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DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE YOSEMITE NATIONAL PARK

YOSEMITE NATURE NOTES

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This is one of a series of bulletins issued from time to time for the information of those interested in the natural history and scientific features of the park and the educational opportunities the park affords for the study of these subjects.

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W. B. Lewis, Superintendent

YOSEMITE INDIAN FEASTS OF AUTUMN

Scenes of old are being enacted daily in settings made very modern by the construction of a new Yosemite Village. Not far from the new buildings of distinctive architecture is YO-WATCH-KE, an ancient Indian village, now occupied by the Indians of various tribes who make Yosemite Valley their home. Black oak trees grow in numbers in and about both the white man's village and the Indian village. This year the acorn crop is enormous. Under every oak, bushels of the full, rich nuts may be seen, and every autumn breeze brings a weighty shower of the fruits, which fall like great hailstenes.

All of the resident squaws of the valley busy themselves throughout the day in gathering the bountiful crop. Many years ago Yosemite visitors witnessed the squaws gathering acorns in large, conical burden baskets lashed to their backs. The present day method employs the squaw's gingham apron, its free corners held in one hand, and the acorns dropped with the other hand into the spacious sack it forms. Then a half bushel or so of the nuts are suspended thus from the squaw's waist, she transfers the load to a gunny-sack and repeats the gathering. Some 1924 A.D. Indian males condescend to carry the weighty sacks to the village, but for the most part the squaws do their own packing.

At the village the acorns are dried in the sun and dumped into CHUCK*
AS, great baskets made of saplings lashed together and held off the ground by supports made of sections of pine trees a few inches in diameter. These crude granaries are made somewhat weather and rodent proof by a heavy thatching of pine needles woven into the framework of saplings. Over the open top is thrown a piece of oilcloth, canvas, or old blanket, and the winter food supply is considered stored.

The supply is drawn upon as needed. The first step in the preparation of the food is the cracking and removal of the shells. This is accomplished by means of a hammerstone and deft fingers. The nut meats separate into two pieces. Modern Indians have adopted no modern methods of grinding the cleaned nut meats to meal. Ancient mortar stones that have been in use for hundreds of years still serve as mills for the production of acorn flour. Convenient slabs of granite, fallen from the cliff walls above, have been pitted with numerous mortar holes, which through many years of use have been deepened to several inches. Into these holes the acorn meats are placed, and the grinding is effected by a round-ended stone pestle which fits the mortar hole. This fairly heavy implement is wielded by the squaw's two hands.

When the desired quantity of the white meal has been produced, it is next necessary to remove from it the bitter tarmin, which is present in all acorns. Not only is the acorn food unpalatable but it is indigestible if the tarmin is not removed. Long ago the Indians discovered a leaching process to accomplish this end. The finely ground meal is heaped into a pit or basin excavated in clean sand and lined with a fiber mat or a strip of cloth. Over the top of the meal branches of White Fir are spread. Quantities of hot water are then poured onto the meal. The fir boughs tend to break the force of the falling water and avoid splashing and digging into the meal. The water readily seeps through the flour and into the sand. As it goes it carries with it the tannin. Leaching water which has passed through acorn meal is as black as crude oil and as bitter as gall.

after the leaching process the meal is cooked. Pots and pans abound in present-day Indian camps just as they do in any white man's camp, but, when acorn mush is to be cooked, most Indians revert to methods employed before kettles were known to the race. Finely woven baskets of bowl shape, of sizes varying from those of two quarts capacity to those that will contain a bushel. are the cooking utensils. It is, of course, impossible to place the baskets over the fire. The meal is placed in a basket, and water added to give it the desired consistency. A heap of stones, the size of one's fist, have been heating in a fire nearby. These are handled with wooden tongs and dropped, several at a time, directly into the mush. They are stirred about with the tongs until the heat is exhausted from them when they are removed and more hot stones dropped in. This is continued until the contents of the basket have been thoroughly boiled, the result being a thick jelly-like porridge. It may now be allowed to cool sufficiently to permit its being eaten by the handful or it may be dipped from the cooking basket to special smaller baskets and these plunged at once into a cold, running stream. The cold bath causes the mush to shrink and harden so that it may be turned out of the basket in the form of a rounded loaf. The loaves are placed upon a rock to drain and in a few days they become dry and hard and may be carried for weeks before they are eaten.

