

# GRAND CANYON Nature Notes



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Grand Canyon Nature Notes

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This Bulletin is issued monthly for the purpose of giving information to those interested in the natural history and scientific features of the Grand Canyon National Park. Additional copies of these bulletins may be obtained free of charge by those who can make use of them, by addressing the Superintendent, Grand Canyon National Park, Grand Canyon, Arizona.

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M. R. Tillotson, Superintendent

Edwin D. McKee, Park Naturalist

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# The YUCCA~SWORD-LIKE YET FRIENDLY

By Barbara Hastings McKee

As one travels through the arid Southwest, across our American deserts or semi-deserts, his notice can not help but be attracted by the yuccas which are very common. These plants are also called Spanish Bayonets because of their dagger-like leaves of greenish blue.

While there are several species of yucca, the one of greatest economic interest to the original inhabitants of this part of the country is the Yucca baccata or wide-leaved yucca. This plant lives in both upper and lower Sonoran zones and seems to thrive in rocky, dry soil. Normally it blooms every year, sending up a flower stalk from the center of the bunch of spear-like leaves. The flowers, of which there are a great many on the stalk, are bell-shaped and creamy white. Later green fruit hangs from the stalk and ripens with a peach-pink color. It is heavy and solid, having somewhat the shape of a fat, stubby banana. When the fruit dries it turns brown and becomes very light in weight. The seeds fall to the ground and are scattered; each one of which may be a potential plant.

It has been truthfully said that a white person would starve to death in many places in the desert where Indians could actually feed and clothe themselves and their families. To the ordinary civilized person the Yucca baccata appears quite useless, yet it is a plant for which the Indians find, perhaps, the most uses.

Starting with the root we find where the plant received its common name - - soap weed. As far as I can ascertain, all the Indians in New Mexico and Arizona use it for soap, although the Yucca baileyi or narrow-leaved yucca is preferred by the Navajos and Hopis for this purpose. Even today with our cheap and good commercial soaps, the Navasupais, Navajos, and Hopis whom I have questioned use the Yucca baccata or the Yucca baileyi for shampooing their hair. The root of the plant is crushed and bruised, hot water is then poured over it and a rich lather whipped up. After thoroughly rubbing this lather into the hair it is rinsed out with clear water and the hair tossed and dried in the sunshine. The soft, shiny tresses of the Indians are a good advertisement for this soap.

Besides this most common use of the soap weed, it is employed by the Navajos to wash dirt from the wool shorn from their sheep and goats. Dirty rugs are often scrubbed with the suds. The Hopi Indians use the rich lather for a great many ceremonial purposes.

The spiked leaves of the Yucca bacata are very fibrous. The short ends of the fibers hang from the edges of the leaves giving them a ragged appearance. From time immemorial Indians in this part of the country have used

these threads for making twine and rope. Before sheep and goats were brought to America by the Spaniards blankets were sometimes woven of yucca fibers, and strips of rabbit fur were occasionally interwoven with the yucca to make a warmer and more ornamental fabric. The prehistoric inhabitants of this region made sandals of yucca. Even into modern times the Navajos use such footgear, but with the introduction of sheep and goats these were no longer made -- the buckskin shoe seen today taking their place.

The yucca fibers are obtained by boiling the leaves and then pounding or chewing the mass to extract the threads. These are then twisted and woven or braided into the various articles. Besides using the fibers for such utilitarian objects, they are made into paint brushes to decorate pottery, and for a number of ceremonial purposes.

The Hopis make a flat, bowl-shaped basket of split yucca leaves. Such a basket is used for winnowing grain as well as for a handy container for almost anything.



Hopi Indian  
with basket  
made of split  
yucca leaves

When the leaf is baked it becomes quite sweet to the taste, and travelers have been known to eat it prepared in this way when other provisions had given out.

A delicacy greatly prized by all Indians in the Southwest is the fruit of the yucca. It is very meaty and said to be delicious after it has been roasted until the outer skin can be stripped off. It is supposed to taste like a perfectly baked apple. The Zunis in New Mexico make a stiff jelly or conserve by boiling the fruit after it has been well masticated. The resulting jelly-like mass is formed into pats and dried in the sun. In this way it can be preserved indefinitely. When chunks of this conserve are broken off and soaked in water the resulting liquid is very sweet. Before the Zuni Indians had sugar this syrup was used for sweetening.

