment Aug. 21, 1864 (Ind 136)

Round Valley, Santa River, Mendocino  
Tule River, Tejon, Ind 12-13, 119.

Santa River Reser. 117, 126, 127

<u>Round Valley</u>	"	{ 117-118, 126-7 128-129, 136-7	} 119
<u>Mendocino</u>	"	{ 118, 126, 127 129-130	
<u>Tule River</u>	"	118, 125	

Census of Indians by Tribes on the  
Calif. Reservations Sept. 1, 1864 (total 3,845).  
Ind p. 119.

Tejon, 125-126; 131 (removal of all -200-Indians to  
Tule River (apparently in June 1864))

Orleans Valley Indians at Tejon, 125

Calif. Ind. Reservations in 1857.

Rept of Thos. J. Henley, <sup>of Kansas,</sup> Lt. Comm. Ind. Affrs for 1857,  
House Doc. 2, 35<sup>th</sup> Cong., 1<sup>st</sup> Sess., 675-691, 1857.

Calif. Ind. Reservations in 1858.

Senate Ex. Doc. 1, 35<sup>th</sup> Cong., 2<sup>d</sup> Sess., 635-661, 1858.

Calif. Indian Reservations

Tule River Indian Farm.

Rept. Comm. Ind. Affrs. for 1862, 328, 1863.

Weather

Temp.

Indians on & near  
Klamath River Reservations  
in 1856

Rept by Jas. A. Patterson, Agt.  
House Doc. 1, 34<sup>th</sup> Cong.,  
3<sup>d</sup> Sess., 800-801, 1856.



Establishment of Reservations  
in Calif.

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Tejon appears to have been established  
by E.F. Beale in 1854

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- { Nome Lake in Calaveras Co 1855
- { Mendocino (50 miles S of Cape Mendocino) 1855
- { Klamath River 1855

These 3 in 1855 or early 1856

Also 3 'Farms':

Fresno River 1855

Kings River 1855

Nome cult or Round Val. 1856

Rept Comm. Ind. Affairs, for 1856 -

House Doc. 1, 34<sup>th</sup> = Cong. 3<sup>d</sup> Sess. 567-8  
1856.

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See also Mendocino Reservations, Ibid.  
pp. 808-809 (important).

Calif. Reservations in 1856

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Tejon

Nome Lake

Mendocino

Klamath [River]

also 3 Farms:

Fresno River

Kings River

Nome cult [= Round Valley]

House Doc. 1, 34<sup>th</sup> = Cong. 3<sup>d</sup> Sess. 787-790, & 796-797, 1856.

L. Lea, Commr. Ind. Affairs, records  
in his report for 1852, the plan of  
forming "2 grand colonies" of the Indians  
of Calif - one in the northern, the other  
in the southern part of the State. -  
H. R. Ex. Doc. 1, 32<sup>d</sup> Corp. 2<sup>d</sup> Sess.,  
Pt. 1, 300, 1852.

Calif. Reservations Indians -

condition in 1871. See ~~Rept.~~ 3<sup>d</sup>  
Ann. Rept. Board Ind. Commrs., for  
1871, 144-152, 1872.

also 4<sup>th</sup> Ann. Rept. <sup>171</sup> 37, 1872.

also 5<sup>th</sup> " " 49, for 1873, 1874.

Notes on Calif. Reservations

Recommendations for combining the 4 of N. Calif.  
(Mendocino, Klamath River, Nome Lake, &  
Round Valley) into 2 (to be Round Val  
& Linn River).

Records 1 instead of 2 Dist. Ind  
Repts. for State -

Rept. Ind. Commr. (for 1863) 10-13, 1864.

[Nome Lackey] P. 94  
Reservation west of Tehama, between Elder Creek  
and Thomas' Cr. - "laid off by Colonel Henley". -  
Capt. E. D. Keyes in Ind. Affairs on the Pacific, House Doc 76,  
34<sup>th</sup> Congress, 3<sup>d</sup> Session, 88-89. 1857.  
Other refs in same vol.

Nome Culte

Nome Culte: Reference to Reservation--Marysville Daily  
Appeal, Sept. 30, 1862.

## Mendocino Reservation

In 1861 contained about 1,000 acres.

- Greatly injured by presence of saw mill at mouth of No-Yo River, destroyed fishing there & brought in white men.
- Repts. Comm. Ind. Affs. for 1861, 148, 1861.

Repts. Comm. Ind. Affs. for 1864, 118, 126, 127, 129-130, 1865.

## 'Fresno' Reservation' (on Mendocino River)

Original examination of land by Barham. - Senate Ex. Doc. 4, 1, 1  
70, 1853. <sup>Special Ass.</sup>

## Reservations recognized in Calif. in 1866:

1. Round Valley
2. Hoopa Valley
3. Tule River.

Repts. Comm. Ind. Affs. for 1866, 25, 1866.

Mendocino Reservation Station discontinued Mar. 31, 1866  
& property removed to Round Valley. (2 Ind 91)

Tule River Farm - 1865

Reft. Comm. 2d offers for 1865, 114, 1865

Hoopa Valley

Reft. Comm. 2d offers for 1864, 12, 13, 14, <sup>116-117, 119, 135, 136</sup> 1865 -  
(Establishment of Reservations - 1864, 2d ed 117 and 136 - Officially established Aug. 21, 1864, p. 136)

Reft. Comm. 2d offers for 1865, 113, 1865

SAN GORGONIO PASS SUGGESTED FOR A BIG INDIAN RESERVATION

J.W. Denver, Commissioner of Indian Affairs, in a letter to Thos. J. Henly, Supt of Indian Affairs in California, dated August 14, 1857, states:

"With a view of effecting, if possible, the concentration of the Indian tribes of California within these reservations, I would suggest the policy of establishing a new reserve in the neighborhood of the present locality of the Cavesons, in the San Gorgonio Pass, if the same should be found to be an eligible point, to be surveyed and set apart for the future home of all the Indians in the southern and southwestern portions of the State. . . . .

"You will perceive that it is contemplated to abandon the Tejon, the Fresno, and all the Indian ranches or farms between the latter point and the southern boundary of the State, and concentrate the Indians thereof within the valley of the San Gorgonio Pass"--Rept. Commr. Indian Affairs, for 1857, House Doc. 2, 35th Congress, 1st Sess., 694-695, 1857.

Inasmuch as the Commissioner of Indian Affairs cannot be believed to have intentionally recommended the removal of the non-desert Indians of California to the desert, where they would have perished in a very short time, it must be concluded that he was densely ignorant of the physiography of the State and had been grossly misinformed.

Division of California into two Indian Districts, Northern & Southern

The act of June 19, 1860, making appropriations for the Indian Service for the year ending June 30, 1861, provided for a reorganization of Indian affairs in California and gave the Secretary of the Interior discretionary power to divide the State into two districts, a Northern and a Southern.

This was at once done, and the boundary between the two was fixed at the southern boundaries of Marin, Sonoma, Colusa, Sacramento, and Eldorado Counties & thence easterly to the eastern boundary of the State.

Under date of July 30, 1860, John A. Dreibelbie was appointed Superintendent Agent of the Northern Indian District, with headquarters at Shasta City, Shasta Co., Calif.; and J. Y. McDuffie, Superintendent Agent of the Southern Indian District, with headquarters at San Francisco.

The salaries of these Superintendent Agents were \$3,600, and each was authorized to appoint a 'supervisor' to instruct the Indians in husbandry, at a salary of \$1,800.

The only instructions given the Superintendent Agents, apart from ~~advisory~~ details relating to their appointment and finances, were, to cut down the expenditures for the Indian Service in California, and to procure situations for the Indians - better on and off the reservations - so that they might "be comfortably supported, free of all expense to the Government." - Report.

Comm. Indian Affairs for 1860, 20, 230-234, 1860.

In 1862 the Secy of the Interior recommended the merging of these two Superintending Agents into one. - Report. Comm. Ind. Affs. for 1862, 8, <sup>41</sup>1863.

