

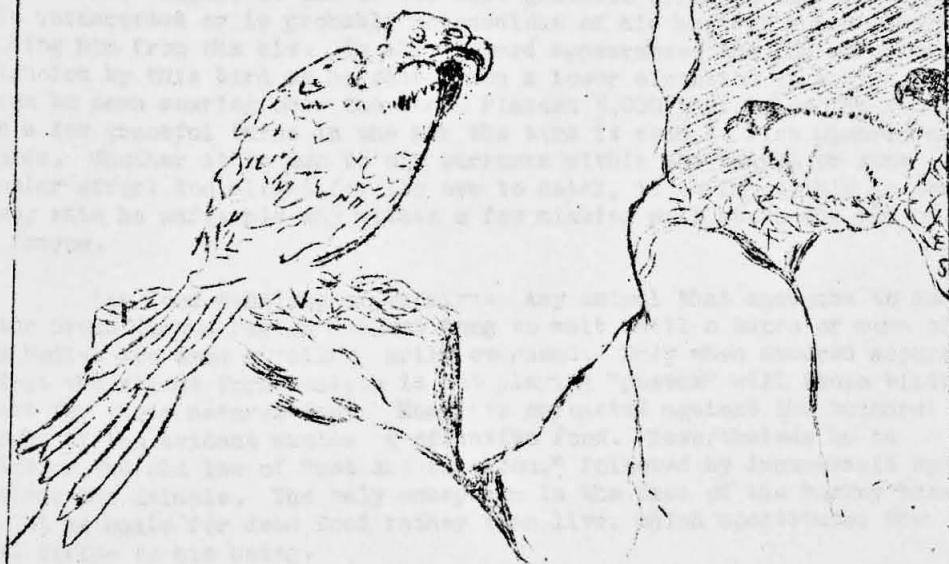
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GRAND CANYON NATIONAL PARK.

Nature Notes of Grand Canyon



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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 of those who can make use of them, by addressing the Superintendent, Grand Canyon National Park, Grand Canyon, Arizona.

J. H. EAKIN - Superintendent.

G. E. Sturdevant-Ranger Naturalist.

THE TURKEY BUZZARD (Cathartes aura)
By - G. E. Sturdevant.

Accorded admiration for the graceful manner in which he maneuvers his ponderous body through the air rather than the food he chooses to eat, permits an introduction to the Turkey Buzzard (*Cathartes aura*).

The buzzard is one of the most graceful birds on the wing. He feels unconcerned or is probably unconscious of his host of human admirers watching him from the rim. To all outward appearances the law of gravity is ignored by this bird as he soars from a lower elevation to a higher. He can be seen soaring over the Tonto Plateau 3,000 feet below the rim. With a few graceful turns in the air the bird is seen to rise upwards and upwards. Whether it is due to air currents within the canyon or some muscular effort too slight for the eye to catch, it is impossible to state. At any rate he wafts his way within a few minutes well above the rim of the canyon.

Its food consists of carrion. Any animal that succumbs to death in the Grand Canyon region has not long to wait until a score or more of dark bodies are seen circling warily overhead. Only when assured apparently that the silent form beneath is not playing "possum" will these birds alight for their natural food. Many are opinionated against the buzzard because of the evident choice of offensive food. Nevertheless he is following the old law of "eat and be eaten," followed by innumerable species of birds and animals. The only exception in the case of the turkey buzzard is that he hunts for dead food rather than live, which constitutes the chief virtue to his being.

The head of the buzzard is practically bare of feathers. This corrugated skin of the head resembles the crimson skin on a turkey's head. Upon the ground the large bird is often mistaken for a turkey - hence the name turkey buzzard or turkey vulture.

The nest occurs in protected places beneath large over-hanging rocks or in caverns in the walls of the canyon. The two eggs are deposited in a scooped-cut place in the earth. The young are a downy white with blackish heads. Upon approaching them, they send forth a hissing noise not unlike a tame turkey hen on a nest.

