

# YOSEMITE NATURE NOTES

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# Yosemite Nature Notes

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## SONGS OF THE SEASON

By Ranger-Naturalist Enid Michael

Living in the out-of-doors one has the opportunity to learn the notes, calls, and songs of birds, and in the Yosemite Valley where birds are more or less tame, the opportunity is especially good to practice the gentle art of listening. Any morning during the month of May when the spring chorus of bird song fills the air, one may spend a quiet hour in almost any section of the valley, and hear as many as thirty species of singers — that is if such birds as woodpeckers and flycatchers can be classified as singers. On a May morning as many as six different species of warblers are audible without moving 100 yards. As a matter of fact, I have heard the songs of seven different warblers without leaving the tent.

And, by the way, to one who knows the birds well, ear identification is much better than sight identification. Call-notes and bird songs give surer identification at a much greater distance than a sight record possibly could. For instance, take the kinglets — birds that forage high in the tops of the tall conifers. The sight

of a very small bird foraging high up in the outer branches of pine or fir would likely warrant the guess kinglet, but which kinglet—Ruby-crowned or Golden-crowned? Let the bird speak, and identity becomes at once disclosed. Or better, take the flycatchers for an example. There are four species of small flycatchers in the Yosemite district— all just about the same size, and so much alike in appearance that they cannot be separated in the field if they remain silent. Each kind of flycatcher chooses its own peculiar habitat in which to spend the summer, and knowing well the habits of the bird, one can make an intelligent guess; moreover, each species has its own peculiar and distinctive call-notes, and if the individual happens to be in the mood to speak up, identity is disclosed to the trained ear.

All summer visitants to Yosemite Valley are singing when they arrive. The blackbirds — Red-wing and Brewers' are the first summer visitants to arrive, and are closely followed by the White-throated Swifts. Then come the Evening Grosbeaks

and the robins. The blackbirds and the swifts often come in before winter is really over. Some morning toward the end of February, or early in March when the snow is just melting off from the meadows, one is awakened by the blare of silvery notes of the Red-wing Blackbird. After a long, silent winter, it is refreshing to hear the cheerful song of the Red-wing, or the clear whistled notes of the Brewer's Blackbirds.

A stretch of sunny days in late February may bring in the White-throated Swifts. The first colony of swifts to come into the valley stop at El Capitan, and spend their days in the reflected warmth of the great expanse of granite. On twinkling wings they race; they leap; they dive; at times they appear to be flying upside down, and all the while their quavering chatter comes drifting down from the sky. It really is a treat to watch a colony of White-throated Swifts on the wing.

In March come the robins. The male birds come into the valley 10 or 12 days ahead of the females. The male robins get along well together; then come the females, and the battle begins. Fights between the male birds is the order of the day. Trouble, trouble, trouble everywhere until each female has selected a mate. The love making of the robins is rather "cave-manish" but seemingly the female approve of the rough tactics.

The robins are the first birds to get up in the morning and the last birds to go to bed at night. While still dark, they chant a chorus to

approaching day, and when the shades of night do fall, with squealing voices they go protestingly to bed.

By the middle of April the warblers and vireos begin to arrive. Six species of warblers nest in the valley and two species of vireos. The song season for Calaveras, Audubon, Black-throated Gray, and Hermit Warblers ends about the middle of June. The Toltmie Warbler goes on singing until almost the end of



July, while the Yellow Warbler extends its singing season well past the middle of August. The Warbling Vireo sings persistently until the middle of July. The Cassin Vireo becomes silent during the first week of July; however, with this vireo there is a slight revival of song after the first week of August.

The Black-headed Grosbeaks are grand songsters and are in full voice until about the end of June. The male

Black-headed Grosbeak is a persistent singer during the song season, and may be heard at all hours of



the day. He even sings while sitting on the nest incubating eggs. He takes full charge of the young after they have left the nest, and then he is quite too busy to do much singing. There may be a slight revival of song after the young are able to take care of themselves, but there is none of the glorious singing of early spring.

One of the sweetest singers is a winter visitant — the tiny Ruby-crowned Kinglet with the big voice. His song is heard from late February until he leaves for his nesting grounds in the forests above the rim of the valley.

The Russet-backed Thrush, a remarkable songster, arrives late in the valley, and his song is not likely to be heard much before the second week in May. He makes up for lost time—singing persistently until near the end of July.

