YOSEMITE NATURE NOTES

DEPARTMENT of the INTERIOR
~ROY. O. WEST SECRETARY~
NATIONAL PARK SERVICE
STEPHEN. T. MATHER. DIRECTOR.~

Volume VIII March 1929 Number 3

This is the official publication of the Educational Department of Yosemite National Park. It is published each month by the National Park Service with the co-operation of the Yosemite Natural History Association, and its purpose is to supply dependable information on the natural history and scientific features of Yosemite National Park. The articles published herein are not copyrighted as it is intended that they shall be freely used by the press. Communications should be addressed to C. P. Russell, Park Naturalist Yosemite National Park, California.

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Acting Superintendent

YOSEMITE NATURE NOTES

THE PUBLICATION OF
THE YOSEMITE EDUCATIONAL DEPARTMENT
AND THE YOSEMITE NATURAL HISTORY ASSOCIATION
Published monthly

Volume VIII March 1929 Number 3

MORE NOTES ON TIOGA MINING HISTORY

By Grant H. Smith

A VISIT TO TIOGA MINE

Carl P. Russell, Park Naturalist, Yosemite, Calif.—My Dear Russell: The statement in a recent number of "Yosemite Nature Notes" that Judge Rule, an old-timer in the Mono Lake region, had given to the museum at Yosemite a file of the "Homer Mining Index," a newspaper which began publication about fifty years ago in the mining camp of Lundy, brought to mind an interesting incident of long ago.

About the first of August, 1917, after a vacation with the Sierra Club in Tuolumne Meadows, I was seized with a desire to see the Tioga mine, about which I had heard so much in my boyhood days in Bodie, and to revisit the streams and lakes at Lundy and Virginia Creek, where I used to fish.

I obtained a horse and, with sleeping bag, grub and fishing tackle, started on my trip. Though so late in the season, the croppings of the Tioga mine were partly covered with snow (the elevation is nearly 11,000 feet), but even a cursory examination told the story of its failure.

The next day, starting from Saddlebag Lake, at an elevation of 10,000 feet, I managed to pull, coax and drag that horse up the great red mountain which lies to the east of Saddlebag, and over the top, 11,500 feet high, where I was caught in a snowstorm; thence down Lake Canyon to Lake Lundy, which lies at an elevation of 7500 feet.

It was a long and exhausting day's work, and I felt a little proud of the trip until someone called to my mind the fact that in February or March, 1880, a ponderous compressor and boiler, weighing several thousand pounds, had been dragged over the snow over the same route, from Lake Lundy to Saddlebag Lake, and thence four miles below to the Tioga mine, where they were driving the big tunnel. Unless one has been over that mountain, one can hardly realize what a tremendous feat that was. In summer the thing would have been impossible, as the route was indescribably rough and steep

J. C. Kemp Van Ee, then manager of the Tioga mine, required a compressor in order to use power drills in the tunnel. There was no

road to Tioga in those days, either from the west or from the east, and he conceived the idea of taking the machinery over the mountain on sleds at the end of winter. Especially prepared hardwood sleds were built and, with a crew of men, a horse and necessary equipment, they made the trip, a distance of about ten miles, in seventeen days, without accident, although hourly menaced by snow slides that would have engulfed the whole party. It must be remembered that they not only had to drag the heavy machinery, but tents, bedding and supplies for the men and horses, as well, in addition to a quantity of heavy rope, a winch, blocks and tackle, etc.

There was a complete write-up of the episode in the "Homer Mining Index" of February or March, 1880, and I trust that you will reprint it for the wondering eyes of the present generation, that has little conception of the perils, hardships and achievements of the pioneers—for the men of those days were the pioneers of that region.

After the tunnel, which was designed to tap the Tioga veins at great depth, had penetrated the mountain about 1700 feet, work was discontinued (about 1884) and has never been resumed. Evidently, developments in the tunnel were not encouraging, and a further investigation of the entire property convinced the Eastern investors that the mine would not pay.

In that region, however, in 1879 and 1880, the stories that were told of the riches of the Tioga were fabulous. It was confidently stated that a great body of ore cropped on the surface that was three hundred feet wide, a mile or more in length, and of unknown depth, and all of the value of several hundred dollars a ton. Men easily figured the value of the mine, on that basis, at billions of dollars. The remoteness and inaccessibility of the property added allurement to the tales.