# Tule River Reservation

- Rept. Comm. Ind. Affs. for 1875: 96, 228-230 (apt rept). 1875
- Quid for 1876: 17-18, 1876 (for Tule, Tejon, Wickumni, Kaweah, Kings River, and Monoche)
- " 1877: 41-43 (actual removal in Dec. 1876 to So. Fk. Tule Reservation, p. 41); 246 (tribes) 228/1877
- " 1878: 13-14; 242-243 (describ. & acc. orders); <sup>280 (tribes +</sup> 298 (statistics); 1878
- " 1879: 12-13 <sup>(with map)</sup> (apt rept.); <sup>(tribes & statistics)</sup> 218; 228; 1879
- " 1880: 10-11 <sup>(apt. rept.)</sup> <sup>228</sup> (tribes + statistics); 238 + 258; 1880
- " 1881: 18-19 (apt. rept.); 261 (tribes); 1881
- " 1882: 16-17 (apt. rept.); 258-259 <sup>(22 orders +)</sup> (reclamation); 302 (tribes); 1882
- " 1883: 18-20 (apt. rept.); 256 (tribes) <sup>(statistics)</sup> 266; 1883
- " 1884: 17-18 <sup>(apt. rept.)</sup>; 256 (tribes); 284 (statistics); 1884
- " 1885: 12-14 apt. rept.; ~~48~~ 1885
- " 1886: 48 (apt. rept.); <sup>(Exec. order of)</sup> 313.41878+1885; 1886
- " 1887: XLIX-L <sup>(consolidation with mission agcy)</sup>; 13-14 <sup>(Indians killed their medicine men)</sup> (apt. rept.); (tribes 302) 1887
- " 1894: 118, 1895
- " 1895: 131 1896
- " 1899: 172 (school) 1899
- " 1901: 198 (school) 1902
- " 1905: 191-192 <sup>(describ. + gen. remarks)</sup>; 1906
- "
- " 1908: 183 (population 151); 150 (tribes <sup>150</sup>); 1909



MISSION INDIAN RESERVATIONS AND VILLAGES IN SOUTHERN CALIFORNIA, 1894.

(Francisco Estudillo in Report Commr. Indian Affrs. for 1894, p. 123, 1895)

	<u>Population</u>	<u>Tribe</u>
Yuma Reservation	531	Yuma
Saboba or San Jacinto	146	San Luis Rey
Mesa Grande Reserv.	178	San Luis Rey
Potrero Reserv.	255	San Luis Rey {comprises La Jolla and Ya Peche & part of Rincon villages. p. 11}
Tule River Res.	184	Tule Rivers
Cahuilla Res.	239	Cahuilla
Capitan Grande Res.	100	Dieguino
Sycuan Res.	38	Dieguino
Santa Ysabel Res.	75	Dieguino [San Luis Rey in next ref. p. 134]
San Manuel Res.	38	Serrano
Temecula Res.	189	San Luis Rey
Rincon Res.	130	San Luis Rey
Los Coyotes Res.	127	San Luis Rey
Agua Caliente Res.	54	Cahuilla
Campo Res.	21	Dieguino
Cuyapipe Res. [Long Canyon]	39	Dieguino
Pauma Res.	46	San Luis Rey
Santa Rosa Res.	51	Cahuilla
Pala Res.	53	San Luis Rey
Augustine Res.	43	Cahuilla
Cabazon Res.	96	Cahuilla
Torres Res.	265	Cahuilla
Twenty-nine Palms Res.	13	Cahuilla
On Warner Ranch (villages):		
Puerta de la Cruz	11	San Luis Rey
Agua Caliente	152	San Luis Rey
Puerta Ignoria	51	San Luis Rey
San Luis Rey village	50	San Luis Rey
San Felipe village	78	San Luis Rey
Morongo Res.	228	Dieguino [corrected to Serrano in next ref. p. 134.]

Others mentioned in same report:  
 Inaja p. 119  
 Cosmit " "  
 Laguna " "  
 Mahzanita 120  
 La Posta " "  
 Ramona " "  
 San Jose 121  
 San Pasqual " "  
 Pechanga " "  
 Santa Ynez " "

Nevada Camp

Nevada camp in 1858 controlled by  
None Lackee Reservation.

Rept. Commr. Ind. Affrs. for 1858  
p.651. Mess. & Docs. H.R.35th Cong.  
2d Sess. Ex. Doc. 2, 1858.

## REMOVAL OF YUBA INDIANS TO NOME LACKEE RESERVATION

[Sacramento]

The California State Journal, Dec. 25, 1857 writes as follows of the removal of Yuba Indians to Nome Lackee Reservation.--

"Yesterday a continual crowd of visitors frequented the store house on the levee near K Street, where were congregated a number of members of the Yuba tribe of Indians, who are in course of removal to the Nome Lackee Reservation, by the Indian Agent, Col. Henley. They are the last of the Yubas, and number only 66 in all, of whom 36 are men, 20 women and 10 children. The Chief is a fine-looking fellow named Captain John, and is full of dignity. Much surprise was exhibited by the small number of children in comparison with the adults. We were told as something remarkable, that for some unaccountable reason their children latterly have scarcely passed the age of two years before they were seized with disease and died. We noticed two of the youngsters who were exceedingly pretty. Great difficulty was experienced in removing them from their old home, and finally a police force had to be called in order to enforce their departure. On finding they were obliged to submit, they burned their houses and accoutrements of all and every description. Learning they were going to burn their acorns also, Col. Henley offered to purchase them. They agreed to sell provided he would pay them in blankets. This he promised to do. But, notwithstanding, during his temporary absence, the acorns were reduced to ashes to keep company with the remains of the rest of their worldly goods. This tribe ten years ago consisted of 2,000 souls, but is now dwindled down to the insignificant number mentioned above . . . "--California State Journal, Dec. 25, 1857.

Round Valley Reservation Indians

"Rev. J. L. Burchard, a former agent at the Round Valley reservation, gave the following information to a reporter of the San Francisco Call, in January 1878:

"There are on the reservation about 1000 Indians. . . . .  
The various tribes on the reservation are the Potter Valley, Ukiah valley, Little Lake, Conchow, Redwood Valley, Pet Nuer, Ukies, and Wylackies. As a rule, they are distinct in habits, language and appearance."

*Palmer*: --History of Mendocino Co. 171, San Francisco, 1880.  
Alley, Bowen & Co. Pubrs.

✓

### TULE RIVER INDIAN FARM.

To secure the grain crop in 1862, the farm was rented, and the proposal is made to give up the further renting of this farm and remove the Indians to Tejon Reservation "some 90 miles further south. Therefore, before such a step is taken, I would again most respectfully urge upon the department the necessity of establishing the title of the United States to the Tejon Reservation."--J.P.H. Wentworth in Rept. Commr. Ind. Affrs. for 1862, p.328, 1863.

ROUND VALLEY RESERVATION (Pitt River Indians)

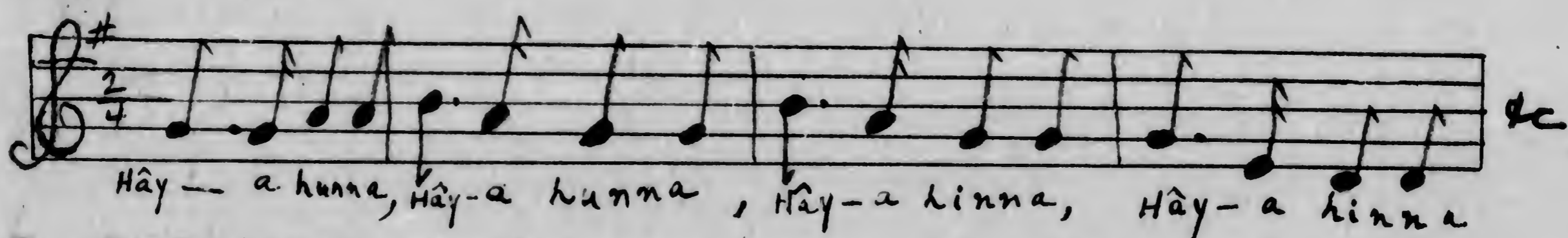
Col. Francis J. Lippitt, who lived in California from 1847 to 1851, then again from 1855 to 1863, and who was in command of the Humboldt District in 1862-3, in his 'Reminiscences' published in 1902, writes as follows concerning Indians of the Round Valley reservation.-

"The principal Indian reservation in California [114] was Round Valley, in Mendocino County. There were then some thousands of Indians upon it. It being in my military district it was my duty to go and inspect it. I took with me my adjutant, and I think another young officer. Of the different tribes there the Pitt River Indians were the most numerous. My first visit was to the young squaw who was known as their Queen. I found her to be a girl of some 18 or 20 years of age, whose form was as straight as an arrow and a perfect model for a sculptor. Her bearing was most graceful and dignified. Her complexion was decidedly lighter than that of her subjects, and her face was really refined and beautiful. She could speak no English except that when I was introduced to her she said 'I--am--good.' It was explained to her that I perfectly understood what she meant, and I took my leave of her with all the respect

Francis Lippitt: Round Valley Reservation. (2)

I would have shown to the Queen of England.

