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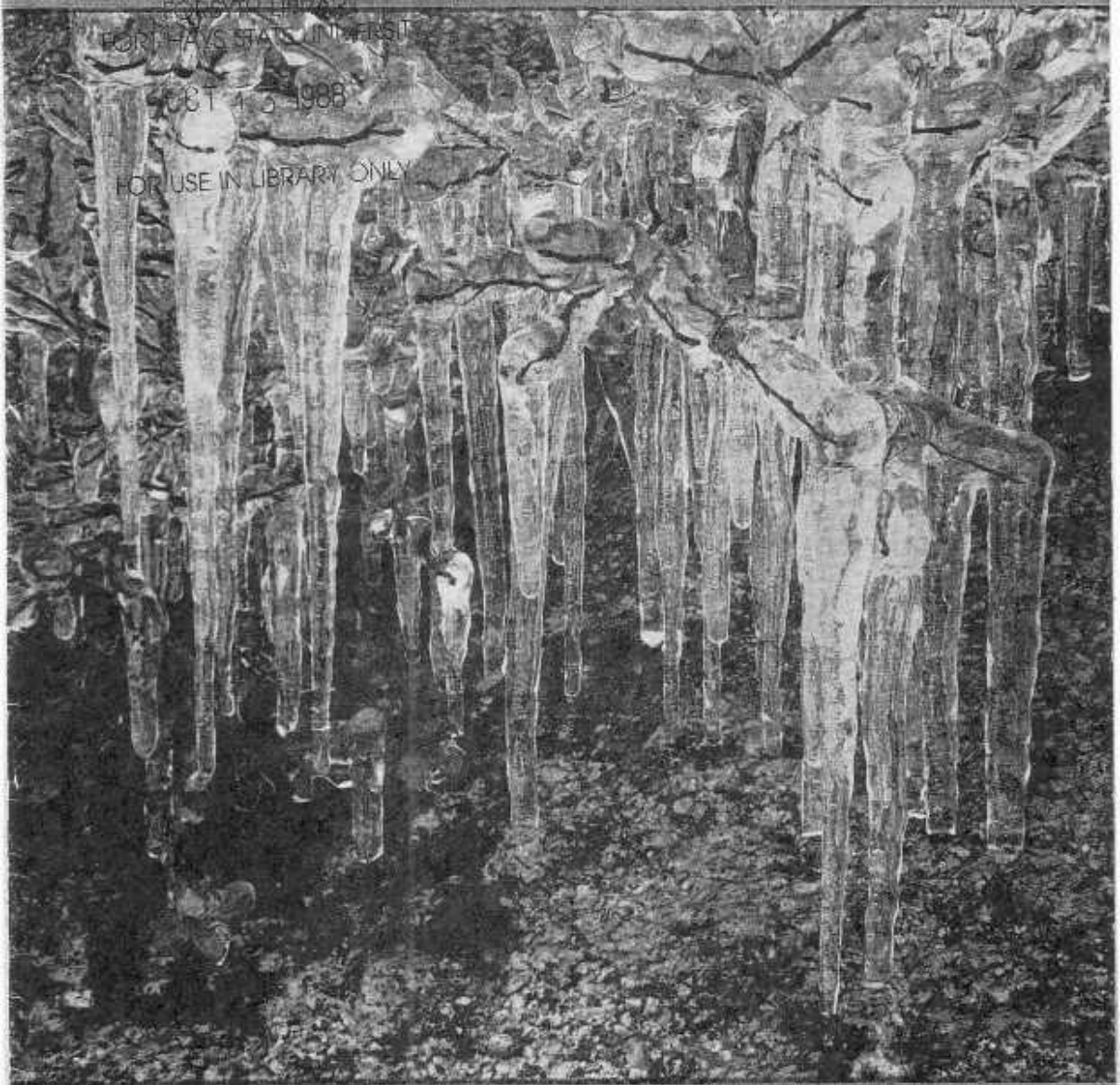
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