In those days the mountains in the vicinity of Tioga, Lundy and Virginia Creek swarmed with prospectors and miners, all spurred by great hopes, but practically all were doomed to disappointment, as but one real mine, the May Lundy, was found in that region, and that had a checkered career.

With best wishes, I am cordially yours,

GRANT H. SMITH.

January 16, 1929.

"TREMENDUOUS TASK TRANSPORTING GREAT SIERRA MACHINERY ACROSS THE SNOWY MOUNTAINS"

(Editor's Note—It happens that the item requested by Mr. Smith is to be found in the "Homer Mining Index" of March 4, 1882 and is available in the Yosemite Museum files. Believing that many Sierra enthusiasts will find it interesting, it is reproduced below.)

"The transportation of 16,000 pounds of machinery across one of the highest and most rugged branches of the Sierra Nevada mountains in mid-winter, where no roads exist, over vast field and huge embankments of yielding snow, and in the face of furious wind storms laden with drifting snow, and the mercury dancing attendance on zero, is a task calculated to appall the sturdiest mountaineer; and yet, J. C. Kemp, manager of the Great Sierra Consolidated Silver Company of Tioga, is now engaged in such an undertaking, and with every pros-

pect of perfect success at an early day—so complete has been the arrangement of details and so intelligently directed is every movement. The first ascent, from Mill Creek to the mouth of Lake Canyon, is 990 feet, almost perpendicular. From that point to the south end of Lake Oneida, a distance of about two miles, is a rise of 845 feet—most of it in two hills, aggregating half a mile in distance. The machinery will probably be hoisted straight up to the summit of Mount Warren ridge from the southwest shore of Lake Oneida, an almost vertical rise of 2160 feet. From the summit the descent will be made to Saddlebags Lake, thence down to and along Lee Vining creek to the gap or pass in the dividing ridge between Lee Vining and Slate creeks, and from that point to Tunnel, a distance of about one mile, is a rise of about 800 feet—most of it in the first quarter of a mile. The machinery consists of an engine, boiler, air compressor, Ingersoll drills, iron pipe, etc., for use in driving the Great Sierra tunnel. It is being transported on six heavy sleds admirably constructed of hardwood. Another, or, rather, a pair, of bobsleds accompanies the expedition, the latter being laden with bedding, provisions, cooking utensils, etc. The heaviest load is 4200 pounds. Ten or twelve men two mules, 4500 feet of one-inch Manila rope, heavy double block and tackle, and all the available trees along the route are employed in "snaking" the machinery up the mountain—the whole being under the immediate supervision of Mr Kemp, who remains at the front and personally directs every movement. It is expected that all the sleds will be got up into Lake Canyon today, and then the work will be pushed day and night, with two shifts of men. Meantime, the tunnel is being driven day and night, with three shifts of men under Jeff McClelland."

BLUE-FRONTED JAYS AND PINE NUTS

By Enid Michael

On the morning of February 15 the great pine that stands back of the postoffice was the gathering place of the blue-fronted jays (Cyanocitta stelleri frontalis). There were at least 50 birds in this one tree, having gathered here for breakfast. They buzzed about like bees, gathering to feast on blooming manzanitas. After a week of warm, sunny days, the cones of the great pine were opening to cast their seeds upon the wind, and the jays were on hand to take their toll of the fruit.

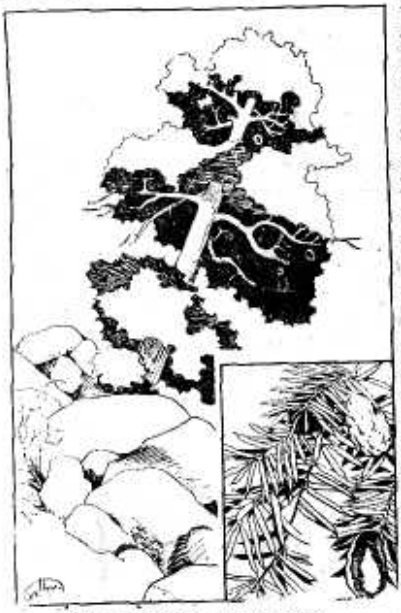
Swinging at the ends of the boughs, the jays would poke their bills between the cone scales and pluck out the nuts. As the birds cracked the pine nuts, the seed-wings were cast aside to come fluttering and pin-wheeling toward the earth. Occasionally a seed-wing came down with the nut attached, but in almost every case these nuts were cast-offs for, on examination, they proved to be empty shells, the kernel, for some reason, never having developed. The wise jays evidently knew by the weight of these nuts that it would be a waste of time to crack them.