A bevy of young squaws then got up an entertainment [114] for me. They retired to a short distance in the woods, and in a few minutes returned with their skirts puffed out with sprigs and leaves (their ball dress?). They were laughing merrily as they formed in line, and with hands joined began a singular dance, which consisted in raising each foot alternately with corresponding swaying of the body from side to side. They sang as they danced. I succeeded in catching both the words and the music, and here they are:



F. J. Lippitt, Reminiscences, pp. 114-115, 1902.

CALIFORNIA, NEVADA AND UTAH INDIAN SCHOOLS AND AGENCIES

Title of School or Agency

Post office

Northern Mission Agency

Riverside, Calif.

Southern Mission Agency

Pala, Calif.

Western Shoshone School

Owyhee, Nevada

Reno Agency

Reno, Nevada

Goshute School

Ibapah, Utah

Shivwits School

Santa Clara, Utah



LANDS PURCHASED FOR CALIFORNIA INDIANS, 1906-1921

County	Band	No. of Indians	Acres
Butte	Enterprise No. 1	51	40
Butte	Enterprise No. 2	8	40
Butte	Mooretown	53	80
Calaveras	Sheep Ranch	12	2
Colusa	Colus	63	40
Colusa	Cortina	47	480
Del Norte	Crescent City	50	100
Del Norte	Smith River	163	163
Eldorado	Eldorado	53	80
Eldorado	Sacramento (Verona)	34	160
Fresno	San Joaquin or Big Sandy	114	280
Fresno	Table Mountain	90	160
Glenn	Grindstone	56	80
Humboldt	Bear River	29	15
Humboldt	Blue Lake or Mad River	45	26
Humboldt	Lower Eel River	60	20
Humboldt	Trinidad	43	60
Inyo	Bishop		15
Inyo	Piutes (Under Bishop Sch.)	200	80
Lake	Big Valley	92	80
Lake	Cache Creek	32	160
Lake	East Lake <i>(Sulphurbank)</i>	134	88
Lake	Middletown or Loconami	51	108.70
Lake	Scotts Valley	60	56.68
Lake	Upper Lake	285	143

LANDS PURCHASED FOR CALIFORNIA INDIANS, 1906-1921

County	Band	No. of Indians	Acres
Madera	North Fork	200	80
Madera	Polasky or Millerton	55	140.86
Mendocino	Cahto Laytonville	98	200
Mendocino	Coyote Valley (above Ukiah?)	48	100
Mendocino	Guideville		34.12
Mendocino	Guidiville <i>Sisunville?</i>	92	50
Mendocino	Hopland	120	630
Mendocino	Point Arena		40
Mendocino	Point Arena or Manchester	84	75
Mendocino	Potter Valley	72	16
Mendocino	Redwood Val. & Little Riv.	51	80
Mendocino	Sherwood	41	60
Mendocino	Sherwood	92	230.72
Mendocino	Ukiah or Pin <sup>ole</sup> ville	130	95.28
Modoc	Cedarville	82	17
Placer	Auburn	25	20
Placer	Colfax	64	40
Riverside	Palm Springs	35	800
Riverside	Pechanga or Temecula	179	235
Riverside	Santa Rosa	70	640
San Bernardino	San Manuel	56	5.13
San Bernardino	San Manuel	56	7.5
San Diego	Campo	165	720
San Diego	Campo	165	160
San Diego	Campo	165	160

LANDS PURCHASED FOR CALIFORNIA INDIANS, 1906-1921

County	Bands	No. of Indians	Acres
San Diego	Los Coyotes	165	160
San Diego	San Pasqual	66	120
San Diego	San Pasqual	66	80
Shasta	Montgomery Creek	62	72
Shasta	Pit River	55	40
Shasta	Pit River	30	80
Siskiyou	Etna & Ruffey's	56	480
Sonoma	Alexander Valley or Wappo	74	24
Sonoma	Dry Creek	75	75
Sonoma	Sebastopol	76	40
Sonoma	Sebastopol		15.45
Sonoma	Stewart's Point	118	40
Sonoma	Wappo		30
Tehama	Paskenta		111.72
Tehama	Paskenta		148.16
Tuolumne	Tuolumne	78	289.52
Yolo	Rumsey	48	75
Yuba	Strawberry Valley	14	1/2

The following document is a duplicate of the preceding document. It may contain annotations and corrections not found on the original.

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Madero	Polasky or Millerton	55	140.86
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Mendocino	Coyote Valley	48	100
Mendocino	Guideville		34.12
Mendocino	Guidiville	92	50
Mendocino	Hopland	120	630
Mendocino	Point Arena		40
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Modoc	Cedarville	82	17
Placer	Auburn	25	20
Placer	Colfax	64	40
Riverside	Palm Springs	35	800
Riverside	Pechanga or Temecula	179	235
Riverside	Santa Rosa	70	640
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San Bernardino	San Manuel	56	7.5
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Sonoma	Dry Creek	75	75
Sonoma	Sebastopol	76	40
Sonoma	Sebastopol		15.45
Sonoma	Stewart's Point	118	40
Sonoma	Wappo		30
Tehama	Paskenta		111.72
Tehama	Paskenta		148.16
Tuolumne	Tuolumne	78	289.52
Yolo	Runsey	48	75
Yuba	Strawberry Valley	14	1/2

## Suggested Reservations

Brevet Brigadier General B. Riley, Commanding the 10th Military Department of the Army in California writes as follows regarding the condition of the Indians in a report to the Adjutant General, dated Monterey, Calif., Oct. 15, 1849.--

"The Indians of California are scattered throughout the whole extent of the country from north to south, but in the greatest numbers along the western slopes of the Sierra Nevadas in small bands or rancherias without any general organization, and generally without acknowledging any authority superior to that of the captains or chiefs of their rancherias. They are divided into three classes: the Christianized Indians or neophytes of the Missions, many of whom are domestics in the families or upon the ranches of the inhabitants of California and are properly subject to the local laws of the country.

The friendly or tame Indians (mansito) living in small communities on the banks of the Sacramento and San Joaquin and their tributaries, living upon game and fruit. These are of a very degraded class but generally harmless and inoffensive, living in constant and friendly intercourse with the whites in their neighborhood.

The wild Indians of the Sierra, more degraded than either of the other classes, living in the slopes of the Sierra and subsisting upon game, acorns, roots, and upon the products of their thieving incursions.

Among these are many renegade Christian Indians who by their



superior tact and intelligence have risen to a controlling influence among these Indians and are leaders in the incursions for stealing horses and in all acts of hostility against the whites. All of these Indians are greatly addicted to intemperance, and when in contact with rapidly acquire all the vices and none of the virtues of the whites.

So many different dialects are spoken among the Indians of California that the inhabitants of rancherias separated by but a few leagues are unable to understand each other; and among the neophytes of the same mission, three or four, or even a greater number of distinct languages are frequently spoken . . . . .

As suitable districts for reservations the country immediately east of the Lake Buenavista Tulares of Fremont extending to the coast of the Sierra, and that around the laguna northeast of Sonoma are suggested. These districts are more densely populated by Indians than any others in California.\*

Bvt. Brig. Genl. B. Riley to Adjutant General, Headquarters 10th  
Dept., Monterey, Oct. 15, 1849. Letter on file in  
War Dept., under head "Letters Received Adj. Genl." 1849 R 36.

## NOMA LACKA RESERVATION

According to Miss Golda Schoenfeld based on an interview with Mrs. Kathryn Halley, a resident of the region, the ruins of the Moma Lacka reservation headquarters were as follows: "The adobe walls of at least two rooms of the soldiers' barracks where the company of soldiers were quartered in the '50's on the once important Noma Lacka reservation are disappearing. The smooth and level parade ground will always be there when nothing is left to mark the spot of a bit of interesting history; when the trees outlining the avenue or promenade are gone and the last of the grand old oaks has fallen. The finest grove of oaks in that part of Tehama county was situated on the south side of the creek that ran through the reservation.

