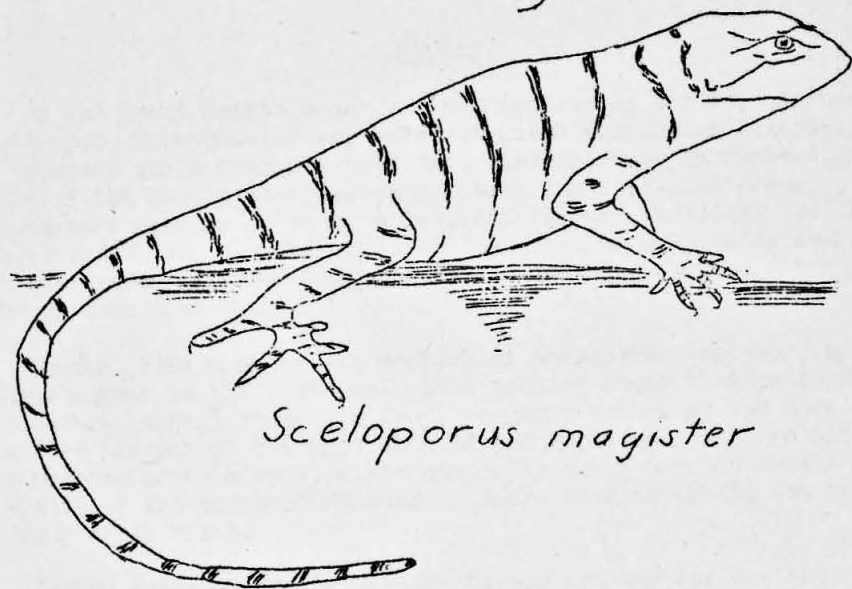


Nature Notes
of
Grand Canyon



Sceloporus magister

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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.

M. R. Tillotson, Superintendent. By - G. E. Sturdevant, Park Naturalist.

STUBBY.

At the Grand Canyon occur several species of active, variously colored, bright-eyed, sunshine-loving, harmless animals known as lizards. A competent observer would probably note that they increase in numbers as the bottom of the Canyon is approached. Like the birds and mammals, the lizards vary greatly in size, color, habits, and timidity. Of the several species inhabiting the Canyon depths none are more friendly towards mankind than *Sceloporus magister* and of this species none assumed a more friendly attitude than "Stubby."

Stubby, like many of the members of *Sceloporus magister*, apparently enjoyed a home in the cottages. This species seems to know that flies, which are a large part of his food, are more numerous and more easily caught on screens of cottages than in other places. As a result one or more members of this species are generally found perched on the outside or inside of the screened windows or doors basking in the sun and partaking of their daily bread.

Stubby chose the U. S. Geology Survey cottage for his home. He was observed by Mr. A. H. Williams, in charge of the station, as a small lizard enjoying the flies on the screen doors and windows. At first he would dart in or out of the door when it was opened. During one of these journeys his tail did not quite judge the proximity of the door - for it closed with the tail on the inside and Stubby on the out. This accident gave Stubby his name and marked him from others of his kind. The accident, however, did not cause him to show any additional fear of man. In fact he appeared more friendly and spent most of his time in the house. He was a common sight perched on the screen doing his best to keep the cottage cleaned of flies or taking his exercise from the prone position where he would raise and lower his body as if he had been taught how by some calisthenic instructor.

For a lizard Stubby would have passed high in an intelligence test. Occasionally Mr. Williams would assist him in getting the flies. He would kill them with a swatter and then strike the watter on the floor calling "Here Stubby." Stubby seemed to know his name or the signal for he would come running and lose no time in eating the killed flies. Stubby had an insatiable appetite, for the absolute limit of his capacity for flies was

the
never determined. Gradually his sides grow larger and stubby tail grow longer. With his increased bulkiness he became less active which was the apparent cause of his untimely death. As he attempted to follow Mr. Williams out of the house, the same screen door that had pinched off his tail closed on his body.

Although several members of this species frequent the cottage of the water resource branch of the U. S. Geology Survey, none has ever become quite so friendly as Stubby.

NEW BIRD RECORDS FOR PARK.

By - Edwin D. McKee.

Upon a recent visit of several days to the Kaibab Forest on the north rim of Grand Canyon some thirty-five species of birds were observed and identified. Three of this group - the Brown Creeper, the Western Lark Sparrow, and the Marsh Hawk, were new records for the park thus raising the total number of birds recorded in this region to 109.

THE GEASTER OR EARTH STAR.

By - H. V. Hibbard.

This curious and curiosity-provoking little organism lives in the Grand Canyon region as well as in other similar localities.

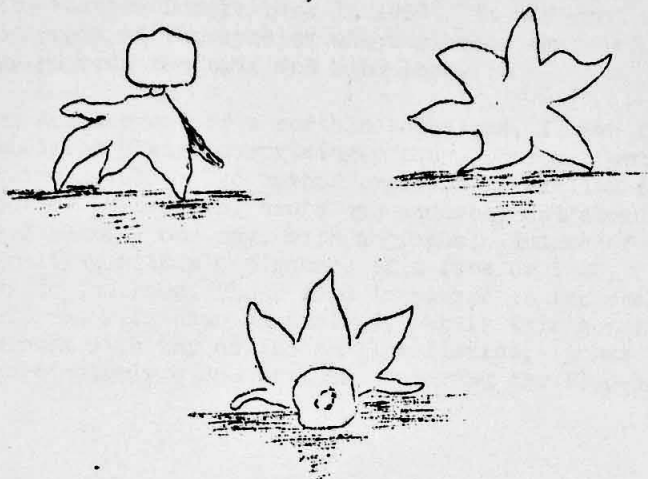
Quite naturally the life purpose of this fungus, for fungus it is and of the puffball variety, is to scatter its spores and so, Caliban-like, seed the earth with its own progeny. In this worthy attempt it does not wait to catch on to moving things for a free ride but hitches along over the ground on its own skinny legs, puffing out its cloudy spores at every jolt and leaving an erratic track in the dust or sand.