The songs of Canyon Wren and Sierra Creeper (both resident birds) are to be heard every month in the year.

The Water Ouzel is unique; he does not wait for spring sunshine to

loosen up his vocal chords. In the dead of winter he may perch on a cake of ice and pour out his soul in song.

## SEEDLINGS

Ranger-Naturalist Arthur Carthew

Following a very heavy cone-bearing year in 1940, thousands of young fir seedlings covered the forest floor this year. In the Mariposa Grove where the White Fir is especially abundant many of the tiny firs were to be found under the Giant Sequoias. The fir seedlings are much more tolerant than the sequoias and will sprout in heavy humus—something the sequoias will seldom do. Most of the seedlings so located will in all probability be shaded out and not survive. In sharp contrast to the numerous firs, only a few new sequoia seedlings were to be found, a dozen or so making their appearance near the Haverford Tree. The seeding of the sequoia depends on favorable mineral soil in addition to the prolificness of the cones and ideal moisture conditions; hence, proportionately fewer seedlings are to be found than the firs. However, this fact does not imply that the sequoias are doomed for extinction as within the last ten years thousands of sequoia seedlings in the Mariposa Grove have obtained an excellent start and are on their way to becoming big trees if they can escape destructive fires.



### SOME TREE TOPICS

By Harry C. Parker, Junior Park Naturalist

"In the world of plants, the tree is the most majestic creation that long centuries have produced." — Pack and Gill.

No other living thing attains such great size and bulk as the largest trees and furthermore, some of them reach the greatest age of any known organism.

The California list totals some 130 species of trees, of which 63 are not known from any other Pacific Coast State. Of these, 18 are "native sons" — strictly peculiar to California — such as the Torrey, Foxtail, and Diabler Pines; Monterey, Gowen, Dwarf, and McNab Cypresses; California Nutmeg and Giant Sequoia. Approximately one-third of the species found in California are represented in Yosemite National Park, including Giant Sequoia, California Nutmeg, and Diabler Pine. The coniferous trees of California are known to surpass all others of their kind in extent, size and richness of species. There are 43 kinds of cone-bearing trees found in the State, which ex-

ceeds the number found in any other equal area, and 17 of those are on the park list. (See special issue of Nature Notes, May 1939, "The Cone-bearing Trees of Yosemite" by James E. Cole.)

In a broad sense, climate controls the ability of trees to establish themselves and to produce seedlings. Consequently, California, covering a great range of latitude and altitude, and therefore temperature and rainfall, presents a great diversity in native trees, from the elfin forest of the southern chaparral to the cathedral-like coniferous forest of the Sierra timber belt, such as we find in Yosemite. Some of these trees may be described as "living fossils," as for example, the Monterey Cypress, which the records in rocks tell us, was much more widely distributed a geological period or so ago, when the climate along the Pacific Coast was apparently much moister and the land lower. Likewise the redwoods formerly had a much wider distribution in the northern hemi-

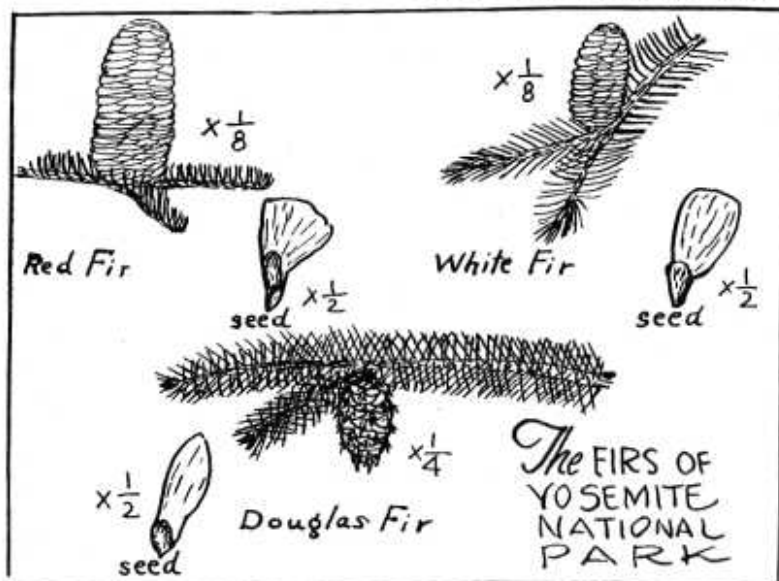
sphere, until glaciers and climatic changes brought about the disappearance of all except those now found in Western North America.