While the jays were all very busy extracting and cracking nuts, they did manage to find time to exchange a bit of gossip.

CALIFORNIA NUTMEG

By William C. Godfrey

The California nutmeg (tumion californicum), like the great Sequoias, seems to find within the boundaries of the state of California that which is most necessary for its existence. Trees of this group are of ancient origin. Related species inhabited the Arctic zone in the tertiary period, and later, portions of Europe. There, too, they became extinct. This distinguished evergreen was originally erroneously classified under the generic name torreya. Only a few years ago it was found that this name had previously been applied to an entirely different plant. Two species only are indigenous to the United States: one is confined to Florida and the other to California.



CALIFORNIA NUTMEG

Very old tree along all-year highway in Yosemite below Coulterville road. In lower corner is foliage and fruit of California nutmeg.

Although always a rare tree, it is found in California from Big river, Mendocino county, south to the Santa Cruz mountains in Santa Clara county, and in the Sierras at elevations of from 2000 to 4500 feet above sea level, extending from Tehama county along the west slope, south to the Kings river region.

Along the Coast Range, as in the Sierras, it is found in small, dense thickets, alone, or may occur in mixture with canyon live oak, white alder, western sycamore and broad leaf maple. In this environment it is more readily distinguishable than at higher elevations in the rocky canyons of the Sierras, where the presence of white fir (abies concolor) and Douglas fir (pseudotsuga taxifolia) might easily lead one to associate the California nutmeg with these conifers.

Very tolerant of the shade throughout its life, it is found in moist, gravelly, or sandy gulches, springy coves and narrow, watered canyons. In crown structure it differs slightly from that of a stunted fir. In youth and middle age it has an open, wide, pyramidal crown, which, in the open, extends to the ground. The slender branches stand out rather straight from the trunk and are somewhat droopng at their extremities.

Crowded in a dense stand, it bears a short, conical crown and a clear trunk, while old trees under such conditions have rounded, dome-like tops. The trunks, which are rarely straight, are clear of branches for two-thirds of their length, and are from 35 to 50 feet high and from 8 to 20 inches in diameter. Under conditions espe-

cialy favorable for growth, it is from 75 to 80 feet high and from 2 to 3 feet in diameter, but such dimensions are exceedingly rare. The bark, one-third to five-eighths of an inch thick, is finely checked with narrow seams and short, scaly ridges with frequent side connections, outwardly weathered to an ashy, yellowish brown.

The glossy leaves are lance-shaped and sharply pointed and are deep yellowish-green in color. This lance-like appearance and the keen point immediately distinguish the foliage of the California nutmeg from that of fir—quite as distinctly as does the disagreeable, aromatic odor emanating from a bruise of the branchlet or bark; this odor is responsible for the common reference to California nutmeg as "stinking cedar" and "stinking yew."

California nutmeg is so named from the fanciful resemblance of its seed-kernel to the nutmeg of commerce, which belongs to a different and unrelated family of broad-leaf plants. The fruit matures by early autumn of the first season, when it is pale, yellowish green with irregular, dull purple streaks. It is about an inch to an inch and three-quarters in length, with thin, leathery covering; the tough skin of the fruit is resinous, and the seed has a smooth, hard shell. Seed kernels are characteristically wrinkled, the surface appearing to be infolded as in the nutmeg. The tough, stringy stems were used as bow material by the Indians of these regions.

Those who visite the Yosemite National Park may find this very interesting tree growing in the Merced river canyon, along the all-year highway between El Portal, at the park entrance, and Cascade creek, above the old Coulterville road—an area typical of the secluded sections throughout the Sierra where this very rare representative of an ancient lineage continues the struggle for existence as though to compete with its very ancient neighbors, the great Sequoia.

NOTES OF A MID-WINTER WANDERER IN YOSEMITE VALLEY

By George M. Wright

The dotted canyon wrens (Catherpes mexicanus punctulatus) live an abundant existence on Yosemite wall. And the valley floor is like an ocean upon which they venture in search of new lands to conquer, once family cares are over for the season. It is like the nations of history whose crowded environs caused their peoples to seek new lands for colonization.

