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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.

Utilization of these bulletins by those receiving them to the end that the information contained therein might be as extensively distributed as possible will be appreciated.

W. B. Lewis, Superintendent

PINE NUT HARVEST

When Major Savage and his Mariposa Battalion entered Yosemite Valley in March, 1851, they found but one decrepit squaw, too feeble to more than crawl under a huge slab of granite. However, numerous recently evacuated Indian lodges were evident, and with them were large caches of Indian provisions. In Bunnell's "Discovery of the Yosemite" we find the first descriptions of Yosemite Indian foods as they were before the Yosemite tribe was influenced by white men.

Most important of these aboriginal foods was the acorn of the Black Oak, which has already been considered in "Nature Notes". But another product of local trees made up a big part of the Indian stores, i. e., Pinon pine nuts. To the invading white men, if not to the Yosemites, the pine nuts were of greater importance than were the acorns. The acorn jelly, even after laborious Indian methods of preparation, was unpalatable to the discoverers of Yosemite, while the pine nuts, on the other hand, were rich and delicious and only required cracking to be ready for consumption.

These nuts were of two kinds: those coming from the Pinon Pine (Pinus monouhylla), which grows on the east cide of the Sierras, and the somewhat larger nuts from the Digger Pine (Pinus sabiniana). This last named pine grows commonly in the foothills west of the Sierras and is found here and there as high as 4,000 feet above sea level. In the canyon of the Merced the species is last seen at M1 Portal. It is usually noted by Mosemite visitors, for it is the first conifer met in coming to Yosemite from the west. 1ts habit of growth is remarkable in that the trunk usually divides into several secondary trunks about twenty feet from the ground. These secondary trunks at first grow away from one another and then extend upward, forming individual crowns and giving a broom-shaped structure to the tree. The needles are long and slender and gray-green in color. It is useless for the traveler to seek a cool resting spot on the sun-baked slopes upon which Digger Pines grow, for the sun's rays strike through the needle tufts as though no resistance were offered by them. The shade of a Digger Pine is not at all indulgent. The cones are large and extremely heavy with pitch. Woe unto the pate upon which one of these leaden projectiles may fall. Each scale terminates in a murderous down-curving hook of flinty consistency.

At the time of harvest, the Indians climbed the trees and beat the cones from their supporting limbs, of perhaps our off entire limbs, if they chanced to be especially fruitful. Squaws then picked them up and reasted them until the scales would spread so that the muts could be beaten out. Digger Pine nuts are hard shelled. A hammer stone was needed to crack them, and for that reason they were less desirable than the Pinon Pine nut of the east slope.

Calen Clark, who best knew the habits and methods of the Indians of the Yosemite region of the period before the tourists came, is sutherity for the statement that the Pinon Pine nut was imported from the east side of the Sierras. According to Clark, these nuts formed an important article of barter between the tribes of the Mono Lake region and the Yosemites. To the writer's knowledge no pine tree of the species Pinus monophylla grows on the west side of the Sierras in the region of Yosemite, with the exception of a single specimen found in Pate Valley on the Tuolumne. It is believed that Pate Valley was annually occupied by Piutes from the Great Basin country. Possicly this single tree was introduced by their hands. Since this tree will grow there, it seems remarkable that other specimens have not sprung up in other sections of the western slope to which the seeds were introduced through inter-tribal barter.

The desert ranges of the Great Busin are literally clothed with Pinon Pines. As one approaches a forest of these diminutive trees, one is impressed with the idea that the hillside has been blackened by burning. Closer approach reveals the black mass to be an unbroken growth of Pinons. Again, as in the case of Digger Pines, if one hopes to find refreshing shade in such a forest, disappointment is keen. The ground under the trees is naked, and the sun beats through the thin foliage, its desert severity all unabated. The needles occur singly, which fact has given the specific name monophylla. The vegetation, as a whole, is gray-green, through which the black trank and the limbs show

readily enough. A full-grown tree is about fifteen feet high and perhaps covers an area, the diameter of which equals the height. The cones are but two inches long, but the nuts contained in them are of good size. The small size of the tree makes it possible to gather the cones without climbing the tree. The cones are beaten with poles from the trees, gathered in heaps, and covered with brush. The brush cover is then fired, and the cones thus sufficiently roasted to remove the heavy pitch which seals cavities between the scales in which the nuts are contained. After roasting, the cones are sunbaked, and then the nuts are threshed out. They are about one-half an inch long and a quarter of an inch in diameter. The shells are thin, and it is not difficult to remove them with the fingers. The kernels are very white (brown after thorough roasting) and most delicious. At the present time, the nuts may be purchased in every candy store in Nevada. Small wonder that early explorers fell upon the Indian stores of this particular food with avidity.