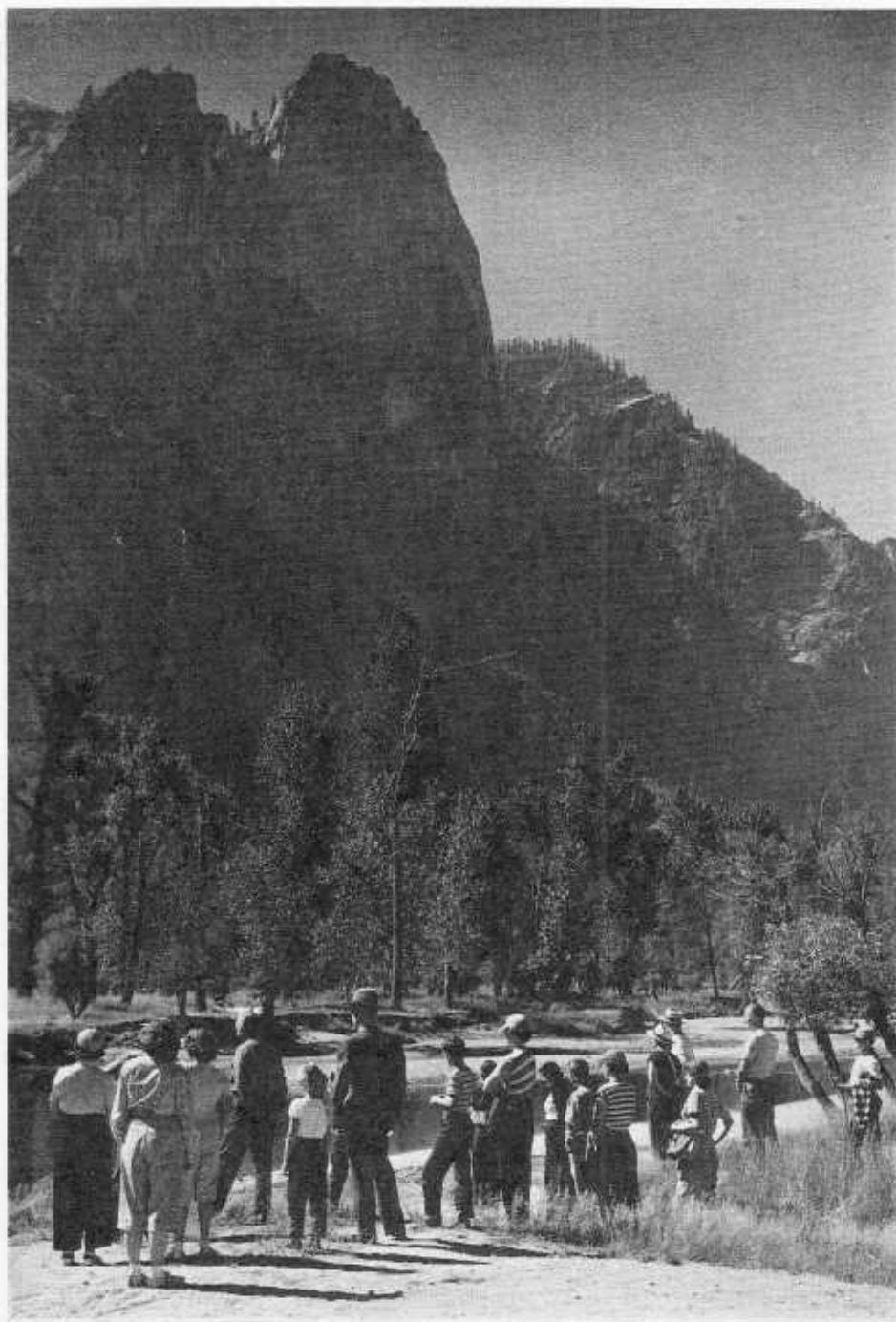
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Summer visitors afield with a ranger naturalist in Yosemite Valley.