In former years explorations on the flat valley floor did not bear the fruits of great discovery for the wandering wren. But 1928 Columbuses have added to the canyon wren map of Yosemite. The Ahwahnee Hotel with its rock masonry mirrors in miniature the great surrounding cliffs of Royal Arches, Washington Column and Glacier Point. Like an island volcano it has arisen almost over night. Its chimneys are crater vents still belching forth their occasional smoke. And its very newness would tend to make it devoid of life as a land new created.

Were it not for man's increasing realization that every attempt to harmonize his edifices with surrounding nature will bring a closer

approach to ideal beauty, the island Ahwahnee might have been listed in bird geographies as a land uninhabited. But the granite rocks were so laid in that only the weathered, lichen-covered surfaces were exposed. Thus were provided suitable surroundings for populations of the various forms of life which constitute orthodox canyon wren diet.

This may help to account for the frequency of their visits and especially for their long contented lingerings. The habitual rocks and foods are there. If only some suitable nesting sites are to be found tucked away under the eves and in dark corners, wren realtors will surely advertise "An ideal place to raise your children as well as an exclusive fall and winter resort."

What medal could more perfectly recognize an architect's attempt to make his structure a symphony with its natural surroundings than its eager occupancy by the native wild things?

It is one thing to stud a building with cornices, embossments and filagree designs which are after all but imperfect crystallizations of impressions originating in nature's architecture, but how much more effective it is to decorate it with the wild creatures whose wonderful perfection man has never been able to reproduce. And we are all most charmed by the things that are in themselves possessed of life.

Great is the delight and cherished the experience of the sophisticated city dweller who, looking out of his window to marvel at Half Dome, freezes spell bound to the imminent cheery presence of a canyon wren as it pokes an eager curious little head and long curved bill around the casement corner to gaze and bob and twist and gaily slink away again. His energetic little body, clothed so neatly in a white dickey and suit of chestnut brown, intricately barred and marked with dusky spottings, is a breath taking surprise at close range. The clear, ringing cascade of song likened to a "spray of waterfall in the sunlight," by one writer, beggars this as it does every other attempted description.

Merrily the wren goes along exploring every dark hole on the way without fear or trembling. So it is that he will take advantage of hall door or open window to investigate rugs and tables, dressers and overstuffed chairs in the chambered recess of this magical new island, Ahwahnee.

The shingled dwelling is friendly to the woodpecker; the church tower is a solemn retreat for the owl, and the bridge arches over the black phoebe's nest, but the Ahwahnee Hotel belongs to the dotted canyon wren.

BAND-TAILED PIGEONS

By Enid Michael

One of the avian features of the winter has been the great flocks of band-tailed pigeons (Columba fasciata fasciata) that spend their days along the warm oak-covered slopes of the north wall. These band-tailed pigeons are still here and many a morning they give us a grand show as we walk along the winter sun trail. With a clatter of wings the pigeons tumble suddenly out from the crown of some densely foliaged fir. Then as they get under way they fall into orderly flight formation and all come sweeping overhead. As they fly toward a rising sun their breasts take on a rosy glint of color and there

is a soft swish of sound like the rustle of fine silk. The leader pigeon turns and the flock swings into a wide circle out over the valley. The birds head down the valley, going like the wind. They fade almost from view in the black shadows of the great south wall and then suddenly, what a thrill as the great flock leaps into silhouette against a bank of white clouds. Again the flock turns and comes winging back into the sunshine. As the birds near the north wall the flock formation breaks and pigeons come tumbling pell-mell out of the sky. As the birds approach the cliff there is a wild fluttering of wings and a spread of banded tails as they settle in the oaks.

SOME NOTES ON THE SONG OF THE PACIFIC BLACK-HEADED GROSBEAK

By Ralph Teall

There is no pleasure quite so sweet for the young bird student as to find in the notes of an experienced observer corroboration for an unusual field observation. With the discovery in Dawson's "Birds of California" of a description of a rare song performance of the Black-headed Grosbeak closely corresponding with one which I myself had heard only a few weeks ago, that pleasure has become mine.