"The barracks and parade ground were on the north side of the small stream. Of the Cottonwood trees lining both sides of the promenade, most of those on the south line are alive, while the north line of trees has suffered a loss of about one half its number or more. They have not been cut out, they simply died. The irrigation ditch which gave them their start in life is still well defined. But the beautiful grove of grand old oaks has been depleted by half or more than half in the past 50 years. . . .

"The old government ditch that brought water from the flume to the head of Mill creek on the reservation is still well preserved. Some of the timber supports of the old flume placed in the rock walls of Elder creek canyon about seventy years ago are just as good as ever.

"The old Washington house, which was the headquarters of the reservation, is on the north branch of the little Mill creek which runs through the old Noma Lacka reservation, very close to the little mill that ground wheat for the Indians." ✓

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✓ Red Bluff Times, Mar. 8, 1930, based on an article in the Red Bluff Sentinel of Mar. and Apr. 1923.

U.S. STATUTES ON ALLOTMENTS OF LAND TO

CALIFORNIA, NEVADA, & IDAHO INDIANS

Indians of Klamath River Reservation, Vol. 27, p. 52, 1892.

Yuma, Vol. 28, pp. 332-36, 1894.

Agricultural, Grazing & Timber Lands in Round Valley,  
Vol. 26, p. 658s. 1, 1890

Carson National Forest, Vol. 35, p. 2241, 1909  
Vol. 36, p. 2741, 1910.

Fort Hall Reservation, Vol. 25, p. 688, 1889.  
Vol. 36, p. 1063s. 5, 1911  
Vol. 36, p. 275 b s. 7, 1910.

Sequoia National Forest, Vol. 35, p. 2250, 1909.  
Vol. 26, p. 2727, 1910.

Trinity National Forest, Vol. 35, p. 2243, 1909.  
Vol. 36, p. 2765, 1910

## INDIANS LEAVING ROUND VALLEY RESERVATION

The Red Bluff Semi-weekly Independent, Oct. 3, 1862, publishes the following:

"We are informed by Mr. L.V.Loomis, that 400 Indians from the Round Valley Reservation are encamped on Thomes' Creek, on their way to their old homes in the hills and mountains. The Indians state that they left the Reservation for fear of starving to death the coming winter, as there is nothing there for them to eat. We had supposed that the Reservation at Round Valley was well supplied with provisions--if it is not, somebody must be in the blame. It may be that the Indians make this as an excuse to get away, and if so, they should not be suffered to proceed any farther, for we want no more Indian wars--which will certainly come if they are permitted to return to their old haunts. Where is Superintendent Hanson? This Indian hegira needs looking after. If the Indians are provided for at Round Valley, they should be sent back; but if ~~the~~ Government pens them up only to starve them, we would recommend shooting as the quickest way of disposing of them. The Indian question in this State has been a great eye-sore to the Government, and cost enough to have the Indians well provided for. In order to live, the Indians must eat; game and wild oats are scarce, and if they go back to their old haunts, we shall hear of depredations being committed upon stock; stock owners will retaliate by killing the depredators; this will open the ball and another war will be on the hands of the Government, and another million or two of dollars will be spent in subduing, and again removing the Indians back to the Reservation. . . . --Red Bluff (Calif.)  
Semi-weekly Independent, Oct. 3, 1862.

## INDIANS AT NOME LACKEE RESERVATION

The following is from the Sacramento Daily Democratic State Journal, November 2, 1855.--

"Col. Henley informs the Marysville Express that he has been gathering the Indians from Bear River across to the Yuba, including those at Nevada, Grass Valley, Routh and Ready and all along Deer Creek. Nearly all those scattered along the Yuba, on both sides, for a distance of 20 miles, have been gathered in, together with their chiefs and head men, and on Monday they were crossed over the Yuba at Long Bar, numbering in all, men, women and children, 165. The number will probably be increased between the Yuba and Sewell's Ranch, to 200, who will be in a few days quietly located at Nome Lackee, where everything is provided for their reception."

Sacramento Daily Democratic State Journal, November 2, 1856.

## INDIAN MASSACRES

For premeditated, cold-blooded, and wholesale slaughter of Indians on the Round Valley or Nono Cult Reservation, see 'Majority and Minority Reports of the Special Joint Committee on the Mendocino War', California Legislature, 1860.

It relates chiefly to Yuke, Yukiah, and Wilakke tribes (tribal names variously spelled); mentions also Kaza-Pomas, Cahto-Pomas, Chebal-na-Poma, Chedil-na-Poma, Camebell-Poma, Wappa Indians, Yosul-Pomas, Yubas, Nevadas, Numstrattes, Shumairs, Whistlers, Callya-Pomas, and Tartars.

## INDIANS ON NOME LACKE RESERVE

Corded

A. S. Taylor publishes in the California Farmer the following notes on Indian population "prepared mostly from Official Reports of the Indian Bureau at Washington City":

	Males	Females	Total
· <u>Nome Lackes</u>	450	320	770
· <u>Noi Mucks</u>	40	30	70
· <u>Wye Lackes</u>	22	15	37
· <u>Noi Yucans</u>	10	16	26
· <u>Noi Sas</u>		13	13
· <u>Yukas at Nome Cult</u>			3, 000
· <u>Nevadas</u>			25

[Note: This table is quoted from Rept. Commr. Ind. Affairs for 1862, p. 359, 1863.]

A.S. Taylor, Calif. Farmer, June 12, 1863.

Carded

## INDIANS ON FRESNO RESERVE

A.S. Taylor publishes in the California Farmer the following notes on Indian population "prepared mostly from Official Reports of the Indian Bureau at Washington City." ✓

<u>Tucson, Fresno Reserve</u>			
	<u>Males</u>	<u>Females</u>	<u>Total</u>
· <u>Nelcelchumnees</u>	45	40	85
· <u>Potoencies</u>	60	50	110
· <u>Noot-choos</u>	45	40	85
· <u>Pohoneches</u>	55	50	105
· <u>Chow-chilas</u>	45	40	85
· <u>How-chees</u>	8	10	18
· <u>Pitchatches and Lal Linches</u>	80	70	150
· <u>Coss-was</u>	40	48	88
· <u>Monos</u>	260	275	535
· <u>Wartokes, Iteeches and Chopees</u>	150	140	290
· <u>Watches</u>	40	35	75
· <u>Notonotos and Wemelchees</u>	100	90	190
· <u>Cowwillas</u>	60	50	110
· <u>Telemnies</u>	50	55	105
· <u>Cove-chances</u>	115	125	240
· <u>Tatches and Mowelches</u>	80	85	165

A.S. Taylor, Calif. Farmer, June 12, 1863.

✓ Quoted from Rept. Commr. Ind. Affairs for 1862, p. 359, 1863. The use of the word 'Tucson' in the heading is probably an error, the heading in the Commr's Rept. being "Fresno Reserve".



Reservations

Carded

INDIAN WAR, NORTHERN CALIF. REDWOOD TRIBE.

The following note appears in the Marysville Weekly Express, March 19, 1859. --

"It affords us pleasure, says the Humboldt Times, to announce that the Indian War in our country may now safely be considered very nearly at an end. Gen. Kibbe was in town on Thursday, and entered into a contract with Captain Woodley, of the bark Fanny Major to take another batch of prisoners to Mendocino. The General informs us that Captain Messic had, on Monday Last, 75 prisoners, and that Lieut. Winslett had captured about 25 more, which had not left camp when he left. The Indians are entirely starved out, and the weather has been so severe that they could not hunt in the mountains, and dare not go down on the streams.

The Redwood prisoners captured by a party of citizens, some two weeks since, on Mad River, are pointing out the camps of the Redwoods to the volunteers, and the Indians are captured without difficulty. The General left here under the impression that a cleansweep of the Redwood tribe would be made this week. ..."

Marysville Weekly Express, March 19, 1859.

Carded

## NORTHERN PIUTE

John J. Powell, in a book on Nevada published 1876, states that Pyramid Lake and adjoining lands "have been set apart as a reservation for the use of the Pah-Ute Indians, this being the ancient headquarters, and present home of that tribe."--John J. Powell, Nevada, the Land of Silver, 197, 1876.

