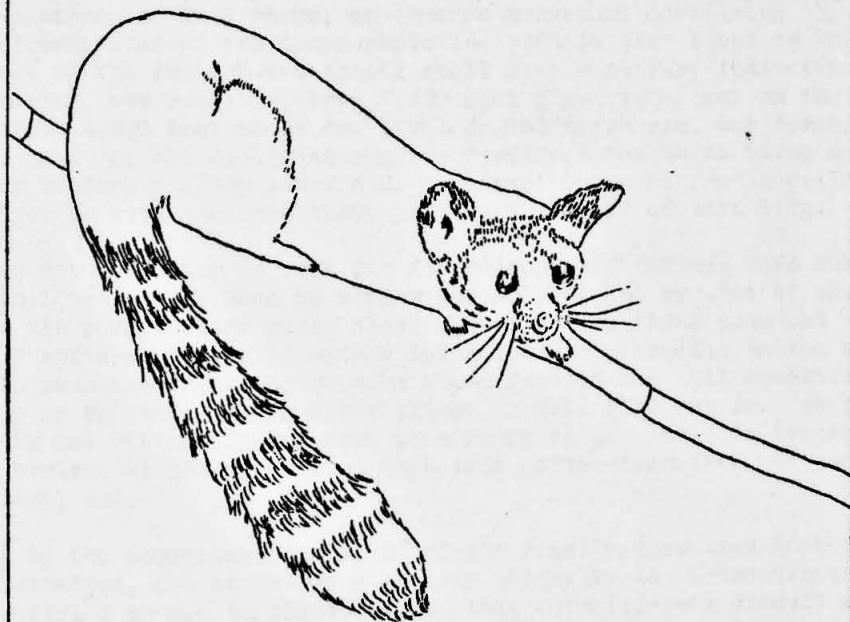


*Nature Notes  
of  
Grand Canyon*



*Vol. 3 - No. 5*

ES.

U. S. DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
GRAND CANYON NATIONAL PARK

VOL. 3.

GRAND CANYON NATURE NOTES

NO. 4.

OCTOBER 31, 1928

-----  
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.  
-----

LESSONS FROM A GRAVEYARD.

If the human race should show as much antipathy towards stepping on graves of once living beings, other than forms of their own kind, there would be few steps taken at Grand Canyon National Park.

The solid rock forming both rims of the Grand Canyon and known as the Kaibab limestone is, in a sense, an immense graveyard containing the remains of many species and innumerable individuals that lived in Permian time. Most of the remains are fossil shell fish - thereby indicating that this formation, now reposing about 7,000 feet above sea level on the south rim and about 8,000 feet above sea level on the north rim, was formed under the sea. As the geologist regards Permian deposits as being approximately two hundred million years old, it cannot be considered sacrilegious to walk over or even dig into these preserved records of past life.

It is not necessary to look far for evidence of extinct life for in places the limestone is made up almost entirely of the remains of shell fish. As the park visitor walks along either rim he steps upon and invariably notices sea shells either lying loose or imbedded in the solid rock. The paleontologist who studies these fossils can tell something of the nature of the sea. Among other things he will find corals. As corals, both living and extinct forms, have been known to live only in tropical seas, he arrives at the conclusion that this marine formation was deposited in a tropical sea.

Thus by the occurrence and study of the fossils contained in this ancient formation, two of the many lessons taught by the Grand Canyon are apparent, viz: a change in climate since this formation was deposited and uplift of this formation to its present elevation above sea level.

KINGFISHER AT GRAND CANYON

While on a recent trip to the north rim of Grand Canyon a new bird was added to the park list. Three Belted Kingfishers were seen along Bright Angel Creek. They appeared entirely out of place in such an environment. Their occurrence here indicates they have followed the tortuous path of the Colorado River through a semi-arid region where even their sharp eyes could hardly peer into the turbid waters for food. Such streams as Bright Angel Creek -

stocked with trout and containing numerous native minnows - are undoubtedly rest havens for these travelling fishermen.

### TWO TRAIL PARTIES IN ONE PICTURE.

As each trail party starts down the Bright Angel trail their pictures are taken in front of Kolb Bros. Studio. Ordinarily but one party is included in the picture. Recently, however, a second party presented itself in time to be "snapped." Three of the tame deer had taken an early morning stroll into the Canyon and upon their return they came face to face with the down trail party just as the picture was taken.



