DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YOSEMITE NATIONAL PARK

YOSEMITE NATURE NOTES

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Yosemite Nature Guide Service C. P. Russell, Park Naturalist

This is one of a series of bulletins issued from time to time for the information of those interested in the natural history and scientific features of the park and the educational opportunities the park affords for the study of these subjects.

Utilization of these bulletins by those receiving them to the end that the information contained therein might be as extensively distributed as possible will be appreciated.

W. B. Lewis, Superintendent

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GROUND HOG DAY

Probably no more firmly seated and harmless belief in a legend is to be found than that of the ground hog and "ground hog day." The ground hog is the woodchuck of the east. In the west we have closely related species which we call marmots. In the autumn the woodchuck takes on great quantities of fat and in November goes to sleep in his burrow and does not awaken until February 2, "Ground Hog Day." Then according to popular belief he comes to the surface and looks about. If he sees his shadow, he again retires to his burrow, and sleeps six weeks longer, which betokens a cold wintry spring.

Sierra Marmots have been noted to emerge from their winter quarters early in the spring while their haunts are yet buried beneath several feet of snow and to strike out unerringly across the snowy miles to a nook with southern exposure where the first green grasses are beginning to sprout. The directness of the course taken, as told by the trail in the snow, belies the idea that this early spring jaunt was a whimsical wandering. From the evidence we might judge that the animal in his first waking hours recalled certain feeding grounds and proceeded to them with something of the judgment of a human mountaineer.

DECEMBER BOTANY NOTES

During the last few months the Valley has been visited by occasional storms. The visitations usually brought rain to the floor of the Valley, while along the "rim," three thousand feet higher, there was left a snowy mantle. On very special days these robes of purity draped down to the feet of the cliffs and flowed over the level. Following each storm were days of crystal clearness, and warm sunshine disrobed the northern cliffs. The opposite side of the Valley lay buried in the shadow of the great south wall and here the cliffs clung modestly to their winter robes.

Befooled by the lingering of the Indian Summer days growing things have responded to the moisture and warmth. In the great rock piles the Pellaeas are unfurling their fronds of dainty green and in their freshness they contrast nicely with the darker foliage of summer's growth. Shy Cheilanthes peeps out here and there from under her roof of stone -- a roof that has protected her kind thru many generations. In warm nooks where snow waters have trickled thru the seasons stand clumps of tall Woodwardia. Bleached and faded by the summer sun stately they still are in their old age. Down among their stems and at their feet hairy fists are lessening their grip on the coming generation. Clinging in crevices of this moist rock wall are many dainty Gymnograms.

Mosses of different sort and color spread mosaics of green, and growing among the mosses the Larkspurs and Thistles round out promising rosettes of leaves.

The shrubs also whisper an answer to this premature call of spring. The Laurels wave swelling buds and the Manzanitas hold at the end of each fresh shoot a prophecy of glorious bloom.

And all about on the warm slopes are active bee and butterfly; with memory they linger here in gardens of the past.

Enid Michael

"TREE-TOADS" AND SNOW STORMS

When does a moist skinned amphibian find it necessary to retire from the frosty air of winter?

All ordinary amphibious creatures vanish during the first weeks of freezing weather and cause no consternation among nature lovers. But in the Yosemite the Hylas display habits that awaken mild amazement, to say the least.

During the last weeks of November and the early days of December the writer had several times noted the melancholy croaking of Hylas along the sunny north wall of the valley. Each time that these vocal manifestations of activity were heard, the spots from which they came were bathed in warm sunshine.

On the night of December 7 there came the first snow fall on the valley floor, followed by crisp cold that endured well into the morning of December 8. Conditions were ideal for the reading of records left by furry night prowlers, and a jaunt was made up the Tenaya Lake Trail. Hours before the sun shot its rays into the Tenaya Gorge and while the snow cover yet maintained its snappy crystalline form, a Hyla's dismal c-r-a-a-a-k, c-r-a-a-a-k floated out on the frosty air.

It would seem that his sticky discs with which he clings to his support must be congealed to ice lumps and his very skin crackled into flakes.

