## YOSEMITE

JUNE, 1975 VOLUME FORTY-FOUR, NUMBER 4



YOSEMITE'S DOMES - The great series of granite domes of Yosemite have been a source of scientific theory and glorious sight-seeing since first viewed.

Fifty years ago, in the February 29, 1924 issue of NATURE NOTES, an article on Yosemite Domes stated that "It requires no scientific turn of mind to discover that Yosemite landscapes are characterized by huge, bulging masses of base granite,

swelling out from the timbered slopes. Thoughtful study of the domes reveals the fact that each and every one is divided, at the surface, into curved plates. Removing an outer plate reveals another, and the domes seem, like an onion, to be composed of concentric layers. Geologists, in explaining these peculiar structures, have developed two general theories. According to one theory, the granite of the domes has always been divided into curved plates, Because of this layered structure it has been possible for water and ice to model the rounded domes."

"The other theory holds that the layered formation originated subsequent to the forming of the domes and was caused by release of pressure by weathering away of the top layers and unequal expansion and contraction at the surface of the solid mass of granite."

These theories have been the cause of much controversy, notably between Josiah Whitney and John Muir. François E. Matthes of the U.S. Geological Survey did extensive study on Yosemite's geology and his conclusions bear out the latter theory of the formation of the domes by exfoliation.

SOME DOMES AND HOW TO FIND THEM The southern-most, and in solitary splendor of Yosemite's domes, is Wawona Dome which may be viewed from Wawona. For a closer look, take the Chilnualna Falls trail that leaves from north Wawona community, just off of Hwy. 41. It is a steadily climbing trail with good views of Chilnualna Falls. This is a day-hike and one should carry water as the summer weather is guite warm in this region.

Continuing on Hwy. 41, take the Glacier Point turn-off at Chinquapin and continue on the Glacier Point road for 11½ miles to the Sentinel Dome trail parking area. From there, it is an easy 1 mile hike to the top of this scenic dome, with its much photographed Jeffrey pine. There is a 360° panorama view of the Sierra Nevada from its summit. The dome stands 4157 feet above the Valley floor. Sunsets from Sentinel Dome are scenes to be treasured. Be prepared for a breeze.

A stop at Washburn Point on the Glacier Point road gives a fine view of the Mount Starr King Dome, the least accessible of all the domes. It stands some 9,092 feet and may be reached by an over-night hike along the east Illilouette Canyon trail. The dome is named for Reverend Starr King, although it seems a dubious honor as legend has it that it was named for its similarity to the Reverend's bald pate.

From Glacier Point, the grandeur of Half Dome is seen in its splendid profile. To reach Half Dome start from Glacier Point and hike to the top of Nevada Falls via the Panorama Trail or from the Yosemite Valley floor, hiking up from Happy Isles. There are camping places in the little Yosemite valley or at the Clouds Rest, on the Sunrise trail to Tuolumne Meadows. From here, it is best to use a topo map or the "Giant Stairway" trail map for a route to the

north side of Half Dome from where one may ascend Half Dome (with the assistance of the cables that were first placed there by the Civilian Conservation Corps). The cables are removed annually and, as on all hikes, check with the Rangers to find out trail conditions before leaving. On over-night hikes it is necessary to obtain a Wilderness Permit from the Valley Visitor Center, Tuolumne Meadows Visitor Center or Happy Isles Trail Center. On a hike to Half Dome one passes Liberty Cap and Mount Broderick, just north of Nevada Fall. These are classic examples of "roche mountonnee" domes with their slanting "sheep backs." These are "new" domes sculptured by the Merced Glacier. A V-like cleft now separates Liberty Cap from Mount Broderick. The two great monoliths seem to glorify each other.

Farther up Little Yosemite Valley on the Merced River is Moraine Dome which is easily recognized by the curving band of vegetation up its side, disclosing the lateral moraine of the glacier. From the top of Nevada Fall, follow the Sunrise Trail to the Clouds Rest Camp site. From here, it is an easy walk up the side of the dome. On top one will find several "pedestal" erratics, large boulders left by the glacier and, as the shells of the dome weathered away, that portion directly under the boulder having been protected and still standing supporting the boulder upon a pedestal of stone. Nearby is an aplite dike which is an intrusion of harder rock that still stands as the adjacent granitic shells have sloughed off. The dike is over eight feet tall and graphically illustrates the amount of exfoliation that has occurred on Moraine Dome. As this is one of the least known and visited geologic treasures of Yosemite, treat it gently. A trip to Moraine Dome is about 12 miles round trip, and makes a nice over-night trip with camping at the Clouds Rest camp site. One should obtain a Wilderness Permit.

The juncture of Tenaya Canyon and the Merced River canyon is guarded on the north side by North Dome and Basket Dome. North Dome may be reached by the Snow Creek switch-back trail from the northeast or may be approached from the north via the North Dome trail. The shortest route to North Dome is from Porcupine Creek Campground, a mile south of the Tioga Road. From the campground, it is 3.8 miles to the top of North Dome making this one of the more accessible viewpoints along the Valley's north rim. The Rim Trails guide is a map for this hike. All Trail Guides are available at the Visitor Centers Sales Desks.