### Robin Breaks Ice to Take Bath.

Chief Ranger Brooks was recently surprised to watch a robin take a bath under obverse weather conditions. A sharp drop in temperature was noted after a flurry of snow and a thin scum of ice coated the bird bath outside his house. A robin was seen to fly down to the water to bathe. Undaunted by the icy coating and temperature of the water, the robin showed his initiative by breaking the ice with his feet and finally plunge in for his bath.

### ANTLERS AS AN AGE INDICATOR OF DEER.

That one cannot be sure of the age of a deer from the number of points on the antlers is evidenced by the marked variation of horns worn by three tame bucks of approximately the same age at Grand Canyon National Park.

All three bucks were caught shortly after birth in the early summer of 1927. At the present time all are entering their second winter - their summer red coats having been replaced with gray winter coats and their horns having been polished of the velvet indicating the full growth for the first season.

One might expect to find single spikes representing the antlers on all three bucks at this age. The age criteria of a single spike for each antler, however, is present on only one buck. The antlers as an age indicator would hardly work in the case of the other two. For not knowing the age one might easily believe they had entered upon their third or fourth winter. One buck has three points and eye guard on one antler and three points on the other antler. The third buck possesses a beautiful set of antlers with three points and a well-developed eye guard on each horn.

Whether or not the second sets of horns will show a similar marked variation in growth remains to be seen.

### RING-TAILED CATS.

By - Mrs. G. E. Sturdevant.

A couple of months ago two half-grown ring-tailed cats were caught in the dining room at Phantom Ranch. They were boxed and sent by mule back as a donation for the park museum. Since caged or leashed wild animals are not approved of in national park museums the task of taming these two accessories had to be undertaken.

Mr. and Mrs. Brooks (Chief Ranger and wife) volunteered to undertake this interesting work. It was their plan not use any cage or box of any kind to house the little creatures. They donated the whole back porch to the "cats" leaving them free to roam around as they wished. Then as their guests became more gentle and accustomed to human surroundings they were to be allowed further domestic privileges until it was hoped they would soon occupy the same place as an ordinary domesticated house pet. These plans were showing great promise of fulfillment until a crack in the porch door allowed their wards to take "French leave." All was not lost, however, by their departure for during their brief sojourn many interesting habits were observed.

In harboring wild creatures one of the most important questions to solve is what shall I feed them? The cats were not finical as their appetites soon proved. Although they are omnivorous they decidedly favored a meat diet. Raw meat was preferred to cooked meat and mice to any meat obtained at the market. Fish was not liked all. The old barn cat who is quite a mouser, unbeknown to herself, furnished her rivals with two mice each day. After catching the mice the old cat would take them to Mrs. Brooks who in turn would give them to the ring-tails. The ring-tails

would immediately decapitate the rodents leaving the bodies until their appetites became keener. Once some wandering jow was offered them which they seemed to nibble with some relish. But the most delectable dish of all to them seemed to be grapes. It was for those that they would venture forth from their various and sundry hiding places (wood boxes, refrigerator, etc.) creeping up hesitatingly and then with a graceful movement of their heads, snatch them prettily to eat in privacy. The other two articles of diet which they seemed to enjoy were eggs and milk. They liked the eggs both raw and cooked. Had they stayed longer I am sure their menu would have included many more varieties of food.

During the day the cats slept one coiled on top the other until they were hardly discernible from each other. Their repose was easily broken, however, sudden noises rousing them enough to show ugly claws and slashing teeth.

A rare treat was in store for those who could see them in the late evening. They frolicked and boxed and cavorted around like kittens - climbing all over the porch. Indeed such actions as theirs would soon bring living room furniture to grief. It was their greatest delight to push things off and knock every available hanging object down. During their play they would run after each other crossing from one side of the porch to the other on a bamboo fishing rod. Nothing new ever came to the back porch which they did not examine, not even a fresh supply of kindling wood. After a short time they even dared to nose Mr. and Mrs. Brooks for whom they gradually lost fear.

The name ring-tailed cat is scarcely fitting for these animals; for although they are ring-tailed they are not cats but rather belong to the raccoon family. The ring-tailed cat is one of the most interesting animals in that so many different animal characteristics are present in this one. With a weasel-like body, fox-like face, cat-like feet, and raccoon-like tail he appears as the final product of a four-animal melting pot.