Late in the afternoon of June 6, about two-thirds of the way from Camp Curry to the ledge chimney on the Ledge trail, I was arrested by hearing one of the sweetest bird songs I have ever yet encountered. Many of the phrases were distinctly reminiscent of the best work of a common house canary, the general outline of the song was very much like that of the mocking bird save that the tone quality was infinitely finer and sweeter, but the most characteristic feature of the song was the more or less constant recurrence of phrases distinctly borrowed from the song of the Black-headed Grosbeak, although sweeter in quality than any grosbeak song I had ever heard before. In the tree from which the song had seemed to come, I was rewarded by finding the nest of a grosbeak with the female sitting on the eggs, and the male perched on a nearby limb, singing his own song but with the wonderfully modified song quality I had already observed. As I approached the tree, the mocking bird phrases ceased, and the only song heard during the entire remainder of the time I listened was this song of the male grosbeak. For lack of a better explanation I assumed that I had missed the bird whose song I had heard in the first place and that by some strange agency the grosbeak had learned to sweeten its phrase from hearing the improvement wrought by its neighbor.

Other bird students to whom I described my experience were unable to offer any more satisfactory explanation than that I had heard a somewhat typical song of a Townsend Solitaire. There were several reasons why this explanation seemed inadequate; the song had issued from the limbs of a Kellog oak about twenty feet or less from the ground, the oak was located in the middle of a more or less bare granite talus slope, there were no large firs or pines such as are generally considered typical solitaire associations anywhere in the immediate neighborhood.

In Dawson's discussion of the song of the Black-headed Grosbeak this description occurs: "Once at the foot of Mt. Shasta I listened to a perfectly wonderful song of the Black-headed Grosbeak . . . the singer was, undoubtedly, a bird of 10,000, for his voice was fine and exquisitely flexible, so that he executed the most brilliant trills and appogiaturas. Although I am loath to institute such a comparison, I am bound to confess that much of his music was like that of a highly trained canary, for it was brilliant, crystalline, exquisitely modulated and highly varied. This bird was not at all above giving the hearty, homely, rolling song of his species, but he graced it anew with every repetition, as became a highly accomplished artist."

Circumstantial evidence is never entirely satisfactory, but this particular bit was to me so convincing that, although the grosbeak was not actually observed in the business of singing the canary phrases, I feel little hesitancy in ascribing the unusual song to him. Corroboration from Mr. Dawson's similar experience has only tended to strengthen that impression and has served to increase greatly my own regard for the grosbeak's prowess as a songster.

MOUNTAIN HEMLOCK

By William C. Godfrey

The trees of more widely known varieties which come to our attention along the automobile roads in Yosemite are no more worthy of admiration than are the sub-alpine varieties, which may be reached only by trail. Most beloved among the trees of higher elevations is the mountain hemlock (Tsuga mertensiana).

To arrive at the summit of a ridge along the well-constructed trails in Yosemite's back country and find opening up before one a view of the more familiar domes and peaks through a foreground of these strange, yet beautiful trees, is a real reward for the lover of the out-of-doors. The apparent softness of the foliage and the graceful droop of the branchlets of this high country inhabitant lend to the rocky landscape a charm that is rare, indeed.

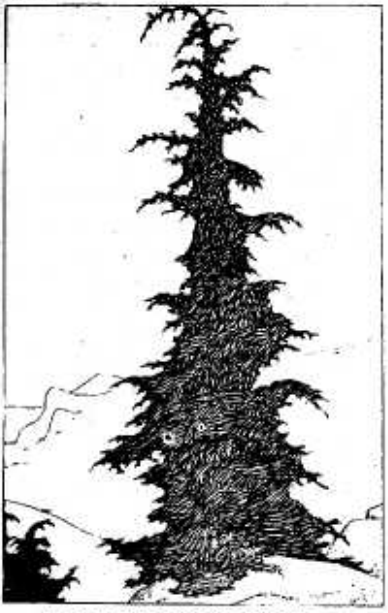
The mountain hemlock is a timberline tree, inhabiting high slopes (chiefly protected situations) at the head of north or east canyons in moist places where snowbanks linger until early, or even late, summer. It usually occurs in small, pure, somewhat open groves or clustered groups of limited extent. The most characteristic of these trees retain their lowermost branches and are readily recognized by their habit of growth, pyramidal at base, but narrowed above, with drooping branchlets and pendulous, whip-like leader. The crowns are usually dense throughout and sometimes remarkably slender, presenting the appearance of slim columns of foliage fifteen to thirty feet high and sometimes not exceeding two feet in diameter except at the broad base.

The leaves have a short but distinct stem, like other hemlocks, in contrast to the stemless leaves of the spruces and firs. But instead of the thin, flat, two-ranked leaves of other hemlocks, this species has thick, angular leaves growing all

around the twigs. Cones are borne in the top of the tree, sometimes forming heavy clusters.

