YOSEMITE NATURE NOTES

VOLUME XXXI • NUMBER 11 NOVEMBER 1952

Meadow pool near the rim of Yosemite Valley
—Ansel Adams

Sierra juniper. By Ansel Adams from "Yosemite and the Sierra Nevada." Reproduction by permission of Houghton Mifflin Company.

Cover Photo: Meadow pool near the rim of Yosemite Valley. 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.

Yosemite Nature Notes

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

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VOL. XXXI **NOVEMBER, 1952** **NO. 11**

"JUNIPER TREES"

By Loye Holmes Miller, Professor Emeritus,
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Some four thousand years ago an old man of Israel, bowed down by the waywardness of his people and discouraged by their deafness to his teaching, fled, despondent, into the desert and cast himself down under a juniper tree, crying out: "It is enough, O Lord, now take away my life, for I am not better than my fathers." The earthquake came, and the rushing mighty wind rent the mountain around and brake in pieces the rock—but there was no comfort in them. Only after the quiet and the peace of the desert had entered into his soul could that old prophet of Israel hear the still, small voice of inspiration. Only then did his spirit lift and his confidence return.

I've come to know such a lot of "juniper trees" in my day and they have meant so much to me: seems as though I ought to tell you about some of them.

Just the other morning, I parked my car outside the east entrance to the campus and started the short walk across the bridge toward my day's work. My *mind* had already crossed the bridge. My *body* was merely operating as an automatic conveyor for the breakfast, clothing, lecture notes, bunch of keys—and other material cargo more or less pertinent to the morning's work at a busy office and classroom. Quite shut out of my consciousness was the glowing truth of a "year at the spring, a day at the morn, a morning at seven [or 7:30], and a hillside dewpearled." (Too bad, isn't it?—when we let our minds reach out too far ahead of us to begin the day's routine almost before the day itself is well begun.) Well—thank the good Lord for ears as well as eyes: when the eye is all unseeing sometimes the ear picks up something that breaks through to the consciousness.

All at once *"Tsee-ah, tswee-eet—teet—teet—teet"* — a thin, sweet call pricked through my preoccupation. *"Tsee-ah, tswee-eet, tseet, tseet, tseet"* sounded again. Forward-pushing mind came back to the automaton body and the reunited whole of me *stopped*—stopped right there on the bridge.

A friendly goldfinch was passing down canyon, high overhead and calling as he went. I answered back, *"Tsee-e-ah, tswee-eet, tsee-ah,"* and *down* he came in a regular "spiral dive." He perched on the tip of a

*Dr. Miller was associated with Dr. Harold C. Bryant, Ansel F. Hall, and Enid Michael in starting the naturalist work of the National Park Service in Yosemite National Park in 1920.—Ed.

tree that just reached up to bridge level from the arroyo-bed below. He sat there only a dozen feet away, swinging, swinging on his tree tip, lemon gold with black cap and green jacket. He repeated again and again his airy little note, peering about for the "other goldfinch" who was talking back to him but couldn't be persuaded to "come on down canyon and play awhile." (How I would have loved to!) Finally he seemed to decide that there were more sociable goldfinches down in Botany Garden, perhaps, so off he started to find out. A single call from me, *"Tsee-ah—tsweet"* sent out after him, and back he came to make another offer of sociability. I enjoyed the neighborly chat for another moment or so—then we both went on about our respective day's business. (I'm sure his occupation was fully as important to him as mine was to me.)

I walked on toward the office with a greatly uplifted spirit. Instead of pushing on ahead, my mind now turned backward and flicked onto the memory screen a wonderful series of "Kodachromes" in which the goldfinch had played a part.

Dropping down into Shadow Lake basin high in the Sierra Nevada back of Banner Peak, plodding along behind an unhurried train of pack burros (you can't hurry a burro, you know). All at once, high overhead, *"Tsee-ah—tsweet"* — my friend the goldfinch. An instant answer to his note and *down* he came to see what it was that brought me so far from home and customary occupation. I intimated that I was just taking time out to enjoy myself. He piped back *"Tsee-ah, tsweet, teet, teet,"* which I was inclined to interpret as: "*I* do that *every* day. *You've* been missing something." Then off he went in that high bounding flight punctuated with his fluting calls.