## INDIAN RESERVATIONS

Executive Orders Relating to Indian Reservations, 1855-1912.

Published in 1912; Government printer.

Indian Reservations in Report of Commissioner for 1920.

Contains descriptions of reservations, exemptions, &c.

Laws of June 1892; Statutes at Large, 1891-1893.

**MAD RIVER INDIANS**

*Cord*

The San Francisco Weekly Herald,  
May 17, 1860, states that the Mad  
River Indians have been lately con-  
ducted to the Klamath Reservation.

San Francisco Weekly Herald, May 17,  
1860.

*Carded*

PIT RIVER, McCLOUD & SACRAMENTO  
INDIANS VISIT ROUND VALLEY RESERVATION

The Red Bluff (Calif.) Semi-weekly Independent, Nov. 1, 1861, publishes the following:

"Mr. A.L. Downer, Special Indian Agent for the removal of the various tribes of Indians to the Reservation, called upon us yesterday, and informed us that he is on his way to Round Valley with a delegation from Pit River, McCloud and Sacramento

tribes, who have agreed to go to Round Valley and see for themselves. Should the country please them they will go peaceably there and live for the future. The Indians in the Pitt River country having been often deceived by the white men, Mr. Downer experienced considerable difficulty in getting their confidence; and not until he had pledged his life, and given his knife into the hands of one of the Chiefs as a guarantee for their safe return, would they consent to accompany him. Should Mr. Downer be successful, he will be deserving the thanks of a large portion of the citizens of our county, as well as Shasta."--Red Bluff (Calif.) Semi-weekly Independent, Nov. 1, 1861.

✓ O.K.

Cardet

## INDIAN TRIBES NOME LACKEE RESERVATION

The Sacramento Daily Democratic State Journal (April 17, 1856) in giving an account of the Nome-Lackee Indian Reservation, obtained from the Indian Agent, E. A. Stevenson, states that "the Indians there are from the Nomelackee, Numculty, Noemicks, Nevada, and Trinity tribes," and that the Nomelackees are the best workers.

Sacramento Daily Democratic State Journal, April 17, 1856.

## NORTHERN CALIF. INDIANS ON RESERVATIONS

The Red Bluff Semi-weekly Independent, Nov. 5, 1861, quotes the following from the Marysville Appeal:

"We learn that the Superintendent of Indian Affairs for the Northern District, George M. Hanson, has taken measures, . . . to have the Klamath and Trinity Indians gathered upon the Reservations.

He has been anxious to effect this object for months past, but has been without

money, except his own private funds, which he has used to the last cent to buy food and clothing for the Indians already on the Reservations, numbering some 4000 or 5000 when he came into office, to which number he has since added, by aid of the military and citizens, about 1000 more. The citizens of the northern counties could serve themselves and humanity much more effectually by helping the Superintendent gather the Indians remaining at large, and whom starvation compels to slaughter and steal cattle than by murdering them like sheep and adding animosity and thirst for vengeance to the comparatively tame motive of hunger."--Red Bluff (Calif.) Semi-weekly Independent (from Marysville Appeal), Nov. 5, 1861.

## RESERVATION INDIANS

The Red Bluff (Calif.) Semi-Weekly Independent, Oct. 15, 1861 publishes the following:

"Geo. M. Hanson, Superintendent of Indian Affairs in this District, has addressed a communication to the editor of the Appeal, in regard to the resolutions adopted by the citizens of Parkville and Pine Grove, in Shasta county, in which he asks them to exercise forbearance until he receives funds from the Government, when he promises that all the Indians will be taken to the Reservation and properly cared for."-- Red Bluff (Calif.) Semi-weekly Independent, Oct. 15, 1861.



The Red Bluff (Calif.) Semi-weekly Independent, June 6, 1862, publishes the following:

"G.M.Hanson, Esq., Superintendent of Indian Affairs for the Northern District, who is now here on his way to a trip to the Reservations, says the Marysville Appeal has lately received as a present from the Indians under his charge at Nome Culte a large hat made of plaited grass, made in the style of the coarser sort of Panama hats, but of a brownish color. It is broad brimmed and has a very shapely crown. The Indians made it purposely for a present to Mr. Hanson, for whom they seem to entertain a high regard, in return for his really humane treatment of them."--  
Red Bluff (Calif.) Semi-weekly Independent, June 6, 1862.

## Nevada Camp

Nevada camp in 1858 controlled by  
Nome Lackee Reservation.

Rept. Commr. Ind. Affrs. for 1858  
p.651. Mess. & Docs. H.R. 35th Cong.  
2d Sess. Ex. Doc. 2, 1858.

Matole Station      Near Cape Mendocino

Mentioned as advantageous location  
for Indian Reservation.

Rept. Commr. Ind. Affrs. for 1858, p. 637.

Mess. & Docs. H.R. 35th Cong. 2d Sess. 1858.

Matole Station Near Cape Mendocino

Mentioned as advantageous location  
for Indian Reservation.

Rept. Commr. Ind. Affrs. for 1858, p. 637.

Mass. & Docs. H.R. 35th Cong. 2d Sess. 1858.

## REMOVAL OF INDIANS TO KLAMATH RESERVATION

The San Francisco Weekly Herald, May 17, 1860 publishes the following note:

"The Kibbe Indians".-- It appears from the Humboldt papers that the Indians who, under the charge of Gen. Kibbe, some time ago passed through this city, on their way to Mendocino county, have finally been removed to the Klamath Reservation, of which, we believe, Mr. Buel has the <sup>S. H.</sup> Superintendence. We hope that these the last representatives of a numerous tribe, will be properly cared for and protected by that official."--San Francisco Weekly Herald, May 17, 1860.

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The San Francisco Weekly Herald, June 7, 1860, publishes another note on these Indians as follows:

"The Kibbe Indians.--We learn from the 'Red Bluff Beacon' that the Indians who were captured by Gen. Kibbe and taken to Mendocine County are returning, in small bands, to Tehama and Colusa."--San Francisco Weekly Herald, June 7, 1860.

Reservations file

Carded

Nome-cult

The San Francisco Weekly Bulletin,  
March 10, 1860, describes the country  
set apart for the Nome-Cult Indian  
Reservation and states that Nome-Cult  
is the Indian name of the region.

## QUESTION AS TO INDIAN LAND TITLE IN 1851

The California Indian Commissioners of 1851-52, G.W. Barbour, Redick McKee, and O.M. Wozencraft, in a report dated "Camp near Graysonville, San Joaquin River, February 17, 1851", addressed to Hon. Luke Lea, Commissioner of Indian Affairs, ask his advice

"as regards the Indian title to lands in this country: whether we are to recognize even a possessory or usufructury right in them or not, to any particular portion of the territory, before such lands as may be necessary for their subsistence shall have been set apart for their use?"

Senate Doc. 4, p. 56-59, 1853

# Red Tragedies

*The Experiences of a Field Matron on  
the Cheyenne Reservation  
of Montana*

By Alice May Ward



Dreaming of the past

**H**OW much are we justified in expecting in one generation?

It is a far cry from the feathered war bonnet, the fringed and beaded buckskins to silk shirts and Stetson hats; from hunting buffalo for a living to turning over the soil on a Montana dry farm for a bare existence. Is it any wonder we seem to fail so palpably, then, when we look for an entire race to step in a single stride from the discipline of the torture dance to that of the modern university?

Until a year and a half ago, only once in my life had I ever come into contact with any Indians. That single experience came when, as an eighteen-year-old, I stepped out alone from the staid and secure Iowa parsonage to register for a land opening in Dakota. But a year ago last June began an experience that has proved deeper and more lasting than at the time I would have believed possible. After a ride of ninety miles from the railway point, through the rugged hills of eastern Montana, I climbed out of the government Ford beside the little shingled house that was to be my home and the scene of my activity. As soon as the khaki car rolled away, leaving me standing with my bag in my hand beside the little house, what had begun as an adventure in experience and work began to promise something of a more serious nature. The brownish gray of the sterile soil at my feet, the greenish gray of the interminable greasewood beyond, with the merciless sun of that endless afternoon beating down on the defenseless little house, did not lighten my heart. The great blue flies buzzed unhindered in and out of the doors; the windows I found were fast, the air stale. The odor of old meat and smoke clung to the walls; that was stronger even than the odor of stale soap suds, silent witness to the heroic



The old habitation and the new

effort made to clean the new field matron's quarters.