Many State Health Departments consider the buzzard an invaluable cooperating agency in carrying on sanitary work. The decaying flesh of dead animals, that might otherwise endanger the public health, is quickly removed. Due to his initiative in this respect, he receives protection in many states.

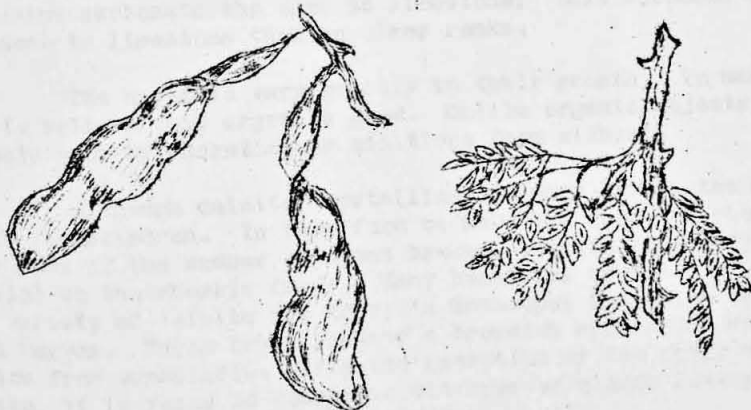
The buzzard is harmless when left alone. Any enemies are adequately coped with, however, in a singular manner. When attacked, he resorts to the vile practise of disgorging the putrid contents of his last meal which is fully as effective as the defensive tactics of the skunk.

The range of this bird is very great; extending throughout temperate and tropical America. He is a permanent resident at the Grand Canyon as he may be seen soaring within the canyon nearly everyday throughout the year.

CATS CLAW (*Acacia greggii*). By - G. E. Sturdevant.

The Cats Claw (*Acacia greggii*), found growing within the Grand Canyon, is one of the few acacias indigenous to the United States.

The Cats Claw is a much-branched shrub, attaining a height of ten to fifteen feet, with a diameter of four to six inches. The leaves along the young twigs are arranged in a pinnate or feather-like manner. The flat, brown, seed are nearly circular. Leaves and a few of the seed pods still remain upon the shrub at this season of the year.



This shrub thrives in a desert-like region such as is found within the Grand Canyon. Within the park it is distributed along the washes above the Tonto Plateau, where it affords but a scanty covering to the soil. These washes are usually dry, but the growth of acacia along them suggests the presence of water within a short distance beneath the surface. The common name is fittingly appended to this small tree or shrub because of the hooked spines along the twigs.

The small size prevents a great economic value for this shrub. The high quality and durability of the wood, however, made it a much-sought-after article by the pioneers. It is regarded as the best substitute for coal in the Grand Canyon region. When used for fuel it is found to burn with a bluish flame and remain burning long after most wood is reduced to ashes. Another value is the browse afforded. The small band of antelope, introduced into the canyon at Hermit Camp, browse the leaves extensively.

CALCITE. By - G. E. Sturdevant.

As "all that glitters is not gold," so likewise might the statement be made that all crystallized transparent minerals are not necessarily quartz.

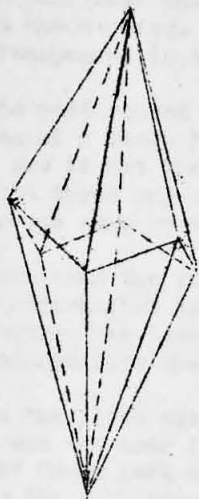
This is especially true at the Grand Canyon where the crystallized transparent mineral most commonly seen is calcite. It is very abundant in the Kaibab limestone where it attracts the tourists attention. The question "Is it quartz?" generally follows. The negative reply is not always satisfactory for many wish to be better informed about this mineral.