If ever I do get to heaven and can do just as I wish, I shall fly like a goldfinch, bounding through the sky and singing as I go. I have no ambition to ride Pegasus or to gallop with the Valkyries. I prefer the goldfinches.

There were lots of other pictures for the memory sceen, for I have played with the goldfinches ever since my boyhood days over half a century ago when I walked four miles of river bottom and ranch road to the schoolhouse (and I wasn't late either, in spite of the birds). Those were profitable miles between schoolhouse and home.

Here, I was walking a hundred yards from the parking lot to another and bigger school, and those were profitable yards because of my friendly friend the goldfinch and his invitation to that moment of refreshment. I went on to my office and shortly thereafter to an 8 o'clock lecture. I hope those two hundred students were charitable in their judgment of an old man who preambled his lecture on Tertiary fossils with a two-minute discourse on living goldfinches, told of their great service to overserious humans by refreshing the mind and the spirit for a fleeting moment of joyous uplift.

I am a cheerful soul in the main—there are so many "juniper trees" under which to sit, and I try to make use of them. The first fall song of the white-crowns under my window has more than once interrupted my lecture with welcome interlude (for student and teacher both). The song of a meadowlark rises above the song of the Ford motor that brings me up to the campus each morning. Thirteen different bird voices came to me high up on the eighth floor of a metropolitan hospital at a time when I could not lift a heavy head from the pillow. The uneven desert im-

mediately beneath my sleeping bag was somewhat smoothed out by the California poorwill who sang to me in the platinum moonlight of an Easter-eve. *"Poor-will, poor-will, poor-will"*—I counted 93 repetitions before he stopped for two seconds—then he started all over again. It was so much more fun than counting imaginary sheep. I squirmed around a bit to find a new spot between the stones and went off to sleep again.

Yes, there are many "juniper trees" if you will learn to recognize them. You don't have to give up and throw yourself down with a request to the Lord to come and get you. Perhaps He isn't ready yet—and perhaps He has something for you still to do. It is the momentary relaxation that counts sometimes. Your heart takes time to relax after each thrust of the blood into your arteries. In that way only can it carry on for three score years and ten without saying, "It is enough, O Lord, now take away my life." During days of stress (and they come to all people who are really alive) these opportunities for momentary spiritual and mental release — these "juniper trees" — are of great importance. Learn to look for them as green spots in your desert of routine. We hope that yours is but a very small desert which the dust of dull things merely deceives you into thinking of as limitless. Pause a moment under one of my juniper trees—it will help to settle that dust of mere *things*.

But why wait till there is need? Why wait till the dust obscures the horizon? The moment of positive pleasure is not just a period of freedom from displeasure—it is something better. I was not unhappy that morning as I walked across the bridge, but after my talk with the goldfinch I walked the rest of the way across on a plane just a little bit above the bridge level and the morning was just a little bit brighter. Learn to look for and to enjoy the "juniper trees." They will pattern into a pleasing landscape, a spirit picture good to look upon with quiet eyes. Then you will grow mellow, but you need not grow old.

A LIZARD TALE

By Richard J. Hartesveldt, Ranger Naturalist,

Devil Postpile National Monument

Nature has provided many lizards with a remarkable means of prolonging life when they are about to fall prey to some hungry predator. The lizard can voluntarily part with his tail, which then wiggles and twists and flops about, very much alive! The predator's attention is thus diverted from the lizard who runs quickly to safety. The abandoned tail is a much smaller meal than the predator anticipates. Within several weeks the lizard grows a new tail, and his defense mechanism is ready to serve him again if necessary.