The Supai Indians are very fond of the ripe fruit which they eat raw after peeling off



the outer skin. They do not gather the fruit until it is very ripe and peach colored.

The *Yucca baccata* as it grows out on the desert is more often than not looked upon with disfavor by white man. To him it is just another unlovely plant with sharp, pointed leaves to be avoided. But to natives of the country it is a beautiful and useful gift of the gods.

## NAVI' - PE

By E. W. Count, Ranger Naturalist

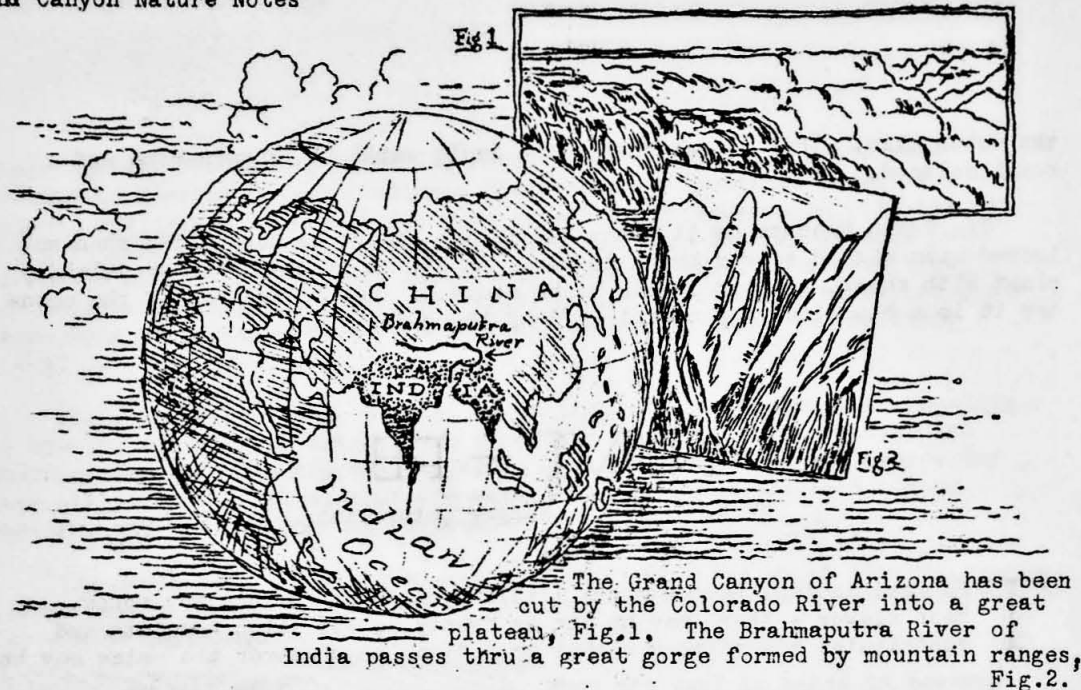
THE Hopi Indians have a merry little game for throwing away money. Each player - there may be ten or twenty, c'est selon - squats and contributes his coin, a nickel or a dime, or whatever the price may be.

The first man takes all the coins in his palm, or on the tips of his fingers, and tries to toss them in the air and catch them on the back of his hand. If he catches all of them, he tosses them again, this time catching them in his palm again. If both these tosses are successful, he keeps the bag.

If however his first toss ends in the spilling of some of the coins, without losing the caught ones from the back of his hand he must pick up each coin dropped. As he picks up each one successfully, he transfers it to his free hand. After he has accomplished this feat, he may toss the coins on the back of his hand, and catch them in his palm as before. These he keeps. The coins picked up must now be tossed from the start again, the whole performance being repeated.

In case he is unsuccessful in any of these operations, he forfeits his coin and the play passes to the next man. The play thus passes to the next man in any case as soon as the pool is exhausted; for a new one is then formed.