Hygroscoopy, not muscularity, is the secret of its automotive power. Hygroscoopy by interpretation means only a highly sensitive response to slight changes in moisture; and so the starry rays of Geaster more or less wiggle abroad over the surface of the ground. Many other things are hygroscoptic, as for instance, animal hair, spore elaters, and the barks of some trees.

Earth star first appears above the ground as a little soft white ball about the size of a marble, then when it is ripe, (for it is really only the fruiting part of the mother mycelium fungus deep in the ground) it breaks away, peels back the skin in the five or six star-rayed segments which curve back under and support the ball, and away it starts on the fruition of its life purpose.

Another class of naturalists not so given to labored learning of Greek names but who live nearer to their mystic source of inspiration call Geasters the "devil's snuff boxes." So poetic and appropriate a

description should not be spoiled by transcription or comment.



THE BLUE-BELLIED LIZARD

By - Edwin D. McKee

The Blue-bellied Lizard or *Sceloporus elongatus* is undoubtedly the most abundant and most widely distributed reptile in the Grand Canyon National Park. Apparently it is sufficiently versatile to exist under all climatic conditions represented in this region, and readily to adapt itself to quite varied environments. On the south rim it is found to be equally, if not more abundant than its well known relative - *Sceloporus gracilis*, and usually lives in very similar surroundings. Specimens have been collected recently from this side of the Canyon near Pasture Wash to the west, and from both Yavapai and Grand View Points to the east. At the last mentioned place the individual was found some hundred feet below the rim. At an earlier date, specimens were found, along with the large Whip-tail and Collared Lizards, quite abundantly in the lower parts of Bright Angel Creek. Here climatic conditions are quite different from those of the higher zone represented by the south rim. What is perhaps equally interesting is that a few were later found at the high altitudes of the north rim. A single specimen was collected at each of these last two widely separated places.

At first sight - whether among the gray rocks forming the Canyon's rim or on the perpendicular surfaces of some black schists down in the Canyon's depths - the Blue-bellied Lizard appears to be a dull, uninteresting creature lacking entirely in beauty. A closer examination, however, soon shows this thought to be entirely erroneous. The scales of the back actually form a very beautiful network design of a rich black color intermingled with a pure gray background - the dorsal rows of scales being nearly parallel and the lateral ones in oblique rows. Deep blue patches are found on the flanks and one on each side of the throat of both males and females, thus making a rather colorful creature.

"Sceloporus," the scientific name of the genus, is one applied to a large group commonly known as "Swifts" or "Fence" Lizards. The name of this particular species, which is "olongatus," was first applied by Mr. Vernon Bailey of the U. S. Biological Survey to specimens collected by Dr. D. Hart Merriam in the Painted Desert back in 1889. It was used to indicate the extreme slenderness of the species which exceeds that of all its relatives - especially as regards the tail and hind legs.

With the development of a certain technique, I have found the capturing of the Blue-bellied Lizard surprisingly easy, whereas formerly it had appeared to be almost impossible. The method employed is similar to that of a snake - namely hypnotism. By keeping one's eye squarely and steadily focused on the head of the desired animal, one may, with a gradual advance of the hand, obtain a commanding position within a distance of a foot or less. Then with a quick dart downward of the hand, the lizard is pinned to the rock from which he may be transferred with ease as desired. While this general method of capture will perhaps work with any of the smaller lizards, it has been my experience that it is particularly successful in capturing the Blue-bellied species.

OSWALD.

By - Mrs. G. E. Sturdevant.

"Oswald," one of the latest acquired pets, is a pretty little bright-eyed field mouse. He is kept in a spacious wire cage which is equipped with a nesting box of cotton and a wire screen treading wheel. One glance at Oswald frisking about and spinning in his wheel will remove all traces of sympathy for a caged creature.

In fact a week or so ago I learned that Oswald has preferences for his captive state. He was left in my charge together with three other tiny field mice while his master was off on a field trip. Although my natural love is not bent toward mice I consented with a few restrictions to care for them. It was great fun to watch Mr. Mouse ride in his wheel and you may be sure that he learned how to get the longest ride with the least effort. The minute any strange person approached, he would immediately spring to the top of the wheel, let the weight of his body pull him down, and then ride clear around again. The attraction of the wheel was so strong that Oswald would ride all day and all night stopping only to partake of the tid-bits which suited his fancy.

The second night, owing to my carelessness in fastening the cage, my four occupants escaped. Imagine my double horror - four rodents at large and my charge unkept. I felt dreadfully guilty and helpless. To catch them in a trap was out of the question and find them about the house was equally difficult if not absurd as far as my ability to do so was concerned. Fortunately a little story that Vernon Bailey, Chief Field Naturalist of the U. S. Biological Survey, had told a few nights before came to mind. He related how his caged rats escaped but later came back nightly to ride in their wheel. I had my doubts about Oswald but the plan was well worth while so I left the cage open for a possible return.

About eleven o'clock that night I was awakened by a clickety-clickety-click. On approaching the cage I found Oswald jumping and playing in his wheel as if his life depended on it. The lure of the wheel was too much, he had to come back - it was the one man-made device that proved better than anything he had found in nature. The other little mice were eventually caught but they were never given the chance to ride in the wheel for I fear that Oswald is selfish with his fascinating play toy.

At the present time Oswald may be left out to run about and eat out of visitors' hands without fear of his running away for he has no desire whatsoever to desert his wheel.