While compiling a list of reptiles in the Devil Postpile area during the summer of 1952, I picked up a blue-bellied lizard (probably *Sceloporus occidentalis*) to make the identification. I had scarcely touched the animal when he dropped his tail and successfully diverted my attention while he scampered away. The tail wiggled vigorously at first, finally slowing its actions until it was motionless 90 seconds after it had parted from the lizard's body.

RUSSELL RELINQUISHES SUPERINTENDENCY TO PRESTON

By Donald Edward McHenry, Park Naturalist

On November 1 Dr. Carl Parcher Russell, superintendent of Yosemite National Park since December 1, 1947,[1] turned over his responsibilities to an old friend and veteran of the National Park Service, John C. Preston.[2] A farewell party was given for the Russells in the Camp Curry dining room, featuring a humorous skit depicting highlights of Carl's *One Hundred Years in Yosemite*, and with its laughter and the well-wishes of their many Yosemite friends still ringing in their ears, the Russells left the park so that Carl could begin a year of study and writing under a Guggenheim fellowship. He will be on a year's leave of absence from the National Park Service, after which he will return to it in some other capacity.

During Carl Russell's leadership much has been accomplished in carrying forward the work of the service in Yosemite. A considerable part of these accomplishments, while somewhat intangible, nevertheless manifested themselves in practical values. Among such things is the splendid growth of cooperative relationships both within the local governmental organization and between other segments of the Yosemite community. Dr. Russell's tour of duty brought the resumption of the Yosemite Field School after it had been suspended during World War II. The school soon regained its position of eminence in this field of endeavor. It also acquired a legal status which it had not previously enjoyed.

Carl P. Russell

As superintendent, Carl was able to fill a great need in the naturalist department in Yosemite through the establishment of a position for junior park naturalist. It was his pleasure to fill this position with the appointment of the son of his old friend and former superior, Dr. Harold C. Bryant, founder of the naturalist program in the National Park Service.

One of the most significant contributions made by Carl Russell in Yosemite was the stimulation he gave to activity in assembling and interpreting additional historical data of this region. Using the centennial of the discovery of Yosemite Valley in 1851 as a theme, he focused interest on the locating of sources of hitherto unavailable historical material, resulting in a greatly increased flow of such material to the Yosemite Museum. Through a special centennial exhibit in the museum, as

1. See *Yosemite Nature Notes* 27(2):57-58, February 1948.
2. During the interim period prior to Mr. Preston's arrival in Yosemite on November 20, Assistant Superintendent Harthon L. ("Spud") Bill was acting park superintendent.

well as through a series of illustrated talks in nearby communities by both himself and members of his staff, public attention was directed to the interesting facts of Yosemite's history. During this period of the centennial observance Carl published in *Yosemite Nature Notes* a series of important articles on the Yosemite Indian wars,[3] containing considerable information new to the literature. His earlier series of articles entitled "Twenty-five Years Ago"[4] placed on record a resume of certain trends and growth through which both the local and the national organization had progressed.

Apart from his many recognized achievements there were, of course, innumerable purely administrative actions which in their entirety reflected much credit to Carl's tenure as superintendent. The best wishes of his many friends go with him and with Betty Russell as he launches upon the completion of his four-volume work on the history of the western fur trade, a study which has held his interest for 20 years.

When Superintendent Russell announced his successor he said, "I feel complimented in the knowledge that a man so estimable as is Preston will have the job which has been mine for five years." John C. Preston enters upon his new duties amid a circle of co-workers with whom he has been associated in one way or another during his long years with the National Park Service. Rising quickly from temporary ranger to assistant superintendent in Rocky Mountain National Park, then as superintendent of Lassen Volcanic National Park and later of Mt. Rainier National Park, he was again transferred to the superintendency of

John C. Preston

Great Smoky Mountains National Park in 1951. From this position he came to Yosemite. John Preston is a native of Fort Collins, Colorado, where he attended the Colorado A. & M. College for a while. He earned his B.S. degree in forestry at the University of Montana in 1926, after which he had his first assignment with the National Park Service at Rocky Mountain. While in this park he was detailed for nearly a year to the headquarters of the service in Washington, D.C., to assist in the direction of the Civilian Conservation Corps and other emergency activities in the national park areas. He served in the Air Corps in World War I. As a career man with the National Park Service John Preston brings to the superintendency of Yosemite a wealth of experience. Their many friends both old and new sincerely welcome John and Betty Preston to our community.