Photo by Anderson

Yosemite Nature Notes

THE MONTHLY PUBLICATION OF
THE YOSEMITE NATURALIST DIVISION AND
THE YOSEMITE NATURAL HISTORY ASSOCIATION, INC.

~~Chas. B. Bell~~ Superintendent
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NO. 1

WHEN HELP CAME FROM THE MOUNTAINS

By C. M. Goethe¹

Jedediah Smith, nicknamed "the Bible Toter," was the man who inaugurated the movement which made possible California becoming the thirty-first star in our flag. By his being the first white man to cross the Mississippi to the Pacific, he was able to recommend a military expedition for blazing the trail. This came under General Fremont and paved the way for the first Covered Wagon folk. Two decades between Smith's crossing and the Mexican War decided the fate of California in a way that probably only those engaged in historical research appreciate. We are only beginning now to discover how the French government disregarded the advice of one admiral after another as to utilizing France's New Caledonia garrison to seize California. What impresses the writer, as a churchman as well as a scientist, is the fact that Faith in times of crises has been known to supply something that the hardheaded scientist sometimes misses in his probing for facts.

The story of why Smith was called the "Bible Toter" is too long to tell here. The writer has written it repeatedly in some of his books.

It may be said here, however, that Smith's grilling crossing of the desert required superhuman courage. Smith relied in encouraging his companions and for his own consolation upon the first verse of the 121st Psalm: "I will lift mine eyes unto the hills from whence cometh my help." These words of the Psalmist had a peculiarly potent value in the crossing after leaving the Sierran crest. It is well known that Nevada is ridged with parallel mountain chains, of which the writer once wrote that "the map of Nevada makes them look like army worms a-march." In the sagebrush desert plains between these mountain chains, Smith and his two companions, again and again, almost dropped from exhaustion and near-starvation. Smith continually rallied them with the reminder that once more they would find water and pasture in the next mountain range. It was literally of a case of men with thirst-blackened tongues staggering toward climbing the next mountain height where there could be expected springs and green grass. Literally "help came from the mountains."

1. Mr. and Mrs. C. M. Goethe were responsible for the introduction of nature guiding in the United States. This has subsequently developed into the naturalist programs of the National Park Service as well as in state, county and metropolitan park systems—Editor.

Cover Photo: *Icicles and Willow Twigs*. By Ansel Adams from "Yosemite and the Sierra Nevada" text by John Muir, 64 photographs by Ansel Adams. Reproduction by kind permission of Houghton Mifflin Company.

TALL TALES OF TINY MICE

By Richard G. Beidleman, Ranger Naturalist

Up in the Mariposa Grove where the trees grow a little taller than elsewhere in the park, tall tales are equally easy to find, even tall tales about tiny mice. Next to tourists, our attractive white-footed mice are perhaps more abundant in Yosemite than any other form of wildlife. Although these little brown-and-white rodents are almost entirely nocturnal, they impress their unseen presence upon our campers by their nightly pattering of feet, their audible gnawing of crackers and bread, and their facility at converting sweaters and blankets into nesting material.

For perhaps every hundred mice who lead normal, unobtrusive existences, there is one who, unduly talented or abnormal, leaves behind his nocturnal navigations unusual tales for the visitors. Two such mice we encountered at the Mariposa Grove Museum during the summer of 1949.

Over the winter months, when the snow lies deep beneath the giant sequoias, the white-footed mice are the long occupants of the museum, scampering about over the oak floor searching for stray sequoia seeds and nesting in the two large wooden chests by the fireplace. Now, normal mice would build a cozy nest of grass and down in a corner of the chest; but not our particular mouse! Selecting our turkey duster, this mother mouse constructed her nest of tattered rags in the very center of the duster, surrounded by the feathers; and there, early in the summer, she raised her family of babies. When we opened the museum in July, pulled our turkey duster out of the chest, and began to sweep off our display table, our surprise was surpassed only by the surprise of



Photo by the Author
The Author's Guest

the mice, young and old, as their nest catapulted out of the duster onto the floor.

Perhaps it was one of these same young mice of turkey duster fame who provided us with our midsummer night's tale. In the museum by our filing cabinet we have an old navy gun shell case about three feet high which we keep our topographic maps in during the daytime. At night, emptied of its maps, the case stands in the dark museum as an impregnable mouse-proof fortress, impregnable, at least, to all but one.

