

Nature Notes of Grand Canyon



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M. R. Tillotson, Superintendent, Edwin D. McKee, Park Naturalist.

A FOOD PLANT OF THE INDIANS

By - Miss Barbara Hastings

One of the most striking plants in both Upper and Lower Sonoran Zones in the Grand Canyon country is the mescal (*Agave utahensis*), one of the many species of century plants. Starting with a few spiked leaves it grows probably thirty or forty years into a mature plant, large and well-armed with long bayonet-like, jagged saw-toothed leaves radiating from the compact center. During the many years of its growth it stores up food in this center, in preparation for the day when it shall send up its flower stalk. Finally, one spring, when enough has been stored up, a huge flower stalk shoots up from the center and grows rapidly to a height of ten to eighteen feet. The upper two-thirds of the straight stalk bears a large number of beautiful, yellow, lily-like, nectar-bearing flowers, each of which later develops a many seeded capsule. After this supreme effort the agave dies, its duty fulfilled, and thousands of new plants started on their long life cycle.

In the Grand Canyon the mescal is found from the bottom to the edges of the rims. It is most abundant in the canyon where it grows on hot dry slopes and rocky ledges, and occasional plants occur on the edges of the North and South Rims.

The flowers of the mescal furnish food for a great many insects, birds and mammals. Saw-flies or carpenter beetles in great numbers use the pith for food and deposit their eggs in the flower-stalk. Bees, ants and numerous small flying insects feed on the flowers and the humming birds swarm around them as long as they contain nectar. In the Canyon the rock squirrels jump over the protecting spiked leaves and climb to the top of the juicy flower-stalk where they perch and have a regular feast. In the vicinity of Indian Gardens the antelope reach over the sharp leaves and eat the succulent stalks. Mules and burros also eat the stalk when they have a chance.

For untold ages the mescal has been a favorite food of the Indians. When a plant reaches maturity, and before it sends up the flower-stalk, they pry it loose from the ground. Rolling it over, spikes down, they slip a pole under each side where it is caught between the leaves and carry it to their mescal pit. Here they have had a fire burning until the rocks are hot. Dumping the mescal on the hot rocks they then cover it over with more rocks and build a fire on top of the pile. It takes about three days and nights to thoroughly cook a mescal. When the rocks are finally thrown to one side the mescal is found with the inner meaty core thoroughly cooked and it is sweet and juicy. The taste resembles that of candied sweet potatoes.



Indians cooking Mescal

Rocky pits encircled by stones which have been thrown back can be seen in many places in the Grand Canyon today. When they were used or who used them we cannot always tell although those on the south side of the Colorado River probably were used by the ancestors of the Havasupai Indians. These Indians today live in one of the large side canyons (Havasupai Canyon) of the Grand Canyon and still cook the mescal in this primitive way.

This once important food of the Indian population of the region is now little used, but the beautiful plants are still abundant and the old mesquite pits suggest an interesting chapter in the history of the primitive people of the region.

THE PATH OF A THUNDERSTORM

By - Stephen B. Jones, Ranger Naturalist

Sunday, June 30, a thunderstorm passed over the Kaibab Plateau. The lightning was seen, from Grand Canyon Lodge, to strike a spur of Buddha Temple. We expected a soaking, but the storm passed off to the northwest. Within a few hours smoke was seen in this direction and next day the path of the storm could be traced by a line of four fires. Two of the fires were on the Dragon's Head, well down in the Canyon. A third was on the plateau back of Point Sublime, while the fourth was near Big Spring. The four localities fall almost in a line, which projected passes near Buddha Temple. The course of the storm was very nearly true northwest.

LUNCH À LA ABERT

By - Ranger Naturalist Count

The Abert Squirrel has been a pretty hungry little fellow since the recent thunderstorms have washed away his stores. Residents have reported him eating morsels where fed rather than trotting off to enjoy privacy. One lady even entertained ^{him} in her parlor and bedroom.

This morning Abert was scrambling up the pinons, sniffing the branches with his nose to the bark, and occasionally testing them lightly with his teeth. Dead branches he always rejected; live ones likewise unless, apparently, he detected some odor that seemed to indicate a possible cone far out on the ends. Up he went farther and farther. I might have told him at the outset that he would find no seed-cones on the lower branches of a pine; then I reflected that my clumsy nose could never tell me which branches held them.

From a position above, Abert would reach out, pull a young branch towards him for inspection. Finally, finding a tuft bearing a cone he clipped off the whole end and retreated to a firmer footing. He then clipped the cone from the tuft, dropping the latter to the ground. With his prize in his jaws he clambered down the trunk, sat near its base like a tiny kangaroo, and proceeded to bite off the scales and spit them out. Green chips, then inner white ones, flew in all directions. Once in a while he came upon the seed, and that quickly disappeared. In a few short minutes the job was over, the core of the cone dropped, and again the hunt was on.

THE HORNED OWL

By - The Park Naturalist

"Whatever its local standing this Great Horned Owl is one of the royal birds of the land, a meeting with which may well distinguish a day in the field." Thus concludes Mrs. Florence Merriam Bailey in referring to the Horned Owl in her recent book on Birds of New Mexico.