The food is very full of oil and, of course, nutritious to a high degree. C. Hart Merriam has found by analysis that the leached flour contains 20% fat. In pure form the acorn food is rather distasteful to a white man; however, mixed with corn meal or white flour it makes palatable bread, adding to the grain the nut-fat value of the acorn. It is reported that John Muir in many of his solitary wanderings with but his "small sack of bread and tea" as a food supply, had in that sack the Indian's acorn bread. Possibly here

is the solution to the mystery of how the great nature lover was able to get sufficient nourishment to carry him through his arduous exploits with naush a but his "bread and tea" of which he writes!

YOSEMITE VISITORS FROM MONO

During the last days of October in the year 1833 the famous Joseph R. Walker expedition was penetrating the Sierras in the region of Yosemite. They had followed an Indian trail, presumably the present Bloody Canyon Trail, over the summit and into that vast snow covered region above Tuolumne Meadows. For several days they battled snow storms in a trackless wilderness, characterized by great chasms and tremendous waterfalls. Time was wasted in fruitless attempts to descend "Precipices appearing to be a mile high" to the inviting valley below. Their food supply became exhausted, and the snowy mountains afforded no game. On October 25 scouts were sent ahead to find a way out of the mountains and to find game.

One of these scouts encountered an Indian climbing toward the summit. On sighting the strange white man, the Indian threw from his back a great burden basket and fled in terror. Investigation disclosed the fact that the Indian was packing a load of large acorns. Leonard, Walker's narrator, ventured to guess that the Indian was bound for the region east of the mountains and writes that the acorns were carried to the explorer's camp and eaten gratefully by the hungry white men. No mention is made of any attempt to remove the indigestible tannin principle from the acorns, and we may surmise that this first food filched by white men from Indians of the Yosemite region was not as satisfying as is the same food prepared by the Indian method.

Here is evidence from records of the very first party of white men in the Yosemite region that the rich acorns of the west slope were packed with much exertion to the Mono Indian camps on the east side. Later accounts tell us that Yosemite acorns formed an article of trade between the Yosemites and the Monos. The sites of ancient trading posts are recognizable yet by the great accumulations of obsidian flakes which grew up at the summit camps where representatives of the two tribes met. The Monos exchanged obsidian to be made into arrow heads for the acorns which do not grow on the east side. At the present time, the same demand for acorns exists among the Monos. But their stock of obsidian does not carry the same value that it did in the days before the white man came. And the Yosemite tribe no longer exists to pack the acorns to a meeting place on the summit of the Sierras. The result is the Monos must come to Yosemite, harvest the crop, and carry it back themselves to their desert homes. This year a number of little family pack trains have followed the old Mono Trail to Yosemite. Bright October days have been busy ones for the visiting Mono squaws and children who have Lathered and dried the acorns. Before the recent snows covered the crest of the range, these same happy parties returned to their Mono homes supplied with a most palatable food with which to vary their pine nut diet.

A WHITE-HEADED WOODPECKER FEEDS AS A CHICKADEE

On the morning of July 13, 1924, while walking along the road above Camp Curry, we had a close-up view of a white-headed woodpecker. The bird was quite fearless, and we were able to approach within six feet of her as she fed among the leaves at the very end of the branchlets. Apparently, she was eating

aphids and other small insects to be found among the terminal buds. In searching among the leaves she had the aspect of a chickadee, but of course with her heavy body she was slightly clumsy among the small branchlets. With her strong claws and heavy feet she had a parrot-like grasp. She seemed to be very successful in gathering insects, and it was noted that her bill was wet with the juices of crushed bodies. She was working in both yellow pine and Kellogg oak branches and once while we were watching she flew to a heavily insulated telephone wire where she alighted and swung head downward. This female woodpecker had the disheveled appearance of one that had recently gone through the trying experience of rearing a family.—Enid Michael.

HUGE GERMAN BROWN TROUT TAKEN

When the immense Loch Leven trout was caught in the Merced Last June, it seemed improbable that another such monster would be taken from the stream. On September 28 Mr. Albert Skelton startled local people and tourists by producing a 29½ inch German Brown, which weighed nine pounds and three ounces. This second Leviathan of the Merced River was taken just below the Pohono Bridge. Incredulous fishermen may view it at the Yosemite Museum. Mr. John Luckenbach of Los Angeles has made the exhibit possible by donating funds with which to purchase a large museum jar to contain the specimen.