On the morning of August 10 at 8:10, the wooden chest in the museum was opened; five maps were lifted out and dropped down into the shell case. At 8:11 the maps began moving around rather excitedly, not at all the way dignified government maps ordinarily act. As the rolled maps had been bound by

rubber bands, we concluded that the movement was due to the maps unrolling inside the elastics. At 8:12 a crunching sound began to emanate from the shell case, not the type of noise produced either by maps or rubber bands but decidedly suggestive of mouse chewing. Upon investigation, we discovered a wide-eyed mouse at the bottom of the shell, surrounded by white bits of map and about as frustrated and starved as a small mouse ever becomes.

As punishment for his trespass, we kept the animal in the shell for several hours, on a diet of sequoia seeds (which he made short work of), awaiting an opportune moment for release. When a bus crowd of



Photo by the Author
Baby Whitefoot

some hundred visitors arrived at the museum around noon, we gathered the tourists around us in the shade of the General Sheridan tree, spun a few tales about the tall trees, and then released our shell case prisoner, who seemed as relieved to bounce away in one direction as some of the audience seemed to run the opposite.

1949 CHRISTMAS BIRD COUNT IN YOSEMITE VALLEY

By Robert N. McIntyre, Assistant Park Naturalist

The morning of December 28th dawned clear with 15 inches of crusted snow on the Valley floor. Twenty-one volunteers including the local troop of Boy Scouts met at the postoffice where transportation was available to take them to assigned areas between Mirror Lake and El Portal. The day was spent in searching out by sight and by call some 37 species numbering 552 birds.

The birds counted, both residents and visitors, gave the searchers not only a thrill, but an insight into the amount of bird life available to the student in Yosemite National Park. Few places exist today outside of the parks and monuments where birds and mammals can live in a natural state free from the predations of man and his domestic companions.

The following list compiled the morning of December 28th is a representative sample of the birds found at Christmas in Yosemite Valley: California heron, 1; common

mallard, 9; Cooper's hawk, 1; Western redtailed hawk, 3; plumed quail, 9; band-tailed pigeon, 96; Western belted kingfisher, 3; red-shafted flicker, 5; western pileated woodpecker, 3; California woodpecker, 29; Modoc woodpecker, 7; willow woodpecker, 4; northern white-headed woodpecker, 2; ash-throated flycatcher, 1; black phoebe, 10; blue-fronted jay, 117; long-tailed jay, 4; short-tailed chickadee, 16; slender-billed nuthatch, 3; red-breasted nuthatch, 7; Sierra creeper, 52; dipper, 12; western winter wren, 1; dotted wren, 4; western robin, 2; western bluebird, 7; Townsend's solitaire, 1; western golden-crowned kinglet, 27; western ruby-crowned kinglet, 19; Hutton's vireo, 3; English sparrow, 1; green-backed goldfinch, 6; Sacramento towhee, 10; Sacramento brown towhee, 22; Thurber's junco, 35; white-crowned sparrow, 2; Modoc song sparrow, 18.

In 1948, 42 species and 622 individuals were counted.

"BUT YOU'VE DONE YOSEMITE"

By A. W. and Mary V. Hood

Yes, 'way back in 1928 we spent a week in the Valley; we drove to the Mariposa Grove and Glacier Point. Each a full day's trip, and an adventurous one, along the old winding roads. We hiked to Vernal and Nevada Falls, saw Mirror Lake and that was that. We had done Yosemite.

But somehow, we kept on coming back. It was so convenient with the children, just the right distance, we liked the rangers, the nature walks, the museum the campfires. As we became acquainted our interests were aroused by the individual naturalist's personal enthusiasm. They suggested things to watch for. What a thrill to come home from a ramble in the Grove and report a new stand of round-leaved ginger (*Asarum lemmonii* Wats.) to the local botanist, or a Townsend solitaire's nest to the ornithologically-minded naturalist in the Valley.

All this, we soon found, carried its obligations and it has sometimes involved weighty matters; an Indian paint fungus (*Echinodontum tinctorium*) of twenty-five pounds that was found near Illilouette Creek and had to be carried up the long steep trail. A little matter of three miles and a thousand feet and all at the end of a twenty mile hike. Then there was the time, down by Ned's Gulch, when we found the giant Indian pestle, that weighed thirty-five pounds, but this time the car was not far away. If our backs ached a bit, it was all forgotten when we reached the Yosemite Museum and were met with the thanks of the "Enthusiast."