John Muir in "Steep Trails" has described the Indian harvest of pine nuts as he witnessed it in Nevada in 1878. The Piute harvest in that region is not unlike the harvest of the Mono Piutes, and a part of Muir's description is here quoted:

When the crop is ripe the Indians make ready their long beatingpoles; baskets, bags, rags, mats, are gotten together. The squaws out among
the settlers at service, washing and drudging, assemble at the family huis;
the men leave their ranch work; all, old and young, are mounted on ponies,
and set off in great glee to the nut lands, forming cavalcades curiously
picturesque. Flaming scarfs and calico skirts stream loosely over the knotty ponies, usually two squaws astride of each, with the small baby midgets
bandaged in baskets lung on their backs, or balanced upon the saddle-bow,
while the nut-baskets and water-jars project from either side, and the long
beating-poles, like old-fashioned lances, angle out in every direction.

"Arrived at some central point already fixed upon, where water and grass is found, the squaws with baskets, the men with poles, ascend the ridges to the laden trees, followed by the children; beating begins with loud noise and chatter; the burs fly right and left, lodging against stones and sage-brush; the squaws and children gather them with fine natural gladness; smoke-columns speedily mark the joyful scene of their labors as the reasting-fires are kindled; and, at night, assembled in circles, garrulous as jays, the first grand nut feast begins. Sufficient quantities are thus obtained in a few weeks to last all winter."

WINTER ROBINS FROM THE NORTH

Since the second week of October numerous robin-like birds have caused Yosemite visitors and residents to make inquiry as to the identity of the newcomers. They are seen singly or in small flocks about to williage street, in the occupied camps, and throughout the snow-blanketed valley. In general appearance they remind one of the departed robins; however, they are quite obviously different from the familiar robins. First of all, there is a unique shyness about them. Even with the hardicap of the snowy cover that clothes the trees and covers the ground, these birds have a way of silently

disappearing before your very eyes. Then, too, when one obtains a clear view of them, it is apparent that the markings and coloration are not like a robin's. Their breasts are orange yellow. Some have a black band across the breast, some a slaty band, and others apparently have no band at all. Those with the very black collar are males, those with a slaty collar are females, and those that seem to lack the collar are young females. All have an orange stripe behind the eye.

Four common rames have been given these winter visitors: Winter Robin, Alaska Robin, Oregon Robin, and Varied Thrush. At this season they are found from California to Southern Alaska. They nest in the mountains from northern California to the extreme northern limits of the spruce forests of alaska. Mr. Fuertes, the artist, says that the song he heard in alaska was "most unique and mysterious, and may be heard in the deep, still spruce forests for a great distance, being very loud and wonderfully penetrating. It is a single long-drawn note, uttered in several different keys, some of the high pitched ones with a strong vibrant trill. Each note grows out of nothing, swells to a full tone, and then fades away to nothing, until one is carried away with the mysterious song. When heard nearby, as is seldem possible, the pure yet resonant quality of the note makes one thrill with a strange feeling, and is as perfectly the voice of the cool, dark, peaceful colitude which the bird chooses for its home as could be imagened."

VALUABLE HISTORICAL RELICS DONATED TO YOSEMITE

More than one hundred articles of great historical interest were this month denated to the Yesemite Museum by Mrs. Fannie Crippen Jones of Merced. Mrs. Jones, a daughter of Mrs. J. K. Barnard, who with Mr. Barnard operated the famous Barnard's Yosemite Hotel in the 70's and 80's, has for years cherished and cared for innumerable objects of interest to Yosemite enthusiasts. Because she yet loves the Yesemite of her girlhood, Mrs. Jones has freely given her prized keepsakes that visitors of this day of motor transportation may visualize the Yosemite of the pioneer period.

Included in the Barnard collection are a score or more photographs of Yossmite pioneers such as James Lemon, J. M. Hutchings, Lambert, J. Gook, Mr. and Mrs. J. K. Barnard, Mark L. McCord, Leidig and many others who did much we make the Yosemite known. Cil paintings, pastels, and water color paintings by C. D. Robinson, C. F. Gordon Cumming, and C. Magersteen, made in the early days, are highly prized because of their historical interest and true art value. There are also many photographs of Yosemiwe scenes by the noted photographers Fiske and Taber in the collection. Carefully kept scrap books, made by Mrs. Barnard and Mrs. Crippen Jones, make it possible to fill certain gaps in the history of Yosemite. A dozen old volumes pertaining to California in general and Yosemite in particular were obtained for the Mather Library in the Yosemite Museum. Fine specimens of Yosemite Indian backets, obtained in the days of Barnard's activity, were donated by Miss Loya Crippen Bell. In addition to the Barnard collection, other historical material was obtained from Wrs. Violette Crippen Bell, Dr. J. C. Smith, Mr. and Mrs. Geo. Conway, all of Merced; Walter McLean, Coulterville; and Bruschi Brothers, Coulterville,

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