## YOSEMITE NATURE NOTES

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#### DRAGONS

The long-tailed flying dragons of myth and fable were fearsome creatures that carried their prey away bodily to crush and devour at their leisure. Every Yosemite stream-side has its monster of the air, the dragon fly. Squadrons and companies of these shining winged, armored creatures maneuver and dart over the grassy meadows. Their powerful wings arranged monoplane fashion carry them with steady motion up the field against strong wind, when, with a turn into the wind they flash back to the other end to hunt up the field again.

As one watches the flashing throng, differences in color and size are noted and some of the fliers are seen to be stronger and swifter than others. Suddenly one descends to the meadow grass and amidst buzzing and struggle slowly rises with some insect clasped to his breast; but most of this dragon's prey consists of mosquitoes and flies, which are overtaken in flight. The six legs of the hunter make a fine trap and the terrible jaws thrust from the covering lips make short work of the victim. During this meal the dragon has not slackened his pace but has coursed back and forth at his accustomes level above the field.

Cn nature guide field trips dragon flies have been observed overpowering their own kind and devouring them, cannibal fashion. For several evenings one of the larger kinds hunted regularly, close over the heads of an out-door audience. Not a few ducked their heads when the steady flier like a war plane shot in their direction. Yet his interest was not in teasing the audience nor in spoiling the entertainment. Those who watched knew his game, for he devoured midair, the lesser dragon flies.

### ACORNS USED FOR FOOD

The great black caks of Yosemite are recognizing the coming of fall by starting to shed their large mature acorns. In a short time the few Indians

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remaining in the Valley may be seen gathering these nutritious nuts in their curiously shaped seed gathering baskets, and storing them for winter food in their quaint "chuck-ahs" or pine thatched caches.

Those of us who taste the acorns of the black oak will find them very bitter. This bitterness is due to tannin which was ingeniously leached out by the red man after the nuts were dried and ground into flour in stone mortars. The powder was spread on clean sand and permeated with hot water until tasteless. The "boulate" or acorn mush was then cooked in baskets by dropping heated rocks into the gruel. This thickened as it boiled, and small cakes were sometimes made by further baking on the surface of hot flat rocks. The method of cooking seems to be at varience with accepted rules of hygiene, but the finished product is said by some ethnologists to be highly nutritious; indeed, some of these students even profess a liking for its peculiar taste.

#### WHEN YOSENITE VALLEY WAS A LAKE

Twenty thousand years ago, when the last glacier retreated from Yosemite Valley, it deposited a terminal moraine, a crescent-sahped dam of rock debris, across the Valley just below El Capita. This impounded a lake some six miles long and from 300 to 600 feet deep and the filling in of this lake with gravel and sediment has made the present level valley floor. The crest of the El Capitan Moraine may be seen today just north of the Merced River paralleling the road which crosses El Capitan Bridge. It is the most perfect of several moraines of retreat that are found at the lower end of Yosemite Valley. Little Yosemite and Hetch Hetchy valleys also owe their level character to the sedimentation of glacial lakes, as do many of the high mountain meadows in the Sierra.

#### WHITE ANTS

While resting on a nature trip a log is sometimes overturned and a glimpse is had of scurrying lizards and stiff-legged bettles walking jerkily to cover. After the excitement one notices other creatures-----ents, much disturbed with the intrusion, or delicate thread-legged centipedes weaving their way through the soft, decaying punk.

Often chunky little creatures the size of small ants, but yellowish white in color, are uncovered. Usually they are pronounced "white ants" but after observation, differences are noted. The head is seen to be nearly as large as the abdomen and the connecting part is decidedly thicker than the thread-like waist of true ants. The nature guide points out that they are termites, an insect order seldom noticed in the United States but the despair of tropical travelers. No. 3 ---- Volume 1 ---- Number 8.

With us they tunnel harmlessly for the most part in decaying wood but in Africa or the Amazon they attack timbered houses in such numbers as to wreck the building. Drummond in his Tropical Africa says, "There is no limit to the depredations of these insects, and they will eat books or leather, or cloth, or anything; and in many parts of Africa I believe if a man lay down to sleep with a wooden leg, it would be a heap of sawdust in the morning. A member of one nature party reported a missionary friend who had written recently of the unbearable inroads of these insects on his furniture and boxed goods.

Like the ants, the termites have a queen, workers and soldiers but unlike the ants, they often retain males after the queen is mated.

#### TO BE CONTINUED IN 1923

This is the last number of "Nature Guide Notes" for the season of 1922. The first issue of Volume II may be expected about June 1, 1923.

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