Finds like these are not made in a single summer, nor is the knowl-

edge gained to recognize or know what is needed at the museum. But the intelligent observer can on occasion be of real help whilst having a wonderful vacation in the mountains.

In 1947 we visited Saddlebag Lake, and while watching a duck hawk (I prefer the name Peregrine Falcon) through the glasses spotted some especially fine clumps of mountain columbine (*Aquilegia pubescens* Cov.). Clumps well worth a picture, sometimes they seem to reproduce all the varieties of color from the very metamorphics amongst which they grow. So up and over the rocks, and after a few minutes what should we become aware of but a great stand of alpine fireweed (*Epilobium latifolium* L.).

After taking both pictures and collecting specimens for identification, we consulted Dr. Carl Sharsmith, ranger naturalist at Tuolumne Meadows, and found the plant was one that had been reported many years ago "from the Lundy region," that no specimen existed in the Yosemite Museum herbarium, that he knew of no stand, in fact, he had been looking for it lo' these many years. So next day we returned to Saddlebag with him and he collected a series.

The same Carl Sharsmith started us off on the study of trailsign and it is now a natural habit to watch for the gnawed branch, the droppings (scats) and other marks as we go along. These particular scats have come to our attention.

Between Taft Point and Bridalveil Creek, on August 10, 1948, at 7,400 feet along the Pohono Trail, it was easy to see that the coyotes have regular stopping places; in one of

the scats observed the hoofs of a tiny fawn were plainly visible.

On August 2, 1948, near Porcupine Flat Campground, 8,000 ft., we found a coyote scat containing the end of a grey squirrel's tail. Now the grey squirrel does not belong to the red fir (*Abies magnifica*) association but is found among the black oaks (*Quercus kelloggii*) at 4,000 feet or thereabouts. This, therefore, would seem to indicate a trip from the Valley since "breakfast," a distance of about five miles, and a climb of three to four thousand feet.

A third observation was made above Merced Lake, 8,000 feet, on August 13, 1949. A golden-mantled ground squirrel was seen eating on a large boulder that stood near the trail on the brushy hillside. Here was an opportunity to gather material and also to find out what these creatures eat in their natural state. It was found, through later identification, that this small spermophile was eating the larva of a small wasp (*Disbolcaspis truckeensis*). The galls, which he gathered and carried to the rock, were found growing on the huckleberry oak (*Quercus vaccinifolia* Engelm.). Here then, this squirrel is a control factor for at least one of this small oak's many enemies.

Our last three summers have been based in Tuolumne Meadows, with frequent overnight trips to the Valley, Glacier Point and the Big Trees. For besides our general ecological interests we had undertaken to retrace the steps of the late Francois E. Matthes and see how many of the plates in his "Geological History of the Yosemite Valley" (Professional Paper 160) we could find and photograph in color. He has led us hither and yon, and we estimate that in the last three summers we have hiked at least seven hundred miles

in the accomplishment of our project. Now we can report the project 90% complete.

What do our Matthes' pictures show? Perhaps the most startling, all over impression is how little the face of nature changes in 30 years. Here and there a tree has fallen. Trees, young in 1913, show some growth, old trees remain unchanged. In most cases logs and dead trees show very little change. Many questions come to mind—"How long can a dead tree exist?" As a home for how many generations of various forms of wildlife will it serve? And in what order will the various creatures occupy its many crevices?

We had the honor of showing Dr. Matthes the results of our first summer's work and receiving his blessing and good wishes. Now it has become a matter of honor to find, not just a similar spot, but the exact one. Sometimes we have been successful almost to the inch, and we knew we were standing just where he stood way back in 1913-14.

Now that the series is almost complete: What do we have?—First a unique set of slides illustrating the park, for not only do we have the Matthes shots but also many more that he would probably have taken had he been with us in person to guide our efforts. Then we know the byways of the park as few others know them. And again our eyes have been opened and we have been able to recognize geological phenomena hitherto unreported.

The sketches accompanying this article have been made directly from the kodasides we took at each new find. It is hoped that later a professional geologist will see fit to duly report them in the proper place.