The Indians began coming to my house almost at once, curious to see the "white woman," which was their first name for me. Early the morning after my arrival an Indian woman came to the back door. I stood before her helplessly, realizing we could not communicate by means of speech. Standing silent she took me in from coif to shoes. As well as I could, for I had been told that very few Indians of my district could speak or understand English, I tried to make her feel my friendliness. She stood stolid and without speaking, looking at me. Her gaze was hardly friendly, and I could not say it was hostile. She was curious in a bland, indifferent sort of way. By reflex action at last, for I felt sure she

could not understand me, I asked her if there was anything I could do for her. She answered in English as untouched by accent as my own that she would like some cough medicine for the little girl she carried. She was an Oklahoma woman and had been educated in the public schools of that state.

But such an incident was unusual. For the most part they came, gazed at me and went their way. Children came with their mothers; children who cried out in fright if I as much as looked at them for a minute, and children who at a mother's behest, gravely shook my hand, and as gravely said "How." One little girl will live long in my memory, for she gave me the first friendly glance, made the first friendly advance I received from my charges. There have been many since, but that was dearest because it was the first. She ran toward me from her retreat behind her mother's skirt and grasped my hand. Just one glance and a daring smile, that was all. When I tried to take her she ran back, shy once more. I tried later to find out who she was, but was never able to locate her. I wonder sometimes if she was not the one to whom I was called, late in June. That was a very sick child, emaciated and suffering, a tiny victim of the



The bulwark of ancient traditions,  
the medicine man

White Plague. Before the great hegira which always precedes the Fourth among the Indians, she lay out under the sun's rays on the dry hillside, and a father,



# EST



# Idaho

Bob's arrival. Bob surviving partner and session. The man of the five hundred dollars, interest, but Bob insisted entire business which five thousand dollars. meant death to refuse, ed quietly, in acknowl- asy conquest Bob made of several hundred

his professed friend- Bob soon began to Cynthia. Mayfield barrel seemed imminent who settled all quarrels Bowie-knife. But May- educated and finer look- s confident of his posi- ave the arbitrament of Cynthia, a proposal to ly assented. He had accurately than had his Mayfield asked her, "Is e?" she answered: Robert is settled in I don't you think he i ke care of me than you

which she referred wa taken from its owner. rue to his bargain, left al. And Cherokee Bob Cynthia and the saloon, " remained in Florence o Fino. Between them e undoing of Cherokee

ayed its part by keeping The mining strikes a and Deer Lodge ha ne of Florence. Had e saloon, Cherokee Bob action, would probably ummer to Bannack. A rt, that is a longer story nce, decline or no decline lebrate the New Year g-up supper and a dance was a woman of energy recognition, and informe ning to attend that dance ws that infested Floren Villoughby, remained as Bob. Bob was not inued on page 80)

with hair loose and neglected, went daily to stand in silence, looking down at the little grave. I used to see him there very often.

When I had been here a week, a genuine cry of distress came to me. A child with dysentery had been brought down to the vil- lage half a mile away, to be near the medicine men, but finally the father in desperation came for me and for the doctor. I went over to see the child, planning to ascertain the symptoms and call the busy doctor later. I found the boy in a tent, sitting on the ground leaning against his mother, who sat behind him. The two, mother and child, sat in this position every time I saw them for the next four days. The doctor came and prescribed. I tried to give the medicine but the child would not take it from my hand and I had to leave it. The grandfather and medicine man in attendance promised to give it, but I believe they did not do so. I had been told repeatedly by those older in the service not to expect it, and there was never any indication in the condition of the child that he had received any help.

The fourth evening as I neared the tent with the interpreter, I heard a peculiar rattling sound within, accompanying the tones of a human voice in a fierce chant, now high, now low. In the density of my ignorance, I started to raise the flap and enter. The interpreter stepped firmly in front of me and would not allow me to go in until the peculiar singing ceased. It continued several minutes. He offered me no explanation, but simply asked me to wait. When the rattle died down he raised the flap and I went in. The child was past all human help, I could see. As I moved quickly toward him, I felt a very determined pressure on my ankle. I had awkwardly stepped on the feath- ered handle of the medicine man's sacred rattle, and was being asked to step off. I did so, without argu- ment. I stayed only a few min- utes and was moving toward the door when the medicine man stopped me.

"You are no good," he told me through the interpreter. "You do not take care of this child prop- erly. You should come and stay all the time. That is what we do when we treat the sick."

"But I can not do that," I answered. "I have many sick ones to care for, many sick ones to prepare food for. Many come to my house for help. And if I did who would care for my own sons at home?"

"This boy's grandfather and I are the ones who have taken care of him, and we are all worn out."

"Very well, then," for I was willing to go the whole length of the road, if necessary. "I will go home, put my boys to bed, prepare food for their use tomorrow and return."



The hope of the future—if they survive ignorance and superstition

When I came back for the night about ten o'clock, they told me that I need not stay. They had taken care of him so far and would care for him that night, too. With unspeakable relief, I am afraid, I went back to my own husky bairns and slept.

Just at dawn, uneasy in my bed, I thought I heard the coyotes howling. I roused myself and listened. It could not be the coyotes; it was a more unearthly sound than even they would make. As I



The old cling tenaciously to the ways of their forefathers

listened I decided it must be some custom of the people I had come to live among. It was.

Early in the morning I heard pounding in the carpenter shop, and by the time breakfast was over I saw them haul away a little box of rough lumber. The weird sound I had heard had been the wailing of the bereaved, marking the passing of the spirit of my little patient.

One early incident helped more than anything else to open my prejudice- blinded eyes to the possi- bility that there was more in this people than I had seen.

It was a smile—a shy friendly smile from a schoolboy. It was at first bestowed upon me night and morning as the boy passed my house on his way to and from school. Sometimes I met it unexpectedly on the road. I came to know the smile long before the boy himself became separated in my mind from the many others. His small brother was among the first of my patients and I came unconsciously to look for the boy with the smile as I called at his home on my rounds. It was a smile showing a fine intelligence, a warm and gra- cious smile. The sight of it was like a glimpse of sunlight on a cloudy day.

Many Indian mothers throw the doctor's prescriptions away, and the children suffer. To one mother whose child was suffering for lack of a treatment so simple it is known in every American home, I said: "How many chil- dren have you had?"

The answer came back, "Nine." "How many are living?" She answered me with a motion of her head toward the sick child on the floor beside her.

"You have had nine and soon you will have none," I told her. "I have had three and they all are with me. Can't you trust your sick child to my care?"

After a long moment of preg- nant silence, as close to genuine tears as an Indian woman often gets, she said, "You are right."

But the husband and the medi- cine man were obdurate, and the child died. But within a few weeks I was privileged to give the same fundamental treatment to a child similarly ill, with very happy results.

The faces of the people are turned backward. The old are actively hostile to the white man's medicine, the white man's religion, the white man's way of living. The middle-aged are feeling about for new leadership and are accept- ing the wrong kind. The young have no chance; those before them must die before they are free, and by that time they, too, are middle-aged—too old readily to accept a new order. For these people are bound by a patriarchy as strong as though it were recognized, and the patriarchy dies hard.

(Continued on page 80) Forer



# Red Tragedies

(Continued from page 23)

The work is hard. It is physically hard, nervously hard, emotionally hard; and all I am able to do is only a nibble at the hay stack of what there is to be done. But there is the same fascination about it that there must be in gold mining. I sometimes see myself in imagination twenty years hence, a white-haired prospector, poverty stricken and weary, still hunting in the hills for the elusive yellow metal. There is this difference, however: the old prospector seeks perpetually and seldom finds his gold, while I seek and

find what I am searching for. I can not lose for I dig in the soil of human nature, and I know that underneath the surface is hidden the spark divine.