The Grand Canyon of Arizona has been cut by the Colorado River into a great plateau, Fig. 1. The Brahmaputra River of India passes thru a great gorge formed by mountain ranges, Fig. 2.

## A DEEPER CANYON

By Clyde C. Searl, Ranger Naturalist

A QUESTION commonly asked by visitors who view the canyon for the first time is whether or not there is anything like it anywhere else in the world. If their question would stop at that the answer could truthfully be given in the negative, but it usually carries a query in regard to the depth of the canyon.

There is a canyon approximately a thousand feet deeper than the Grand Canyon, and on a river similar in many ways to the Colorado. That canyon is cut by the Brahmaputra in northern India. Its depth is not measured, however, from the rims of a high plateau, but from the tops of mountains that rise sharply from the river.

The Brahmaputra (meaning "son of Brahma") is one of the largest rivers in India. It rises in Tibet, and after a course of nearly 1,800 miles it empties, with the Ganges, into the Bay of Bengal through a vast delta region. During the rainy season it floods an area hundreds of square miles in extent, and enriches a plain noted for rice, jute and mustard.

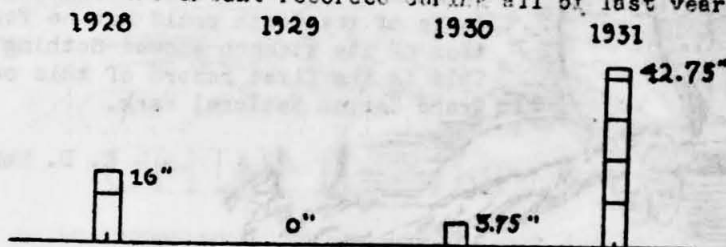
Unlike the Colorado River which can be navigated for only a short distance, the Brahmaputra is navigable for about 800 miles and carries a great traffic. Europeans became acquainted with the river in 1765.

# WHEN WINTER COMES

By Edwin D. McKee, Park Naturalist

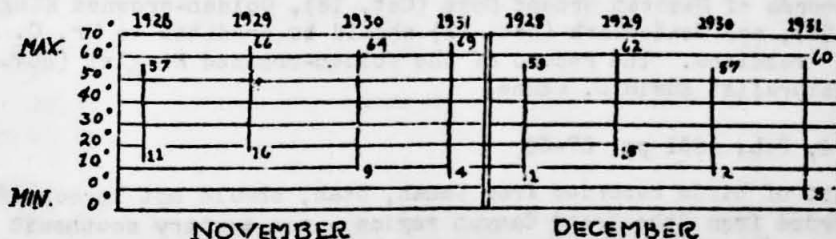
**E**ARLY this fall the Supai Indians were very busy gathering pinyon nuts. They said there was a long, cold winter ahead. When I asked one how he knew, I was told that the abundance of the nut crop gave certain evidence. Even though the weather forecasting of the Supais is not based on modern scientific methods, it seems to have been accurate at least on this occasion. The winter has definitely started out as a long, cold one.

Snow has fallen on sixteen different days already this winter (November and December) and on December twelfth it covered the ground on the South Rim of Grand Canyon to an average depth of eighteen inches. A comparison of the total amount of snowfall during November and December this year with that of the same months during the three preceding years is interesting. In 1931 the total for this period amounted to 42.75"; in 1930 it was 5.75"; in 1929 there was none; and in 1928 only 16". Furthermore the snowfall thus far this winter is almost double the amount recorded during all of last year.



## Nov.-Dec. Snowfall

The early winter temperatures recorded on the South Rim of the Grand Canyon this year further substantiate the truth of the Supai forecast. On December 13 the temperature ( $-5^{\circ}$ ) was thirteen degrees lower than at any time last year. Unofficial readings made on the Canyon rim the same day even went as low as  $-18^{\circ}$ . In brief, the November-December temperature records of this year showed a minimum considerably lower than that of the same months during any of the three previous years. On eight different days the temperature has been below  $10^{\circ}$ . Yes, winter has come this year.



## SPECIAL NOTES

THE tracks of a large mountain lion or cougar were seen in the deep snow near Anita (just south of the Park Boundary) on December 15 by Austin Hamidreck and Paul Burro, Supai Indians. The men followed the trail on horseback and were finally able to tree and shoot the cougar.