In 1947 we found a beautifully



Figure 1

balanced rock (Figure 1) whilst looking for plate 38a near Eagle Peak. A quick calculation estimated a weight of at least six tons, yet so fine is the point of balance that it can be rocked with one finger.

In 1948 on the way to North Dome we rediscovered a natural arch (Figure 2) on Indian Ridge and towards the northern end there is a boulder on a low pedestal.

But our big find for the summer came on July 24th. When returning from Delaney Creek to the Tuolumne River near the "Little Post Pile" we crossed over the shoulder of a large dome. We had, it must be borne in mind, been on the "Little Geology Hike" and visited "Pothole Dome" where plate 34b was taken. Imagine our surprise then when we found two great lines of ancient subglacial potholes on this dome; which we have tentatively named "Torrent Dome." A week later we had the pleasure of taking Dr. Waldo, geologist and ranger naturalist at the Meadows, and his party to see our



Figure 2

find. Some of the potholes (Figure 3) are twelve and fifteen feet across and one has a wall of about 20 feet at one side. Our friends, the Trailfinders, rappelled down into it.

In 1949 we had three more geology notes to bring into the Yosemite Museum, all concerning interesting erratics. Early in the summer we climbed Illilouette Ridge in order to study the Starr King country which we were then planning to and later did visit. The ridge runs roughly from the shoulder of Sentinel Dome and ends in three great steps above Mono Meadows. The last is a bare open rock, clearly seen from the



Figure 3

Glacier Point Road. On this dome there are many erratics, two with pedestals. On the step above is another small pedestalled rock and a huge rock on a very low platform.

On the main ridge itself, right above Illilouette Falls, we found what may prove to be the most significant find of all. We had the pleasure of having Dr. Waldo with us and he tentatively confirmed our suspicions. On this ridge and at 8,300 feet there are several large boulders that appear to be erratics. What we were all surprised to find on consulting the maps, even the latest ones at the Yosemite Museum, was that no record has been made of the ice having ever crossed this ridge, or pushed up to it. In fact

the present marked line of the Glacier Point stage is 500 feet lower (Matthes p. 74, plate 73c.).

Our last experience this summer would probably never have happened if I did not associate with bird observers a good deal of my time, hence I have that undressed feeling on a hike if I do not have my field glasses with me. Now there are three Matthes pictures (nos. 12b, 13b and 36) that come from the Upper Merced Canyon, and a three day trip was undertaken to hunt them down. From the river trail on our way up to Merced Lake High Sierra Camp we stopped to take a picture. After it was done and the notes jotted down I glanced up to the summit of the dome across the river. There through the glasses I saw what appeared to be a giant stony mushroom (figure 4). Again we could find no name, so for our notes we have dubbed it "Sunrise Dome" as it runs due south from Sunrise Mountain.

Two days later the first part of our mission accomplished we returned via the high trail and detoured up and over the Great Moraine (see Matthes p. 60). There at the end of the dome we found and took pictures of two boulders perched on a great series of ancient "shells" that were once the line of the dome. The figure



Figure 4

in the sketch (five feet six inches) will give some idea of the height of the pedestal which is evidently higher than that which Dr. Matthes shows in plate 38a "five foot pedestal . . . the highest pedestal in the Yosemite region." How one wishes the good Doctor were here to see our pictures and share in the fun of it all.

Yes, surely "We have *done* Yosemite" and yet, we hope, next summer will find us on the trails (and off). We have never explored the Red Peak country. The north end of the park is an unknown country. And then there are all those trips we want to take again. Perhaps we are in a rut, but we like it. Our grateful thanks to Dr. Matthes and the ranger naturalists who showed us the way.

SEQUOIA CONES AND SEEDS

By Richard G. Beidleman, Ranger Naturalist

The wonder of the giant sequoias lies not only in their tremendous size and age but also in the unbelievably tiny size of their cones and seeds. One would expect a cone at least three feet long from a tree that stands more than two hundred feet high and weighs several thousand tons. Indeed, the summer visitor to Mariposa Grove will invariably attribute the foot-and-a-half cone of

the sugar pine to the giant sequoia, illegally filling his car trunk with them, to send to his friends at Christmas 'as souvenirs of the Big Trees. Revelation of the identity of the small sequoia cones by a ranger naturalist during the informal Mariposa Grove Museum talks seldom fails to draw a gasp of surprise from the audience, surprise even increased by knowledge of the size

and number of seeds in each cone!