Trees are flowering plants, with blossoms of varying degrees of complexity and beauty. The cone-bearers, being of a geologically ancient lineage, have a relatively simple floral structure. Many agencies are utilized in distribution. Some kinds are dependent upon the wind for seed dispersal. Pine, fir, maple and ash seeds have wings which enable them to ride on the air currents. Cottonwood seeds have downy parachutes. Oaks and other nut trees have heavy seeds which remain where they fall unless transported by squirrels or other natural foresters. Sometimes running streams transport seeds uninjured for miles before depositing them in a growth site.

Millions of seedlings start growth each year, but only a comparatively few survive to become large trees, <sup>due to competition for sunlight and water, and adverse factors of the environment.</sup> Yet we find countless storm-scarred veterans that have established themselves in sterile-looking rock surfaces, as for example, the El Capitan pine (See Nature Notes, May 1941).

Some trees may reproduce by means of sprouts as well as by seeds. This is rare among cone-bearers, but the Redwood of the Pacific Coast is an exception. The Giant Sequoia of the Sierras reproduces from seeds only.

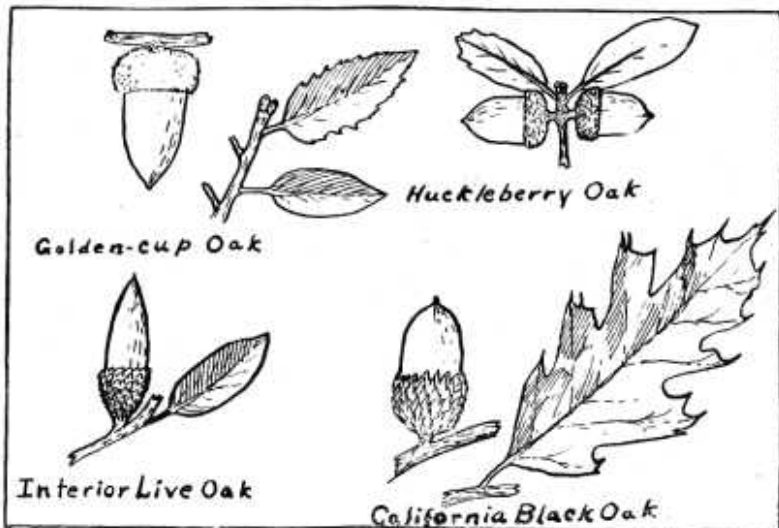
Trees display varied growth habits which reflect the living conditions just as the peoples and races of the world show response to their environment. Much can be told of the climate and soil in a given locality by the trees that grow there natur-



ally. They cannot move around; they must either be suited for local conditions, or perish. Different kinds may meet the same condition in different ways; e.g., the narrow needle of the pine with its small evaporating surface, and the glossy leaf of the live oak with its hard coating enables each to reduce loss of water vapor.

in a tree. It is not always safe to conclude that a tree's age corresponds to the number of rings. In California, however, it is believed that a new layer is added to a tree during each year of growth. These are the concentric rings seen in a freshly sawn stump.

The autumn yellows of certain broadleaved trees are present



Trees in the same stand run a race upwards. The winners get the favorable places in the sunlight and thrive. A tree that can get lots of moisture and sunlight grows evenly from the ground to its top and has a bushy, wide-spreading crown. The same species, grown in the shade, will attain greater height, but will have a small compact crown.

Tree growth as reflected in the so-called annual rings tells us the living conditions for any particular season. Sometimes, because of seasonal interruption of growth two or more false rings may be produced

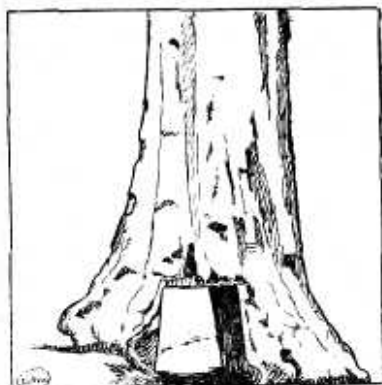
throughout the growing season, but are veiled by the great amount of green pigment of the food-producing cells. During the growing season the green matter is produced as rapidly as it is consumed, but towards the end of the season its formation ceases while it is yet being destroyed. Consequently the green is removed and the yellow or orange revealed. The red of autumn leaves is characteristic of sugar aggregations which haven't changed to starches, the normal plant food.

