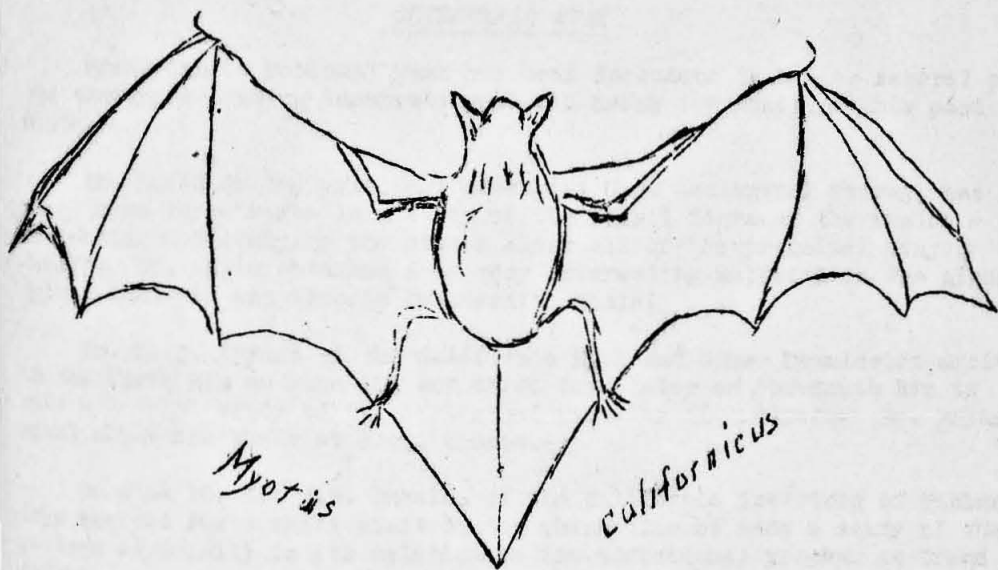


GRAND CANYON NATURE NOTES



Little California Bat -

Phantom Ranch June 1929

Vol. III

No. 10

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

Vol. 3
GRAND CANYON NATURE NOTES

No. 10
June 30, 1929

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.

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

SCIENTIFIC WORK

Grand Canyon National Park has been fortunate in having several of the country's leading scientists numbered among its visitors this past month.

Dr. David White, principal geologist U.S. Geological Survey, has spent some three weeks in a study of the fossil flora of the region - collecting and studying the plants along all of the principal Canyon trails. Dr. White obtained some very interesting material in the Algonquin formations and also in the Hermit Shale.

Dr. H. C. Bryant of the California Fish and Game Commission arrived on the North Rim on June 10, and three days later on the South Rim to make a special study of the biological problems of the park. Dr. Bryant spent about two weeks at Grand Canyon.

On June 10, Dr. J.P. Buwalda of the California Institute of Technology arrived for a short visit during which time he made a study of the geology especially in its relation to the educational program at Grand Canyon.

Dr. John C. Merriam, President of the Carnegie Institution, spent five days (June 12 to 16) examining questions relative to the practical administration of the educational program and to the presentation to the public of the scientific story of Grand Canyon.

Mr. Vernon Bailey of the U.S. Biological Survey has been continuing his work in the Grand Canyon region with considerable success. During the month of June he has worked principally on the South Rim though he has also spent some time on the Kaibab and in the Havasu Canyon.

The two Ranger-Naturalists arrived about the middle of the month to take up their scientific and educational duties for the summer. Mr.

Stephen B. Jones, formerly of the University of Washington and also Harvard University, is stationed on the North Rim and Mr. Earl W. Count of the State Teachers' College, San Jose, California, is located on the South Rim.

MANZANITA ON THE SOUTH RIM

By - Ranger-Naturalist Earl W. Count

It just shows what a fellow with alert eyes will discover. Mr. Cummings, riding through the chaparral east of Yavapai Point, reported a clump of manzanita. General scepticism. Such a thing could not be. Manzanita is supposedly absent from here. But seeing is believing, for Mr. Cummings took me to the place and there it was, a clump a couple of feet high at the center eight feet across clinging everywhere to the ground by powerful roots. In the center of the clump grew sagebrush. Perhaps as the discoverer suggested, some bird dropped the stray seed. Anyway it is thriving in desolate luxury. The plant answers the description of Arctostaphylos pungens as given in Tidestrom's Flora of Utah and Nevada, and has been so identified by Dr. Vernon Bailey.

LADY HECATE

By - Barbara Hastings

Lady Hecate was my pet for several days at Phantom Ranch during May. She was one of the small red bats - Myotis californicus - which can be seen in great numbers circling and swooping in Bright Angel Canyon just at dusk.