The bole is usually from ten to twenty inches in diameter at the base and from twenty-five to sixty feet high, although in favorable situations it sometimes grows to a diameter of forty inches and a height of 125 feet. On bleak summits it rears its head only a few feet or sprawls on the ground. Despite the severe climatic conditions and its small size, it clings to life and grows to a great age, but there is no reliable knowledge in regard to its growth and length of life.

In California the mountain hemlock is found at an altitude of from 8000 to 11,000 feet at the southernmost extent of its range, and at from 6000 to 10,000 feet in the northern mountains. Its range extends from the south fork of Kings river northward to Siskiyou county. Beyond our borders it ranges far north into Alaska and east to Montana.



MOUNTAIN HEMLOCK

THE COYOTE

By William C. Godfrey

The coyote stands second among the bur-bearing animals of California. Certain pelts have brought trappers as much as $20 a piece. In order to bring such a price, the pelts must be prime and properly prepared.

The coyote is the most widely distributed of the predatory animals of California and is found to exist in greatr or less numbers in practically every county in the state

A Menace and a Benefit

On the sheep range the coyote is a menace, especially on the bedding grounds. Lanterns and scarecrows are effectively placed during the night for the purpose of keeping this midnight prowler away.

On the other hand, in squirrel infested country, the coyote is a benefit. If we kill all of the coyotes, we, ourselves, must face the problem of accounting for the thousands of ground squirrel and jackrabbits which the coyote now destroys annually.

The coyote is not necessarily a bad citizen, and control, rather than extermination, should be our aim.

There are three recognized races of coyotes in California.

The Mountain Coyote (Canis latrans lestes), often wrongly called "gray wolf," is found in most of Northern California and south along the high parts of the Sierra

Nevada.

The Valley Coyote (Canis ochroput ochropus) ranges throughout the foothills and lowlands of California, west of the higher Sierra Nevada, and south to the Mexican line.

The Desert Coyote (Canis orchropus ester) lives on the Colorado and Mohave deserts west to Antelope valley and north into Inyo county.

The Mountain Coyote, well furred, large and aggressive, is the race which is of most economic importance. The Valley and Desert Coyote, being more cowardly, come less in conflict with man's interests. As they live in the warmer districts of the state, their pelts, also, are of less value.

The coyote is by no means a vegetarian, nor does he hold strictly to a meat diet. The flesh of nearly all wild and domestic game birds and animals, many insects, lizards, and snakes, as well as numerous varieties of both wild and cultivated fruits, make it possible for him to exist under changing conditions to which he is quick to adjust himself.

Breed in the Early Year

The breeding season of the coyote varies considerably with locality. Those living in the low, warm valley breed several weeks earlier than those living in the mountains. February and March represent the main mating season, although mating has been noted as early as the middle of January and as late as the first of May. Breeding dens are carefully selected by the female with a view to effective concealment.

The location and construction of the den varies with the topography of the country. For instance, in the mountains, a cave or a rocky slope might be used, or the stump of a dead tree hollowed at the base, while on the plains, the den is most likely to be cave-like in construction, with several entrances, or with one entrance burrowed into the earth and extending to the nest cavity, usually a distance of from 12 to 20 feet.

Normally, but one litter of from three to nine young is raised each season. The young coyotes are often moved by the mother from the old den to a new locality, and especially is this true when to the knowledge of the ever-suspending mother the den has been visited by a human.

The sharp, shrill bark of the coyote echoes through the hills and into the valleys of California, seemingly to awaken the spirt of that romantic past, the days of the padre, when the coyote was referred to as "Senor Yip Yap."

The Striped Skunk

Valuable for the attractive markings of its body and the durability of its fur, the skunk (Mephitis occidentalis) holds first place as a California fur-bearer. Yet it falls short of becoming a popular favorite in its local environment, for the reason that it is feared by all other animals.

The skunk is famous the world over for its smell gun, which used only on the defensive. Though the skunk usually gives fair warning, wild creatures prefer to let him alone rather than invite a volley from his famous breech loader.

Because of body stripings and the famous smell gun, the identity of the skunk is not difficult of determination

SLEEPING CHAMBER OF THE CALIFORNIA WOODPECKER

By Enid Michael

In order to winter through safely in a cold country, two requirements are necessary to man, bird and beast. Now the California woodpecker (Melanerpes formicivorus bairdi), with its store of acorns, has guaranteed the first requirement. Also, in his wisdom he has solved the problem of shelter. That woodpeckers drill their own nest-holes is a well-known fact, but perhaps it is not generally known that they also carve out holes to be used as bed-chambers and places of shelter during stormy weather.