Besides serving as food factories, leaves furnish a mulch for the base

of the tree when they fall to the ground. There they help hold water for use during dry spells. They also decay to form an important source of plant food.

Trees can prune themselves. To dispose of a dead branch the tree grows a collar of new wood about the base of the old branch, ultimately choking it off. Then wind, heavy snow or some other natural agency, causes it to fall and the collar closes over the wound. It is by a similar, though slightly different process that trees shed their leaves.

Trees "breathe." This process is carried on day and night through the leaves and small openings in the bark.



In those trees which have it, the heartwood is principally for support or food storage, while the sapwood (outer) is the supply line carrying water and minerals to the leaves, which use them for the manufacture of food with the addition of air and by the aid of sunlight. That the heartwood serves chiefly to support the living parts of the tree is demon-

strated by the famous "tunnel tree" in the Mariposa Grove of Giant Sequoias in Yosemite National Park. This specimen is still flourishing, although the tunnel was cut through it more than half a century ago.

Giant Sequoias grow natively only in the Sierra Nevada of California. The number of existing groves has been variously listed as being from 25 to 70. Nearly all the more important groves are in national parks, national forests, or in Calaveras State Park (California). The General Sherman Tree, "largest living thing," is to be found in Sequoia National Park. It has a total volume of 600,120 board feet, is 272.4 feet high, and over 36 feet through. Likewise, the Grizzly Giant of the Mariposa Grove in Yosemite National Park is one of the truly large trees of the world. It contains 367,000 board feet, is 209 feet high, over 32 feet through, and the first limb, which is 90 feet above the ground, is six feet in diameter. It is probably the oldest living thing, since scientists agree that it carries more marks of age than the four Sequoias which are of greater size than the Grizzly Giant.

Some confusion exists in the mind of the public as to the identity of the big trees found in the three groves in Yosemite, as compared with the Redwood of the west coast. Both are redwoods, and both are sequoias, but of different species. It has been agreed by the authorities of the National Park Service and the National Forest Service that the coastal form (*Sequoia sempervirens*)



shall be called the Redwood, while the sierran species (*Sequoia gigantea*) is known as Giant Sequoia. This practice is also in accordance with the 1942 edition of "Standardized Plant Names" of the American Joint Committee on Horticultural Nomenclature.

In the alpine country of the high Sierra there are dwarf willows that stand no higher than a man's thumb.

Did you know that "Oregon Pine" lumber of commerce comes from the Douglas-fir? That Douglas-fir, while often called Douglas Spruce, is neither fir nor spruce? Together with the Bigcone-spruce, its botanical re-

lationship stands intermediate between the spruces, hemlocks, and firs.

Forests are made up of communities of trees. They have been useful to man for homes, ships, fuel, paper, rayon, and in thousands of other ways. Next to cattle raising, lumbering is the oldest industry in California and still occupies a very high rank. Because of this, and because the value of forests in protection of our watersheds, we should know and protect our trees. Conservation of this important resource is truly "a foundation of defense."

### MOUNTAIN LION OBSERVED NEAR WAWONA TUNNEL

By Ranger-Naturalist Lloyd P. Parratt

Dr. Bert Slater, recently of the Mayo clinic at Rochester, reported observing a mountain lion near the west entrance of the Wawona Tunnel at about 9:30 p. m. on Monday evening, August 4, 1941. Dr. Slater with his family was returning from viewing firefall at Glacier Point. They saw the lion on the north side of the road, and as the lights of the automobile flashed directly upon it, the lion stopped and remained motionless until the automobile passed by.

The lion was evidently trailing or stalking something when first seen, and since deer is the preferred food, Dr. Slater assumed that the big cat was stalking two fawns which he had observed just before sighting

the mountain lion.

The Northwestern Mountain Lion is also called cougar, panther, and puma. Although it is the second largest carnivorous mammal in the Yosemite region, it is seldom observed, and has never been known to attack a person. These large cat-like mammals are about 6½ feet long, including a long, cylindrical tail, and when mature weigh from 100 to 135 pounds. The mountain lion has a definite part in the balance of nature, serving as a natural check on the deer population. Ordinarily, it picks off the aged and deceased deer, leaving the finest physical specimens to reproduce their kind—the survival of the fittest.



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Dan Anderson