- - P. P. Patraw - -



ON January 10, a specimen of a female Arizona Spotted Owl, *Strix occidentalis lucida* (Nelson), was found dead at Indian Gardens by trail caretaker Lloyd Davis. The cause of its death could not be found. Examination of its stomach showed nothing determinable. This is the first record of this owl from the Grand Canyon National Park.

- - E. D. McKee - -

## ERRATA

Vol. 5 No. 1, Nov. 1930 pp.11

The records of Mexican Ground Dove (Oct. 18), Golden-crowned Kinglets (Oct. 21), and Meadowlark (Oct. 22) should be credited to Mr. C. A. Bryant of San Francisco. The record of the Golden-crowned Kinglet (Nov. 21) to Park Naturalist Edwin D. McKee.

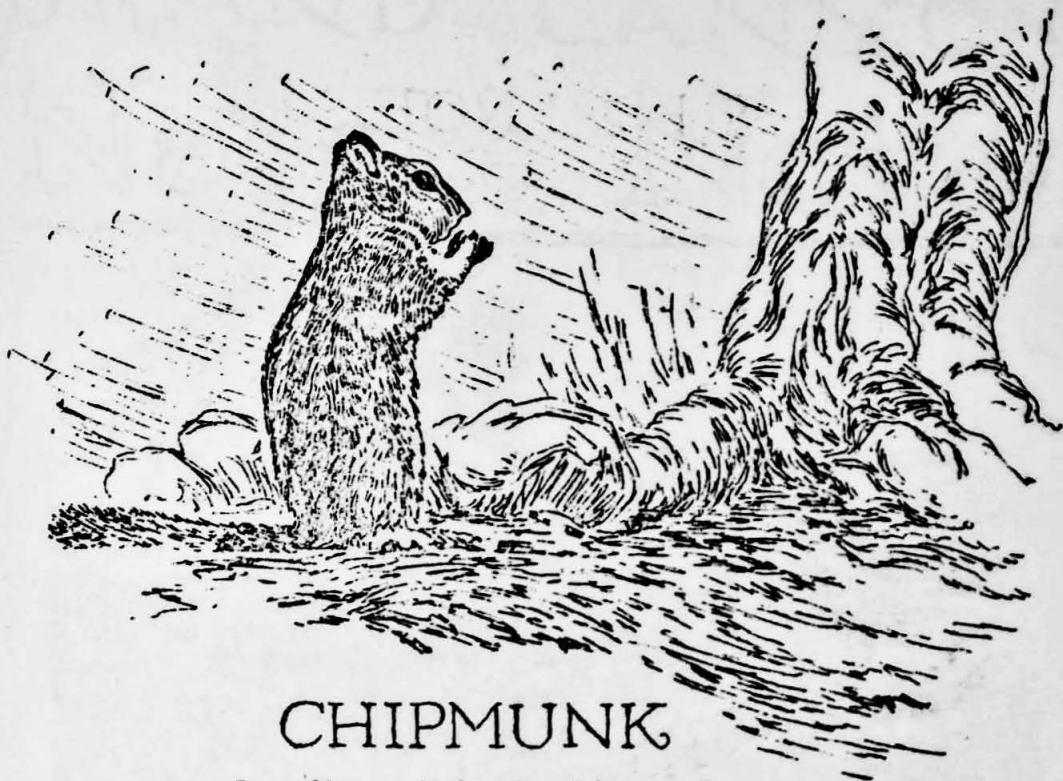
Vol. 5 No. 4, Feb. 1931 pp. 37-38

The list of birds recorded from Kanab, Utah, should not be considered as unrecorded from "the Grand Canyon region - nor country southeast of Grand Canyon as far as the San Francisco mountain region and Mormon Lake".

Vol. 5 No. 8, June 1931 pp. 83

For Rusty Blackbird read Brewer Blackbird.





## CHIPMUNK

In sudden panic he stayed his track

Tensely awaitin' a move from me,

And I, as startled, leapt swiftly back, - - -

Was I the braver, or was he?

- - Siwa Lynch - -