For a number of years Mr. Michael and I have been observing the activities of California woodpeckers in the Yosemite Valley. One spring three California woodpeckers (two males and a female), each working in turn, drilled a nest-hole in the dead stub of an old oak that stood near our home. In this nest-hole the birds successfully reared a family. When the young had flown, the stub, condemned as a menace to passers-by, was cut down. In the same tree, a little lower down, was a second stub, and here, as soon as their former home was destroyed, the birds set to work to carve out a new home. Two holes were drilled. It was now midsummer, their family cares were over for the season, and it is not likely that they had in mind the needs of the next nesting season. It is reasonable to suppose that the birds merely wished to have ready a warm shelter that might be used on the cold nights that were sure to come. These holes were used through the winter, but early in the following spring a fresh hole was drilled for the nest site.

In the selection of a home site, in most cases the judgment of the California woodpecker is good, but he is not infallible; at least, so it would seem from one example that came to our attention. We were walking up the road on the morning of December 2, 1928, when our ears caught the sound of gentle tappings. Although the sound of tapping apparently came from directly overhead, we could locate no woodpecker at work. Soon, however, a shower of chips came drifting down, and, looking up, we caught sight of the freshly cut hole. The woodpecker was quite lost in the depths of his chamber, and he was only seen when he came to the doorway to scatter a fresh shower of chips The dead limb in which the woodpecker was drilling his shelter was about five inches in diameter and was tilted downward at an agle of approximately 45 degrees. The opening of the cavity was on the underside of the limb, and the trend of the hole was downward, paralleling the limb. In this small limb a chamber of such size to permit a woodpecker to turn freely about would apparently leave but a shell of wood between the bird and the outside world. While the site offered complete protection against wind and rain, the thin panels of oak would surely not afford sufficient protection against the cold. The builder of this home was probably a young bird that had never gone through a winter in the Yosemite. We believe, however, that he realized his mistake, for not many days after the completion of his work we found the site deserted.

ETERNAL VERITIES

Edith Coyle Matthes

O mortal soul,
Why doest thou struggling yearn
To reach life's ultimate meaning?
Canst thou not be content to live
and love,
And strive for right and truth?
See, on thine every hand,
The witness of transcendent har-
monies.
The tiniest elecron doth enfold a
perfect scheme
That blazons forth in whirl of uni-
verse.
Sit at the foot of modern sage and
hear him tell
The story of Creation's perfect sym-
phonies,
Then dare to feel that thou and he
Art part and substance of Eternal
Verities.

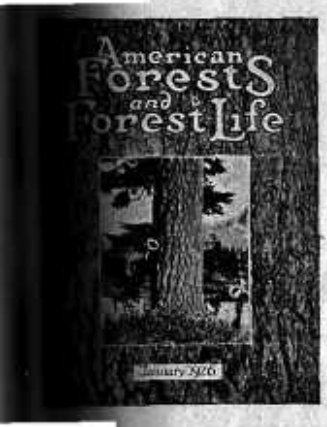
We know so little, yet what stands
revealed
Shines radiant from out the dark
of yesterday.
Can ye not trust the further radi-
ance to the end?
And know Omnipotence, which hath
so vastly wrought,
Must yet in vaster cycles still work
on
Till all thine unnamed longings
find a goal
Beyond the utmost cravings of thy
soul
And thou informed by aspiration's
light
Shall know thyself a fragment of
Infinity.

YOSEMITE NATURE NOTES

Official publication of the

YOSEMITE NATURAL HISTORY ASSN.

Membership $2.00 annually.



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YOSEMITE NATURE NOTES with AMERICAN FORESTS AND FOREST LIFE, $4.00 annually.
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Park Naturalist,
Yosemite National Park, Calif.

Dear Sir:

I am enclosing my check for $2.00 ($4.00) ($6.00). I desire to become member of the Yosemite Natural History Association (the American Nature Association and the American Forestry Association). It is understood that I am to have 12 numbers of "Yosemite Nature Notes" (12 numbers of "Nature Magazine" and 12 numbers of "American Forests and Forest Life").

(Line out the words that do not apply.)

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