In his *Mountains of California* John Muir described the cones and seeds as follows: "The fertile cones are bright grass-green, measuring about two inches in length by one and a half in thickness, and are made up of about forty firm rhomboidal scales densely packed, with from five to eight seeds at the base of each. A single cone, therefore, contains from two to three hundred seeds, which are about a fourth of an inch long by three sixteenths wide, including a thin, flat margin that makes them go glancing and wavering in their fall like a boy's kite." Shirley, in his *Redwoods of Coast and Sierra*, expands somewhat upon Muir's statistics by describing the cones as "1 and $\frac{1}{4}$ to 2 and $\frac{3}{4}$ " long; the seeds "from 150 to 250 in each cone."

During the summer of 1949 it was possible for ranger naturalists to collect a goodly number of sequoia cones from the Mariposa Grove area and join Muir and Shirley in statistical manipulations.

Ten green sequoia cones, freshly felled by chickarees were selected as typical, their average measurements being about $2\frac{3}{8}$ " in length by $1\frac{1}{2}$ " in width. A careful count of the total number of seeds contained in the ten cones was made, resulting in an average of 209 seeds for each cone. The seeds were obtained either as they naturally fell from the cones, which opened and turned brown when dry, or as they were released by the use of forceps and vigorous pounding of the cone on a block of wood during lighter moments in the museum's interpretive program. These average cones had approximately 36 scales, which would permit about six seeds per scale. The seeds ordinarily appeared to be compressed against

the under side of each scale and were packed among flakes of reddish tannin, a crystalline preservative.

Some enterprising sequoia trees appeared unsatisfied at producing normal cones, as evidenced by the number of abnormally large cones collected in the Grove by Ranger Uhte, Ranger Naturalist McFarland and myself. These abnormalities were grouped as "large cones and "jumbo" cones.

Seed counts were made on two large cones which averaged $2\text{-}13/16$ " in length, $1\frac{1}{8}$ " wide and 42 scales. The average seed count per cone was 260 seeds or six seeds per scale. These larger than normal cones were not at all rare in the Grove and apparently were produced as readily by one tree as by another.

Such was not the case with the "jumbo" cones. Three medium-sized sequoias in the Mariposa Grove, two in the Upper Grove and one in the Lower, provided all of these extremely large cones. The largest cone, discovered by Ranger Uhte in the Upper Grove, measured $3\frac{3}{4}$ " in length, was $2\frac{3}{8}$ " wide and possessed 56 scales. Unfortunately, this cone was old and contained no seeds; but using an average of 6 seeds to a scale, it is within the realm of possibility that this cone contained up to 336 seeds. Another "jumbo" cone measured $3\text{-}7/16$ " in length, while two others measured $3\frac{1}{4}$ ". As one of the latter had been freshly cut and was green, it was possible to make a seed count. This cone, two inches wide and possessing 45 scales, contained 282 seeds, which again gives an average of six seeds per scale. The seeds of the large and jumbo cones were just slightly larger than the seeds of normal cones.

Why "large" and "jumbo" cones should occur, particularly the latter on specific trees, is a thought-provoking problem for some enthusiastic botanist. Future Grove visitors and ranger naturalists may find even larger cones to bolster the sta-

tistics. If trees could talk, we might discover that the giant sequoias, mightiest of living things in size and age, feel somewhat chagrined at producing tiny cones and are striving here and there to alleviate the humiliation.



THE BIG TREES

By Mary Dapron Westover, Hayward, California

I stood within the awesome dusk
 Made by your towering stems;
 I marveled at your massive bulk
 That pettiness condemns.
 And as I looked — cares fell away
 New peace there seemed to be
 The God who's tended you so long
 Can surely care for me.

For nearly fifty centuries
 Midst tempest, drought and strife
 You've kept your branches stretching up
 Your roots deep — searching life;
 You've grown a little every day;
 You've sought the broader view.
 The One who's brought you through the storms
 Can guard and guide me too.



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Dan Anderson