THE NORTHERN PILEATED WOODPECKER

We sat on a great boulder above the Indian Cave overlooking the tree-tops. From the forest came the low chuckling tones of the Northern Pileated Woodpecker. Patient watching was finally rewarded by a sight of the big fellow as he flew from one tree to another. He alighted on the dead shaft of a tall cedar, and from where we sat we could see his fiery red head gleaming in the sunshine. Soon he left this tree and started on a flight across the valley. The steady beat of his broad wings quickly carried him beyond our range of vision. With his long neck extended, his bill stuck forward, and his broad wings showing white patches as he flies he is an easy bird to identify.

The Pileated Woodpecker is usually found in oaks and cottonwoods. Like many of the smaller woodpeckers his principal food is insects. He hitches up the tree trunk, tapping as he goes, searching for a loose place in the bark or wood. With his strong bill he whacks and pries off big pieces of bark or rotten wood. Holes in tree trunk or limb often hold his interest for some time and occasionally he finds in them a good meal. When he is at work, his raps are more deliberate and louder than the raps of other woodpeckers.

One spring morning we heard an unusually fine woodpecker song. The rythmic raps were given in rather slow time and were round and musical, and from the change in tone we thought that two woodpeckers were having a musical chat. Searching about in the wood we located a big Pileated in a cottonwood tree. Here he had two dead branches for sounding boards and he rapped out his "song" first on one and then on the other.

A pair of Pileated Woodpeckers have been seen in Yosemite Valley every month in the year. Judging from this and other observations made during a period of four years, we conclude that there is at least one pair of resident birds.

The Pileated Woodpecker is as large as a crow, and with his long neck and flaming crest he always makes a striking picture. But when he flies, his night heron-like silhouette and his loud shouting tones render him both wonderful and amazing.

PORCUPINES

A large number of Yosemite Museum visitors who examine the porcupine specimens and the card of explanation with them discover for the first time that the porcupines do not "shoot their quills." This supposed propensity of the harmless "porky" has become firmly fixed in the minds of most people, and they cling to it as though changing their views might be indicative of weakness. A porcupine is the most peace loving of animals. When attacked, it seeks a crevice in which it may protect its under-parts and present its heavy tail and spiny back to the foe. The needle-like spines are finely barbed and loosely attached to the animal they adorn. Should any unwary enemy attempt to seize the bristly "quill pig," his mouth is at once filled with scores of the punishing barbs. Every twitch of the turtured muscles serves but to work them deeper and nearer a vital spot. To add to the effectiveness of the weapons, every harrassed porcupine will thresh his tail about with vigorous thumps, which if fairly landed will put most enemies to rout with wounds which weeks later may prove fatal.

There is also a belief that porcupines curl up and roll down hill, thus spearing enough dry leaves with which to make a nest. I can conceive of no foundation whatever for this fallacy.

CRACKED GRANITE
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In a previous discussion of how the glacier of the Yosemite was influenced in the work it did, credit was given to the natural jointing of the granite as the controlling factor. In the present brief note, certain definite questions on Yosemite characteristics will be answered.

When visitors at the Yosemite Museum are shown that a river of ice once filled the wonderful valley nearly to its brim, usually the question is asked, "Why has El Capitan stood up in the face of such force?"

The question is a natural one, for it is apparent to all that this mighty buttress projected directly into the path of the ice. And strangely ehough another obstruction, Cathedral Rocks, juts out from the south wall directly opposite El Capitan. These two formations form a choking constriction that forced the great glacier to buckle and yield. The ice squeezed through the narrow throat they formed, grinding at the perpendicular walls and accomplishing little in the way of removing the obstruction. Why? Because the granite of El Capitan and Cathedral Rocks is massive, uncracked, and nearly invulnerable to the action of ice.

The widened regions of the valley east and west of El Capitan are widened because there the granite was jointed and readily yielded before the attacking ice. The rock about the Cathedral Spires was closely jointed and it crumbled away to leave the uncracked portion standing as slender spires. In the same way was Lost Arrow caused to stand out on the face of an unjointed cliff.

The cliff forming the east side of Glacier Point has a north-south trend because the joints of that granite had a north-south trend. The vertical face of Half Dome trends southwest-northeast because the joint planes have such a trend. The Three Brothers are not vertical but inclined and strangely unsymmetrical, because the joint planes are inclined.

Thus we see that water and ice erosion alone do not explain Yosemitic features. The presence or absence of joints in the granite account for the great variety of structures,--the wonder of the world.