3 "The Geography of the Mariposa Indian War." *Yosemite Nature Notes* 30(3, 4, 6, 7):24-30, 33-35, 53-56, 63-71, March, April, June, July 1951.

4 "Twenty-five Years Ago." *Yosemite Nature Notes* 28(2, 3, 4, 5, 7, 11):9-13, 19-20, 30-32, 33-34, 99-100, 135-139, February, March, April, May, July, November 1949.

THE NIGHT LIFE OF A YOUNG FLYING SQUIRREL

By Allen W. Waldo, Ranger Naturalist

On a mid-August night last summer at about 10 o'clock, a group of us heard a big commotion and banging of dishes in one of the naturalists' tents in Camp 19. A light was on in the tent, so we crept up to see what could possibly be causing such a terrific noise. It proved to be an immature flying squirrel *(Glaucomys sabrinus lascivus)*.

The squirrel was busy investigating the shelves in the front of the tent with the hope of finding food. It was interesting to watch the way he got around. After climbing up along the uprights or the diagonal brace behind the shelves,, he would search each shelf as he reached it, not being at all careful, but knocking askew dishes, cups, and glasses as he moved along.

Having found nothing of value to him, he continued on up a support of the tent. To this support he found a loaded clothesline attached. Apparently he felt that this should certainly have food somewhere along it, so he started out upon it. Then there developed one of the neatest little exhibitions of slack-wire walking which I have ever witnessed. He walked back and forth on the rope several times, often stopping to investigate the clothespins and barren areas of the rope. Usually he walked right side up on it. This necessitated numerous quick flips of his little flat tail in order to maintain his balance. The flat, instead of round, character of his tail was clearly shown during these acrobatics. Also, the little fold of skin extending along each side of the body between his front and hind legs showed up beautifully as it alternately stretched and wrinkled during his walking back and forth. A few times he hung from the rope and walked along underneath it.

From "Mammals of Lake Tahoe" by Robert T. Orr. Courtesy of publisher, California Academy of Sciences.

Flying squirrel

Twice he hung vertically from it while holding on only with his hind legs.

Having found no food in this situation, the squirrel finally started down, reaching eventually the top of the shelves. Here he made up his mind that the next place to explore was the table, some 2½ feet below and about 3 feet removed from the front edge of the shelves. I thought that now, at last, we would get a chance to see him glide. He made two or three movements as if to jump, but, although he was nearly three-fourths full size, he was still reluctant to try it. He came on down one shelf at a time, pausing and making attempts to get up his courage to jump, but refusing to do so each time. Finally he reached a shelf only about a foot above and a foot away from the table bench. Here he found his courage and took the one remaining short jump. He spread the folds of his skin, which didn't check him too much, and plopped onto the seat. From here he climbed up onto the table top and finally crawled out of the tent.

I was particularly interested in his high skill at balancing and hanging on the rope, while at the same time he appeared to have so little confidence and ability in his gliding. His graceful flat tail and webbed body edge were well developed and apparently in proper proportion to his body, so that he could have glided, but he still refused to try it except for a very short distance, and even that he did very poorly.

A STAMP COLLECTOR'S DELIGHT

By Orthello L. Wallis, Park Ranger

Yosemite's famed Vernal Fall appears on a 1932 postage stamp of the Philippine Islands over the label "Pagsanjan Falls." The intention was to show the latter fall on the stamp, but through some mistake a view of the Yosemite waterfall is pictured instead.

Pagsanjan Fall, with a height of nearly 200 feet, is one of the largest waterfalls in the Philippines. It is located near the town of Pagsanjan at the junction of the Pagsanjan and Botocan Rivers, in the eastern part of the province of La Laguna on the island of Luzon. Vernal Fall on the Merced River in Yosemite has a height of 317 feet.