As I was walking along one of the trails before dark I noticed that there were several bats flying low over the dust to catch any insects which might be there. I found a large, soft switch and soon brought one of them to the ground, stunned. Just as it was reviving I picked it up. Viciously she bit and clawed me, but her teeth were too small to puncture my skin. And how she did squeek and chatter! She was in a perfect frenzy to get away. I put her in my handkerchief, however, and brought her to my cabin where I liberated her.

Very peevishly she fluttered around, swooping back and forth miraculously avoiding walls and furniture. Finally she stopped on one of the screens and began to crawl nimbly across it. Thinking she might be thirsty I caught her very gently in a handkerchief to give her a drink. She was "madder than hops" and bit the cloth time and again. She did condescend to take a drop of water from the tip of my finger but was too provoked at her predicament to be grateful for it.

Then I caught several moths for her to eat. At first she did not understand that they were for her, but I shoved one into mouth when she was preparing to bite me and she gobbled it down. After that she did not hesitate when I offered her millers but jerked them out of my fingers and made short work of them.

I kept Lady Hecate for two days and let her go the third night. She became too insistent for food. By the third night she had become so tame that I could not go in my cabin that she did not light on my sleeves or shoulder and crawl to my hand to be fed. She drank drops of water from my finger tips and then licked my fingers. I fed her at least large millers the third night. She would hang calmly upside down on the screen and chew them. I could hear her little teeth cracking. Generally she was most fastidious and was careful not to eat the wings of the moth. They would flutter to the floor after the last chew.

Six millers did not satisfy her hunger, however, and she seemed to be insistent for more. She really became quite a nuisance - begging for food every time I went in the cabin. I had exhausted the supply of millers from two cabins and could not find any more, so finally I decided she would have to feed herself. I hated to let her go because in that short time she had become so friendly and trusting.

As I stood there deciding to liberate her she flew up and clung to my sleeve. Then, very nimbly, she crawled to my hand. There she sat comfortably and looked up at me inquiringly with her bright, little, near-sighted eyes. Very quietly I walked across the porch, opened the screened door and stood in the path outside. Not realizing her freedom she continued to rest quietly in my hand. Then, slowly she crawled to my finger tips, hesitated a moment, and with a noiseless spread of her wings she was gone into the night, leaving me with a real feeling that I had lost a friend.

NESTING NOTES

(Extracts from the records of Mrs. F. M. Bailey and the park Naturalist.)

- May 30 - A beautiful little Pigmy Nuthatch nest was observed upon this date in a Juniper just in front of the Hopi House, South Rim. Voices of the inmates were noted. One of the young from this nest was later found in the road nearby (June 24)
- June 6 - Bluebirds were observed feeding their young in the woods east of the South Rim garage. One nest was in a Juniper and another close by in a Yellow Pine.

- June 6 - Crest up and head alert, a little Titmouse was seen hopping over the ground near the hogans of the Hopi House, South Rim searching for food for its young. Very soon one of these young with its shorter tail and lower crest was found close by.
- June 9 - The presence of immature, but well grown White-breasted Woodpeckers was noted in a Yellow Pine near the South Rim Garage. They were approximately fifty feet from the ground.
- June 12 - In the yard of Ranger Lehnert, young robins left their nest and took their first lessons in flying.
- June 17 - A whistle from across Bright Angel Creek brought five little heads to the look-out of their cradle - the lovely lichen built nest of a water ouzel.
- June 22 - The nest of a pigmy nuthatch was found in a Yellow Pine about fifty feet from the ground. The parent birds were busy feeding the young inside. This nest location was in strong contrast to that noted May 30
- June 23 - A family of Bush-tits was found feeding just under the Rim between El Tovar and Bright Angel Camp.
- June 25 - The young of the Ash-throated Flycatcher were observed in a box near Phantom Ranch. They were quite large and very lively.

THE CORONADO EXPEDITION

By - Ranger-Naturalist Stephen B. Jones

Of all the areas that are now National Parks, with the possible exception of Mt. Desert Island in Maine, the Grand Canyon was the first to be visited by white men. After the conquest of Mexico City by Cortez, the adventurous Spaniards turned their faces northwards. A glance at the map of Mexico will show why. That country was no "wild west." It tapers southward, and the "star of empire" was in the north. Mexico City had yielded fabulous treasure to the conquistadores, and they were ready to believe anything about the unknown country to the North. It was in fertile soil that the seed of the story of the Seven Cities of Cibola fell, and it grew amazingly.

Frederick S. Dallenbaugh has given the story of Coronado's Expedition in his "Romance of the Colorado River." One of the most interesting parts of the story is that of the growth of the legend of the Seven Cities of Cibola. Begun by an Indian slave, enlarged upon by a Spanish Monk, who had never seen the cities, the purely fictitious accounts of the great wealth of these cities grew so rapidly that Cortez staked, and lost, his whole fortune to find them. It fell to Coronado to first reach them. He found them small, impoverished Pueblo villages. "The inhabitants of this land are fit only to be made into Christians," said one Spaniard, probably meaning that they were too poor to be robbed.