On the Fourth of July, 1929, I was privileged in having an excellent opportunity of so distinguishing the day and in ably verifying this statement of Mrs. Bailey. While traveling thru the Box Canyon of Bright Angel Creek - where sheer walls of a thousand feet rise abruptly and majestically on each side of the narrow valley, and where for only a few hours daily, the sun's hot piercing rays reach its depths I was suddenly aroused - yes, even startled, by the unheralded appearance of a huge shadow over my path, by a mighty flapping of wings, and then by the wierd sight of that fantastic, phantom-like creature, the Horned Owl.



Bubo

This great owl - the largest of its kind in the arid Southwest, flapped its long wings slowly and deliberately towards a rather undetermined goal, and floated close overhead. Undoubtedly the noise of my mule on the trail had disturbed its slumbers in some sheltered rock crevice, and so hoping for peace thru flight, it had been helplessly mystified and blinded by the brightness of the open canyon. It appeared absolutely dazed for a moment, then evidently feeling "discretion the better part of valor," it settled down on the rock surface directly across the Canyon.

There it sat - scarcely forty feet from the bottom of the Canyon, the distance of an easy stone throw. What a superb sight. It sat for a long time, its mottled brown and white feathers blending magnificently into the dark crystalline rocks which formed the background. Scarcely a move did it make except now and then a peculiar turning or twitching of its curious head which brought forth splendidly the monkey-like faciel characteristics and the imposing ears or horns. A finer view could scarcely have been asked for.

It appeared to be rather a pale form of the owl, in fact it was characterized by an unusual amount of gray or white on the breast and front, and very probably was the species *Bubo virginianus pallescens* - the Pallid Horned Owl of Northern Mexico, Southern California, Arizona and New Mexico. Records of this magnificent creature have been made before in the Grand Canyon; its solemn, deep-toned who, who, who, has been remarked upon not uncommonly in the past, nevertheless such a royal sight of such a royal bird is certainly worth mention among true nature lovers.

YAVAPAI CATCHES A BOLT

By - Earl W. Count, Ranger Naturalist

Jupiter recently afforded me an impromptu chance to write a nature note. One of our frequent thunderstorms was upon us the other day at Yavapai station, and a crowd of some forty tourists were collected inside waiting for an opportunity to leave. Of course I had closed the doors to shut out whatever Mother Nature had to offer us at the time; but some one went over and opened the main entry to see how wet things were getting, then failed to close it. By now the bolts were coming down a bit too frequently. I took hold of the heavy door by its latch, and had almost closed it when there came through that latch a tremendous flash and a bang like that of a huge rifle. Later a tourist said he had thought I had accidentally discharged a revolver from my left hand. The bolt lifted my left leg off the concrete floor, then passed to the porch. Two men standing near the parapet were lifted off their feet and hurled to the floor. One of these was temporarily paralyzed in the legs which caused considerable anxiety. Fortunately after receiving some attention he seemed none the worse for his experience. A woman touching the exhibit column of the canyon received quite a shock in the hand. Then the bolt passed, but not before gouging three holes in the floor, each about six inches in diameter and a couple inches deep.

The sensation of being hit by lightning is really interesting. The bolt had entered my left hand, spread through the left half of my body, extending slightly over into the right. It departed through my left foot, throwing it into the air. The feeling of a tremendous electric shock was followed by a short glow of warmth.

Fortunately, the bolts at this time were comparatively small and frequent. Another one hit the ground outside shortly after the first. The Fred Harvey busses were grouped just outside and I have been wondering ever since if their metal was not the attracting force.

SUMMER SNOWSTORMS

By - S.B. Jones, Ranger Naturalist

In June and July the air of the Kaibab Forest appears filled with "snows". This is brought about by the seeds of the aspen, which have wings of "cotton" attached to them to aid in their distribution by the wind. There is an extensive grove of aspen at the head of the Kaibab Trail, and the floor of the forest in this place is literally white with seeds. In the automobile road nearly the ruts have "drifted up" and "snowbanks" have formed in every cut. So far no one has tried to go coasting, but the rangers are getting their snowshoes ready.

FACTS - NOT FANCIES

To the great pleasure and joy of the entire Clark University geography class, a large male Bighorn Mountain Sheep recently exhibited itself - unconcernedly and at close range. This occurred on July 20 along the very edge of Grand Canyon's South Rim. The "master of the cliffs" presented himself just east of El Tovar hotel in such a magnificent manner that the entire party of seventeen were allowed to approach within fifty feet and even to try their luck with the camera as he strolled leisurely by apparently not the least bit frightened or disturbed by their presence.

The beautiful and gaudy Arizona Hepatic Tanager was reported from Grand Canyon National Park for the first time on June 11. Mrs. Florence M. Bailey observed a male bird in the Yellow Pines just east of Grand Canyon Station on the South Rim.

Two specimens of a brilliant red, black, and white King Snake have recently been found by Range Ed Laws at the high elevation of the North Rim.

Coyotes have been observed by the Park Naturalist several times during the past month in the vicinity of Desert View.

Some very interesting material has recently been collected from the Hecatai Shale (Algonquin Age) which contains rather definite traces of organic matter.

The California Cuckoo and the Song Sparrow - both birds previously unreported from the Park, were noted by Mr. Vernon Bailey in the Havasu Canyon late in June.