Mount Watkins, a dome-type mountain is located near Basket Dome and North Dome. Mount Watkins shoots about 4,275 feet above the Valley floor and over 8,500 feet above sea level; it may be seen reflected in Mirror Lake. Early morning or twilight are the best times for clear reflections in Mirror Lake. At other times the surface is ruffled by canyon breezes.

A series of domes continues up Tenaya Canyon to the high-country and may be reached on foot via the Tenaya Lake trail that originates at Mirror Lake or if you are driving, leave the valley via Highway 120 and continue east on the Tioga Pass Road.

On the north side of Lake Tenaya, Polly Dome rises over 1500 feet above the lake's edge. In the spring, the southern face of the dome is the habitat of many different varieties of wild flowers and seven different kinds of ferns have been found in the damp places under it's exfoliating shells. Easy access is from the eastern and wooded approach; park in the Tenaya Lake Picnic parking area. The side of the dome that directly faces the lake is much more precipitate and is for the experienced technical rock climber. North of the summit of the dome are Polly Dome Lakes, where swamp conditions are hospitable to many flowers of the moist environment.

Continuing along the Tioga Road, the smaller dome immediately to the right after passing Lake Tenaya is Pywiack Dome, 8810 feet. Medlicott Dome is farther to the right and accessible only to the cross-country hiker.

Driving toward Tuolumne Meadows, the road winds between Fairview Dome on the right and Erratic Dome on the left.

Fairview Dome is a sugarloaf-type dome, rising over 1400 feet above Tuolumne Meadows and 9731 feet above sea level. The sides of Fairview Dome are quite steep and slick with glacier polish. Ascent should be by experienced mountain climbers with technical equipment.

Erratic Dome, on the left, is easily climbed and there is a turn-off on a dirt road where there is ample parking. The turn-off is not marked but is the only road on the north side of the Tioga Pass road at that point. A pleasant, short trail through the woods leads to the start of the ascent.

Entering Tuolumne Meadows, there is a large scenic view turn-out on the left. Stop here and observe the interpretive signs for a comprehensive view of the surrounding country-side. The small dome next to this turn out properly is called Pothole Dome as there is a glacierworn depression. A new name, "Wedding Dome", has evolved recently, as a number of contemporary weddings have been held on its gentle summit.

At the east end of Tuolumne Meadows is Lembert Dome. This dome exhibits the "roches mountonnees" glacier form on a grand scale, rising about 500 feet above the Tioga road. It is easily reached by a trail from the north and east sides. One may purchase a *Tuolumne Country* trail guide at the Tuolumne Meadows Visitor's Center to locate the route to the top of Lembert Dome.

This is not a complete catalog of the interesting domes of Yosemite but may help to locate them more easily.

Several booklets on Yosemite's remarkable geology are available from Y.N.H.A. They are the following:

A BRIEF GEOLOGY OF YOSEMITE THE INCOMPARABLE VALLEY THE STORY BEHIND THE SCENERY GLACIERS by M. E. Beatty by Francois E. Matthes by William R. Jones by Robert P. Sharp



SETTLED IN - We gathered our pencils, desks and typewriters in early winter and moved to our new office located on the north side of the building next to the Visitor Center. We have one fine interior stone wall on the south and a view of the Indian Garden and the grey granite cliffs through the windows on the north side. We hope you'll stop in - we'll pour you a cup of coffee.

SEMINAR DATE CHANGE - Our late summer bird banding/migration seminars were scheduled for Aug. 23-24-25, Sept. 6-7-8. Dr. Dave DeSante, the instructor, has accepted a teaching post at Reed College in Portland and must report in early September. Rather than cancelling the class, we have moved it to August 16-17-18. According to De Sante, the banding work and the migration study will not be adversely affected by the change.

THE MASTER PLAN — The National Park Service appears to be approaching its task of preparing a new Yosemite Master Plan with imagination, open-mindedness and vigor. The method of arriving at the ingredients of a plan seems to value highly the opinions of all the publics, regardless of the extremes expressed. "involvement" seems to be the buzz-word.

The plan will be largely a product of the publics' input, supplemented by studies and data accumulated earlier as well as special studies now being done by the park staff and the Master Planning Team.

The basic working medium is a public workshop, of which many are to be held during each of four phases, described briefly below.

Phase I. To define the issues and problems, management directions for the future and an acceptable "Yosemite experience". At these first-stage workshops, statements relevant to these topics are discussed and recorded. Statements are received by mail or in person, as well. A synopsis of all the statements gathered at each workshop is written; then, all the data is collated, the result representing the opinions gathered at all Phase I workshops.

Phase II. At Phase II public workshops, each topic of the collation from Phase I will be examined and options, or alternatives, sought in light of their impacts. At this point, alternatives from earlier planning efforts will be introduced and evaluated.