Calcite is one of the most common and widely distributed minerals found in the earth's crust. It is particularly abundant in beds of sedimentary limestone. These beds of limestone are composed of remains of marine organisms. Upon alteration to crystalline limestone or marble, innumerable crystals of calcite are found. Some of the most beautiful calcite crystals, however, occur in geodes or cavities. Chemically, it is calcium carbonate the same as limestone; this accounts for its greater abundance in limestone than in other rocks.

The crystals vary greatly in their growth. To many it is difficult to believe that crystals grow. Unlike organic objects, however, crystals grow by accretion or additions from without.

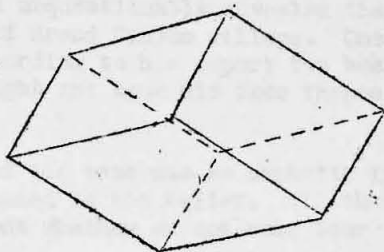
Although calcite crystallizes in many forms, the most common is the rhombohedron. In this form we have six faces of rhombic outline. Regardless of the number of times broken, calcite generally breaks parallel to the rhombic faces. Many beautiful crystals of dog-tooth spar variety of calcite are found in Havasupai Canyon, a branch of the Grand Canyon. These crystals have a brownish appearance due to discoloration from vanadinite. With the exception of the chalk variety of calcite, it is found to possess a vitreous or glassy luster. The chalk variety is dull or earthy in appearance.

Dog-tooth spar var.



Scalenohedron

Common form



Rhombohedaon

In Mohs scale of hardness, which ranges from one to ten, calcite is found to have a hardness of three. Finger nails have a hardness of about two and one-half in this same scale so calcite is classified as a relatively soft mineral.

The greatest value of calcite is in the manufacture of Nicol prisms in high powered microscopes where the calcite crystals polarize light. Practically all crystals used for this purpose come from Iceland under the name of Iceland spar. These crystals are of a very pure quality occurring in a large cavity in basalt.

BEAR? By - G. E. Sturdevant.

The Park Service at the Grand Canyon has recently been informed on three occasions of the presence of a new animal in the park.

The trail-man was returning up the Bright Angel trail after a repair job on the Tonto Trail. He had reached a point about seven hundred feet below the rim near the tunnel. Peering ahead through the approaching dusk, he could make out the dark form of an animal. The animal was coming out of the tunnel to meet him. The long-eared steed upon which he was seated espied the dark form. With a snort, the animal whirled about, elevated his tail, and filling the air with terrifying sounds, raced pell-mell down the trail. Only through fear from the oncoming bear was the trail-man able to retain his seat. A few zig zags below

the mule was brought to a halt. After waiting for some time the trailman turned back up the trail and saw nothing more of the omnivorous beast.

Another bear was sight^{ed} near Monument Creek. This also happened late in the evening. A large dark form was sighted but this time the bear disappeared in the darkness.

The most recent report was one that unquestionably revealed the presence of a large bear near the edge of Grand Canyon village. One person saw it but twenty feet away. According to his report the bear was about three and one-half feet in height and took his time inspecting the new camp grounds.

Each time the individual who sighted the bear was so emphatic in his assertion that he could not be dissuaded in his belief. All three cases required an investigation to find out whether or not some bear had wandered into the park.

In the first case the Bright Angel trail was studied near the tunnel and the bear left tracks like a mountain sheep. The "bear" at Monument Creek left a great many plain tracks which could have been made only by the wild burros of the canyon. The third investigation was certain to reveal the presence of a bear for it had been seen in broad daylight and only twenty feet away. The fresh snow was certain to retain the imprints over night. The man who saw the bear pointed out the tracks in the snow. Unfortunately, however, the bear left a dog's track.

The most reliable of the pioneers in this area have never seen any bear within the park. Berries and other food sought by bear are not present in the canyon. In addition, the lack of water prevents the Grand Canyon from being a good "bear" country. When bruin appears in person and permits himself to be viewed in daylight by some person who recognizes a bear when he sees one, we will be glad to add his name to our list of animals.