~~Coronado remained in the Southwest for two years, and explored far and wide. The sea party threaded the shallows of the Colorado Delta in the Gulf of California, and entered, the first, the Colorado River, their leader, Alarcon, treated the Indians very shrewdly, playing upon their superstitions to win their assistance. When he learned that they worshipped the sun, he proclaimed himself a son of the sun! Money troubled him not the least. He made crosses of wood and told the natives they were very precious! It is a matter of some surprise to learn of the spread of news among the Indians at that early time. The natives of the Colorado delta had heard tales of the bison of the plains, and even of the alligators of the coast of the Gulf of Mexico.~~

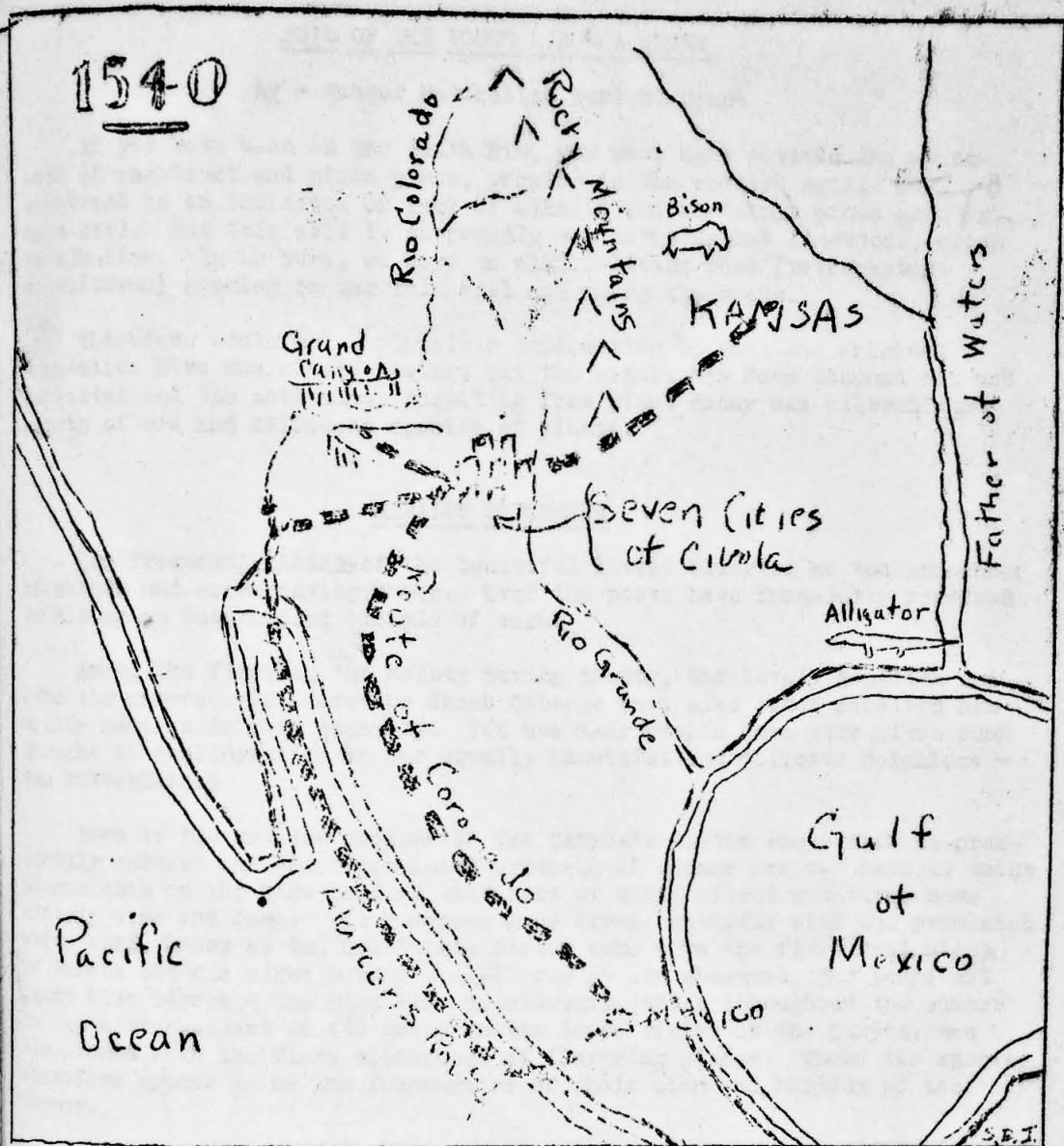
Coronado, and the land party, had meanwhile reached "Cibola," and had been disillusioned, but proceeded to divide and explore. Coronado, himself, reached Kansas, - this, remember, only fifty years after the discovery of America and eighty years before the landing of the Pilgrims. Another party reached the lower Colorado overland, and a third party, travelling northwestward, came to the Grand Canyon, Dellenbaugh believes the point reached was somewhat west of the National Park, and that on the return journey the party may have passed near Havasupai Canyon, at the western limit of the Park. The Spaniards were surprised, as many present day visitors are, that, when they climbed down into the Canyon, rocks that looked no bigger than a cobblestone proved "higher than the cathedral of Seville."