Here I find the romanticism of my earlier years, lately spent and travel worn, reviving. I live again in the imagination of my childhood. As I look toward the hills I see—or is it an illusion?—a naked horseman against their red rocky sides. Visible through the greasewood close by, I see the trembling of a feathered war bonnet. But I soberly reflect that the



and with a chief of the race for whose... Her efforts promise to bring... change in America's Indian policy

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warriors, painted, are no longer on the hills nor hiding in the grass. I am only too sadly sure they are in the camps. But I know that the old man, Elk Shoulder, dying of tuberculosis of the throat, the very sight of whom brings me near to tears, did once stand on that horizon line in war dress and paint; the husband of blind old Mrs. Black Eagle once led his mounted fighters through these very hills against Custer, and the wrinkled old chief, Young Bird, who is at my door each day, was with him.

In the smitten faces of these old men and women is written the story of the last fifty years. It is not a beautiful story. How many times, as I sit at the side of one of them, do I get the same offhand reply, as I ask "What does he say?—'Oh, he's just talking about old times.' We justify our course, I know, with what we find betrayed on the faces of the middle-aged—a

smug satisfaction with their mendicant lives. But on the faces of the young of this people is a different look. It is the same exalted look that once carried their grandfathers to battle against great odds for their land and their homes; it is a look of nobility—a look independent, proud, sensitive, almost fiercely liberty loving and free. It is the inner spirit, visible. The souls of the young yet live. And the same strong racial spirit evident in that high look of power, that in the old has gathered itself to itself, aloof for fifty years, and has held off the white man's way of life—that same proud spirit set free in the young from the steel chains of tradition, tenderly fed with those most excellent things from our most excellent educational table, would, in less than a generation change the status of the Cheyenne from that of a National liability to that of a great American asset.

Other articles on the present-day status of the American Indian will appear in later issues.—The Editors.

A Pima was called upon. He spoke first in Pima and then in English. The faces of the Indians were a study as the speaker made his points. Their faces worked, they laughed, they clapped their hands and finally broke out into cheers. Then the speaker, with an appealing gesture, turned to us:

"The Pimas have ever been friends to the white people," he said. "When the early explorers came through and fell exhausted from hunger and thirst at the door of our lodges, we took them in and gave them food and drink and took care of them till they were able to go on. The Pimas have never shed a drop of white man's blood. We have looked on them as friends and neighbors; we have never asked their help. Now we come to you. For generations our people have cultivated our land and raised our crops with the water in the Gila river. White men have settled far above us and their

the Indians pressed about me and shook hands; I was invited to their camp meeting the next Sunday. It was a glorious, sparkling October day as we rode across the desert toward Casa Blanca where the meeting was held. The tang of sage and cedar was in the air. A fine white dust rose in clouds about us, settled on the spiny columns of the giant cactus, on the twisted, snakey arms of the cholla.

"If we had water this plain would be like the valley of the Nile in its fertility. As it is, it is simply a trackless desert, a veritable waste," said my friend.

"What can be done?" I asked. "There must be some way out."

"There is," he answered. "We must have an appropriation sufficient to get the water to these lands. The dam that is built at Florence is a diversion dam and was meant to remedy the situation. But the project is incomplete; the Indians have no canal to their lands but the white

people have. We are asking an appropriation from Congress now for the construction of that lateral. The Indians' share of water, unless it is conveyed to the land by a pipe line, is lost through seepage and evaporation in this thirsty desert. No water reaches them except in very wet seasons. If the Government does not appropriate this sum, these Indians will have to be supported and will soon be a race of beggars. Now they are one of the finest tribes we have. Why, why do not our Congressmen understand that all the Pimas want is the opportunity to make a living? There are their fields. Look how carefully they are fenced and cultivated. And notice those dry stalks. Much loving labor and no crop! Isn't that a pathetic sight?"

My eyes were misty as I realized the futile efforts of this helpless and despairing people. Small dead remnants of a crop that had never matured; dry, rustling leaves that should have been succulent food; hopeful trust that planted; helpless anguish that could not reap.

I looked out across the desert plain where spirals of dust were floating in the shimmer of the desert heat, where the dead stalks of corn told the tale of the cup of cold water denied to those who had always proffered it, and I wondered how long my country would permit such a travesty.

*Am. Anthropologist - Jan. 1889*

**INDIANS OF SILETZ RESERVATION, OREGON.**

BY J. OWEN DORSEY.

In August, 1884, I was sent by the Director of the Bureau of Ethnology to the Siletz reservation, Ore., for the purpose of gaining information respecting the tribes now found in that region. I obtained linguistic and sociologic notes relating to twenty tribes (or sub-tribes) now inhabiting the reservation, but was surprised to find no Indians in their native attire. About thirty houses could be seen from the agency boarding-school, several of which were built by the Indians. Farms were fenced in. Oats, potatoes, and many vegetables were cultivated. The old men of the Chasta Costa tribe reminded the writer of the Ainos, as described in Miss Bird's work on Japan. As more than twenty tribes, each having its own dialect, have been consolidated on this reservation, they are obliged to use a common language. So all speak Chinook jargon, and many are learning English. The vocabularies obtained on the reservation may be thus arranged according to linguistic stocks:

I. *Athapascan*.—Applegate Creek, Galice Creek, Chasta Costa, Upper Coquille, Chetco, Mikonotunne, Tutu (and Joshua), Euchre Creek, Sixes Creek, Naltunne tunne, Smith R. (Cal.), and Upper Umpqua.

II. *Yakonan*.—Yaquina, Alsea, Siuslaw, and Ku-itc or Lower Umpqua.

III. *Kusan*.—Mulluk or Lower Coquille.

IV. *Takilman*.—Ta-kel-ma or Upper Rogue river.

V. *Shastian*.—Sasti or Sesti.

VI. *Shahaptanian*.—Klikitat.

*Grammatic notes*.—Nouns and pronouns in the Athapascan dialects (of Oregon) have three persons in each number, singular, dual, and plural. Classifiers, when preceding the modified nouns, are formed from verbs of attitude. When the noun precedes, the verb of attitude remains unchanged. In Siouan languages modal syllables (showing how the action is performed) are prefixed to verbal roots, but in these Athapascan dialects the roots precede the modal syllables.

## EXAMPLES.

<i>Siouan.</i>	<i>Athapascan.</i>
Ma-qa-pi, <i>to cut a hole through with a knife.</i>	Rxa-ni-t'as, <i>to cut a hole through with a knife.</i>
Ma, <i>denotes action with a knife.</i>	Ni-t'as, <i>denotes action with a knife.</i>
Qa-pi, <i>the effect.</i>	Rxa, <i>the effect.</i>

The inflection of the Athapascan verb is more complex than that of the Dakota or Ponka. In Dakota there are seven modal prefixes, and in Ponka there are nine. In Tutu fourteen modal suffixes have been recorded. In Siouan languages there is but one verb, "to have." In Alsea there are fifteen. In Lower Umpqua thirteen have been found. Six have been recorded in Tutu. Of verbs of "desiring" Siouan languages have one, while there are five in Lower Umpqua. In the latter language the name of the object desired is not found in the verb, though it appears in other Oregon languages. In the Athapascan dialects there are two sets of cardinal numbers, the human series and the non-human, the latter including references to inanimate objects, as well as those to animals.

In Alsea and Yaquina there are two kinds of inseparable pronouns used with verbs; one set used with verbs of possession begin with *t*, those used with other verbs begin with *q* or *h*. Separable pronouns used with verbs in these dialects are of three sorts. 1. Those occurring before the present (or aorist). 2. Those used before the future. 3. Others which seem to be used only before certain active transitive verbs. The verb is not inflected when the first or second set of separable pronouns is used, but when the third set takes the place of the first the verb can take the inseparable endings.

In Lower Umpqua there is a particle, *uni*, suffixed to nouns which answers to English *en* in *wooden, ashen*, etc., and to *y* in *rocky, stony*, etc. The Lower Umpqua numerals are inflected thus: *One of his, one of thy, one of my*, etc. *Two of his, two of thy, two of my*, etc. A possessive ending is also found in Lower Umpqua. Thus, for rabbit skin they say, in two words, *of-the-rabbit skin*.