The stamp, which is red orange in color and 18 centavos in denomination, has considerably more value to the collector than other stamps in the same series because of this

error. The current Scott's Standard Postage Stamp Catalogue, the Encyclopedia of Philately, lists the value of the stamp at $10.00 for a mint (unused) specimen.

Massive El Capitan is the only other natural feature of Yosemite which has appeared on a postage stamp. The huge monolith was shown on the green one-cent stamp of the United States in 1934. This was issued a second time in sheets of six imperforate stamps to honor the Trans-Mississippi Philatelic Exposition and Convention in October 1934 at Omaha, Nebraska.

EXPERIMENT WITH OBSIDIAN

By William L. Neely, Ranger Naturalist

A Tuolumne Meadows camper with an inquiring mind proceeded to experiment with a piece of obsidian, putting a chip of the glassy, black volcanic rock into the campfire "just to see what it would do." This is an example of that interesting and peculiarly human trait, curiosity. When we think back upon the great inventions of civilization and on the great discoveries—fire, the wheel, cooking of food, basketry, gunpowder—we may perhaps suspect that they are not so much the result of intellectual genius as of simple curiosity.

How did the Indians learn that acorns are edible when leached in hot water? Or how was it discovered that a certain root, manioc, could be freed of its deadly prussic acid by leaching and draining, rendering it an excellent staple food in South America? How did the ancients learn to smelt iron? How did the Egyptians know that a white powder from their desert, soda ash, mixed with fine sand and copper ore would produce a turquoise-blue, glassy surface on their pots when heated? Same as the Tuolumne Meadows camper—they were curious and just wanted "to see what it would do." Experiment and play.

Animals have little time for experiment, animals and many modern folks, for their time is spent mainly in finding or making a living. True, certain animals possess a high degree of curiosity, such as coyotes and crows and jays. And many city dwellers have the leisure time for experiment but their curiosity is often dulled by the confinement of routine living.

Saffron is an extreme example of the tiny corners the human mind has poked into. How did man discover that this tasty spice could be found in the tiny stigmata of a certain crocus flower, each stigma containing but a few grains of the powerful yellow powder? Or indigo—the indigo plant itself gives little hint of the color it will produce. Not until processed by soaking, maceration, and treatment with alkali will the beautiful blue result.

The ancients were like boys with new chemistry sets. Boys do not follow the direction books too carefully, for everything has a certain magic and there is a constant enticement to mix things together haphazardly "just to see what will happen," or to taste strange things for their "magic" quality, or to boil certain things or to throw certain things into the fire because, because—why?

Great ideas begin with play. In all folk tales, the smartest boy is always the young one who dawdles by the ashes of the fireplace while his brothers are out trying to get somewhere in the world. He is seemingly stupid and a dreamer, but it is he who becomes king. Schlegel said that great ideas are most often born when the mind is roaming at leisure. The wheel was probably first used as a child's toy. They say that pottery was born when a basket lined with mud fell into the fire and the framework burned away. Or it may have been invented when children played with mud pies and baked them in the fire as mother did the bread.

The obsidian of the Tuolumne Meadows camper? Why, it did something too. It turned into pumice. Withdrawing the chip from the coals after several hours of intense heat, he found the obsidian had swelled to about five times its original size, becoming a piece of typical pumice that would float in water. You may call it intumescence or the release of dissolved gases, but at any rate the hard, shiny, black glass became a light, frothy stone. Ranger Naturalist Allen Waldo says that this is typical of a certain obsidian called perlite, which is not found around Mono Lake where the camper's obsidian came from. Moreover, perlite differs by having tiny bubbles in it. Perhaps such an experiment gives us a new slant on the origin and formation of pumice,* or the whole thing may have little significance, but I pass it on to play with sometime around your campfire. The human mind, I hope, has not yet lost that quality of play.

*See account by R. J. Hartesveldt, "The Geologic Story of the Devil Postpile," in preceding issue, page 147.