A number of place names in the Grand Canyon have been bestowed in memory of Coronado's Expedition. First, Coronado, himself, is commemorated by a butte near Grandview Point. Cardenas Butte records the name of his lieutenant who actually discovered the Canyon. Tovar Terrace (and the name "El Tovar") commemorate Pedro de Tovar, who was the first to learn of the existence of the Canyon, from the Hopi Indians. Alarcon Terrace is named for the hardy and shrewd captain of the sea party, the first to see the Colorado River, and to sail its waters, while Marcos Terrace records the name of the unhappy Firiar Marcos, whose imaginary description of the Seven Cities of Cibola led Coronado to undertake the expedition. Finally, Conquistador Asle, a part of the Inner Gorge, commemorates the whole group of Spanish explorers, the adventurous and none-too-gentle conquerors of Mexico and "New Mexico."

Three other Spanish names in the park have no direct relation to the Coronado Expedition. De Vaca Terrace is for Cabeza de Vaca, who eight years among the Indians of the Gulf of Mexico Coast. Indirectly, his wanderings and adventures inspired the later search for the Seven Cities. Escalante and Garces were Spanish padros, of a much later time.

What is now the Southwest of the United States was the "Wild North" of Spanish Mexico, and here were enacted many scenes of the romance of exploration.

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SOIL OF THE SOUTH RIM - A QUERY

By - Ranger Naturalist Earl W. Count

If you have been on the South Rim, you must have noticed the abundance of sagebrush and pinon pines, growing in the reddish soil. Now, sagebrush is an indicator of lack of alkali; and certainly pines grow in acid soil. But this soil is supposedly weathered Kaibab limestone, which is alkaline. To be sure, we have an alkali-loving rose (*Petrophytum caespitosum*) growing on the thin soil and among the rocks.

Therefore would not a plausible explanation be that the original vegetation here was alkali-loving; but the alkali has been leached out and exhausted and the acid humus resulting from plant decay has allowed the growth of new and different species of plants.

HERALDS OF SUMMER

One frequently thinks of the beautiful little bluebird as the announcer of warmth and accompanying cheer. Even the poets have frequently referred to him as an outstanding example of such.

Among the flowers, the dainty Spring Beauty, the lovely Hepatica and even the notoriously odiferous Skunk Cabbage have also often received honorable mention in this capacity. Yet how many people have ever given such thought or consideration to our equally beautiful and delicate neighbors - the butterflies?

Down in the hot low regions of the Canyon's bottom where snow is practically unknown and where prominent criteria of summer arrive several weeks sooner than on the Rims we find that some of these winged creatures have already come and gone. The gorgeous grey brown butterfly with the prominent white band, known as the California Sister came with the first real signs of warmth but has since become conspicuous by its absence. The large and gaudy blue insect - the Pipe Vine Swallowtail, which throughout the summer is the most abundant of its group in the lower realms of the Canyon, was also found with the first appearance of flowering plants. These two species therefore appear to be the forerunners of their clan and heralds of the summer.

Transferring ourselves to the highest regions of the Canyon - to the Kaibab Forest of the North Rim, we find the unmistakable evidences of summer just arriving with the early days of June. Here the snow has only recently left the sheltered valleys, and the blossoms are still just beginning to burst forth. Here also we find quite a different group of plants from that found below, and with them a very different butterfly fauna.

On the North Rim the very cosmopolitan Mourning Cloak with its conspicuously yellow border and dark blue wings makes its appearance well ahead of all its relatives, and for a very good reason. It is a hibernating species. During the cold winter months as an adult insect it hides within the shelter of bark or the hollows of trees - then with the very first signs of warmth in the Spring it is on the wing - soaring along easily yet powerfully with the breezes. This butterfly, then, may well be considered the "Herald of Summer" of the north temperate zones and the colder mountain regions of subtropical lands. True enough in the Kaibab Forest many other beautiful species such as the White Admirals the Little Blues and certain varieties of the Swallowtail tribe make their debuts in rapid succession, nevertheless, to the Mourning Cloak undoubtedly goes the aforementioned honor.