*Social organization.*—Very little information concerning this could be obtained. A map of western Oregon and northern California has been prepared on which have been placed the names of two hundred and seventy ancient villages, which may be classed as follows:

Jan. 1889.]	INDIANS OF SILETZ RESERVATION.	57
Californian Athapascans,	- - - -	14
Oregon ditto,	- - - -	108
Takelma villages,	- - - -	17
Yakonan family: Yaquina villages,	- - - -	56
Alsea villages,	- - - -	20
Siuslaw villages,	- - - -	34
Lower Umpqua villages,	- - - -	21
		—
Total of the Yakonan family,	- - - -	131
		—
Total,	- - - -	270

The territory occupied by the Yaquina villages extends from Elk City to the mouth of the Yaquina river, a distance of, say, thirty miles. Translations of more than seventy of these names were given by the Indians. Among these are the following, taken from the list of Upper Coquille villages: People at the forks of the river; people at the big rocks; people by the large fallen tree; people on the open prairie; people opposite a cove of deep water; good grass people; people where they played shinney; people by a small mountain on which is grass but no trees; village at the mouth of a small creek; village on the dark side of a cañon where the sun never shines; people at the base of a plateau; people among the ash trees; only one village—the Coyote people of the Takelma—had an animal name.

A child belongs to the village of its father. This is an old custom and should be taken in connection with another ancient law, now obsolescent. In order to marry aright, a man must buy a wife, who left her village (and kindred) and went to that of her husband. Children born of a wife who had not been bought were regarded as illegitimate. A man must marry outside of his village, as all the women in his village were his consanguinities. The village seems to have been the unit of social organization, and about equivalent to the gens or clan of the Siouan family and other tribes east of the Rocky Mountains.

Each village, as the Tutu, Mikono tunne, etc., has its special burying-ground on the Siletz reservation. Several of these have been visited by the writer. The only exception was in the case of the Chetco tribe. These Athapascans were formerly in nine villages, of which the names have been preserved; yet to-day they

have one burying-ground, instead of nine! This hardly agrees with the usages of a gens as given by Morgan in his "Ancient Society." It may be that the Chetcos are now consolidated, and hence are regarded as one village, though a few years ago a man of one Chetco village could marry a woman of another Chetco village.

The kinship system is, with a few variations, substantially that of the tribes of the Siouan family. Certain Tutu and Naltunne tunne kinship terms resemble names for parts of the body:

<i>Kinship Terms.</i>	<i>Parts of the Body.</i>
Sûs, <i>my mother</i> (sometimes in Naltunne tunne).	Sûs, <i>skin</i> (in Naltunne tunne).
Clâ, <i>my husband</i> .	Cl'â, <i>my hand</i> .
Cmi'sě, <i>my brother's son</i> .	Cmi'sě, <i>my membrum virile</i> .
Clâ-sûn, <i>my wife's sister's husband</i> .	Cl'â, <i>my hand</i> ; sûn, <i>meat</i> .
Clâ-si', <i>my mother's sister's child</i> .	Cl'â, <i>my hand</i> ; si, <i>head</i> . (?)
Sa'ts'ě, <i>my wife's father</i> .	Sa'tsě, a name for <i>skin</i> in the Chetco dialect.
Cts'ûn-ně', <i>my paternal grandmother</i> .	Cts'ûn-ne', <i>my long bone</i> .

*Folk-lore notes.*—The Athapascans fear to speak the real names of the wild cat and field mouse in the presence of small children. The wild cat has three names, but instead of them adults use a long phrase in the presence of children. It means "They do not pronounce it when a child stands there." An infant must be kept in the cradle cover four days after birth. Early in the morning of the fifth day the cradle is made and the child is placed in it. This is according to the command of the great Being, Qa'-wa-ne'-ca (or Kha'-wa-ne'-sha), who made the first cradle early in the morning of the fifth day after the birth of the first infant.

Part of a creation myth told to the writer in the Chinook jargon is appended.

At first it was dark. There was neither wind nor rain. There were no people nor animals. In the midst of the water was a small piece of land on which were two beings. One, called Qa-wa-ne-ca by the Naltunne tunne, remained seated by his fire inhaling the odor of burning cedar instead of eating. The other being was sent to the edge of the land to watch for what might appear. Looking

northward he saw an ash tree arise; turning to the south, he beheld a red cedar. Hence, the ash and red cedar are held as sacred above all other trees. By and by he reported something red in the southwest. Said Qawaneca, "It must be land coming." At last the land came, touching that on which the two beings sat. But it was unsteady. Then Qawaneca pressed his hands over it, making it steady. He tried to make more land, but he did not wish sickness to be in it. Said he, "Where many die I will make much water and little land. Where few die I will make much land and little water." He chose three rocks and two pieces of earth. He threw one rock into the water, and as it went down, down, he bent his head and listened. He threw another rock, then the third, then the pieces of earth, in succession, listening awhile after throwing each. After the fifth throw mighty waves arose, dashed against the land, then receded. Thus were the tides formed. (Five is the mystic number among these Indians.) Then more land came, but it was muddy. Man could not step on it. Presently footprints appeared. "Ha!" said Qawaneca, "that is sickness! It is bad!" So he made the water cover the land. After this he blew at the water and made the land reappear. Once more footprints were seen in the mud and again did he cause the water to cover the land. This was done four times. When the land appeared the fifth time the footprints were seen as before, but Qawaneca would not disturb the land again.

The old man then plucked two hairs from his head and threw them on the ground. All this time there was no daylight, so Qawaneca tried to make it; but he failed. Finally he called all the birds to him, asking them if they knew the secret. He found one that knew, and this bird said that in the far north was the sun. Only two white geese had been there. These agreed to reveal to Qawaneca a certain magic way of calling the sun if he would bestow some privileges on all the birds. Having promised this, Qawaneca learned the secret, and the sun came at once in obedience to his summons, stopping a little south of the zenith. Then did Qawaneca settle his course, northward in summer and southward in winter.

Meanwhile the hairs thrown on the ground had become serpents, the first created animals. These serpents had a hundred young ones at a birth. There were many of them on the land and some in the ocean. They made storms by blowing with their mouths. An enormous serpent coiled itself five times around the world, and thus

keeps it together. On pulling two more hairs from his head, Qawaneca changed them into dogs. These were as prolific as the serpents.

Subsequently a woman came from the south. She wished Qawaneca to marry her, but the other man deceived her, coming in the dark, and so became her husband and the father of the Indians. This woman is the Mother, who never dies (she is in the South). All Indians return to her at death, and she sends them back to this world as infants. Her husband, too, is still alive. He never leaves this world; but Qawaneca now dwells in the sun and looks down on the people. The circumference of that upper world in which he dwells is curved upwards. No one who dies here can go to live with Qawaneca.

The preceding paper by Mr. Dorsey was read before the Anthropological Society of Washington.

#### DISCUSSION.

At the close of the reading, Dr. WASHINGTON MATTHEWS spoke as follows:

1. Phonetic differentiation seemed more marked in the Navajo than in these northern languages. Thus, where the Oregon languages of this stock had many verbs beginning with two consonants, as *rxā-ni-t'as*, the Navajo word corresponding dropped a consonant and then prefixed a vowel, as *a-qā'-nit'as*, or a consonant and vowel, as *ba-xanit'as*.

2. There were about forty Navajo gentes having local names; none had animal names.

3. These Navajo gentes may be divided into three classes, perhaps into four: (*a*) The original gentes, with names that are explained by myths. From these gentes others have sprung. (*b*) Certain gentes were sent by the Woman or Mother (spoken of in the Oregon myth) from the west to the home of the Navajos. (*c*) Modern accretions. All these are called after surrounding tribes, as the gens of the Mexicans, that of the Utes, etc. (*d*) Gentes originating from Pueblos, now in ruins.

4. There are localities in the Navajo country which give names to people, as People of the Bear Spring, etc. Early travelers often recorded these names as the true names of gentes.

5. Among the Navajos descent is in the female line. The man has not that control of the woman which he seems to have in Oregon

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The  
Undomesticated Indian

as seen on the

Warm Springs Reservation

From photographs taken by

**Mrs. Fanny van Duyn**

Tygh Valley, Oregon



*Tat-toon-my and Her Indian Doll.*



*Yeslums, a "Tenas Kloochman" (Girl) of the Wasco Tribe.*





*Syad, an Indian Maiden in a Beaded Buckskin Dress.*



*Twee-men-ess, a Warm Springs Buck.*



*A Young Squaw and Her Baby.*



*Ho-tash-a, Her Pappoose, and "Tenas Man" (Boy).*



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*Sook-wah and Pots-os-ly Wal-u-wa-pum, Taken Unawares During the First Days of Their Honeymoon.*