Phase III. During this planning phase, the objective will be to shape a consensus plan which will result from a willing acceptance of the plan by the public. Here, the workshop participants along with the professionals will draft an environmental assessment.

Phase IV. Between the Phase III and Phase IV workshops the National Park Service will refine the consensus plan into a draft master plan and draft Environmental Impact Statement. The last series of workshops will permit the public to review, comment on, and revise these draft documents.

Upon completion of Phase IV (approximately August 1976) the Park Service will prepare a final Master Plan and Environmental Impact Statement that will be submitted to the Department of the Interior. A 30-day waiting period is then required during which any late changes may be made. Simultaneously, the office of the Secretary of the Interior will review the proposed plan, and, assuming it is acceptable, it will be ready for the signature of the National Park Service Regional Director on behalf of the Director, National Park Service in September, 1976.

With the great opportunity for public expression during the 18 months of the workshop procedure, it would seem that second-guesses should be few and no individual or group could justifiably complain of having been ignored or that secrecy cloaked the planning.

Implementation of the plan will involve a different set of considerations — the politics, the pressures, the funding. But, for now and through next year, the Park Service is and will be listening to the people to whom the parks belong and for whom they exist. And, the public seems to be a continually strengthening lobby.

BOOKS, ETC. - Our book "Discovering Sierra Trees" was awarded highest honors in a competition among publications of all National Park Service 'cooperating associations'. Some seventy-five publications were entered. YNHA was represented at a meeting in Denver when the awards were made. It was a great thrill to hear Bill Everhart, assistant to the director, say "And for best in all categories, the winner is (pause) Discovering Sierra Trees." We understand that author Steve Arno and illustrator Jane Gyer have been commissioned to do a book on the trees of the Pacific

"Influence of Modern Man on the Vegetation of Yosemite Valley" a significant study made by Harold Heady and Robert Gibbens, UCB, was out of print for several years. When we learned that UC Press did not intend to reprint it, we secured permission from UC and have it back in the world. It's an interesting work, comparing the present (1964) vegetation of the Valley with that existing in 1851, as depicted by early writings and photographs, and discusses the changes — both manmade and natural — which have occurred. It is 44 pp with 23 sets of 3 comparison photos. It retails for \$2.25; to members (20% discount), \$1.80 plus tax (\$.11) plus \$.40 postage - or \$2.31.

Northwest.

Carl Russell's fine park history "One Hundred Years in Yosemite" has been out of print for three years. We were fortunate in getting the National Park Service to fund the reprinting in connection with certain Bicentennial publications. We are told that it will be available in July.

Designers are now at work assembling three new publications. Bill Jones, former Yosemite

Chief Naturalist and YNHA director, has rewritten the "brief geology" booklet. Jones has captured in words the facts of Yosemite's dramatic geologic history, and has made the account lively and provocative. There will be new drawings and illustrations by Ms. B. Weiss, who also is designing the booklet.

Harold Basey, biology and ecology instructor at Modesto Junior College, has written an authoritative account of the amphibians and reptiles that inhabit the Sierra Nevada. These creatures are here in abundance but except for those few who are drawn to them, they don't have much of a following. Probably the amphibians and reptiles — frogs, snakes, lizards, salamanders, etc. — have been less disturbed by man's influence than any wild animals in the park. Not many park visitors hunt snakes as they would wildflowers! Basey has provided illustrations of these neglected and seldom loved residents. Ms. Jean Saulsbury of the YNHA staff is designing the book, which should be off the press in August.

The most colorful book underway now is Dana Morgenson's "Wildflower Trails of Yosemite." (Dana is Board Chairman of YNHA.) This will be a popular account of the native plants found in the foothill approaches to the park, in the Valley, along the rim, at the subalpine and alpine elevations. There will be 120 full-color identification photos plus five "habitat" photos, one at the start of each chapter. The project was funded by the estate of the late Mary Curry Tresidder who, several years ago, had selected Morgenson to write and illustrate the book and YNHA as the publisher. G. Dean Smith of San Francisco is the designer.

We are cooperating with the Sequoia-Kings Canyon Natural History Association, toward the publication of "Discovery of Sierra Mammals." Russell K. Grater, a first rate mammalogist and former NPS Naturalist has written several delightful chapters thus far and will deliver the entire manuscript by April, 1976. Publication is planned for mid-76.

FROM HIGH PLACES — In the April 7 issue of the NPS Newsletter, there's a story about gifts helping to support park programs. It reads, in part, "NPS received and processed more than \$2 million in donations from institutions and foundations in FY '74. Some of the biggest donors were cooperating associations like the Yosemite Natural History Association. "Thank you, staff writer Ronnie Spiewak."

By coincidence, the day the article arrived, we bought for the National Park Service an 8" Celestron Telescope, with a box full of accessories. The telescope will be used mainly at Glacier Point for visitor programs studying the spatial nature of the heavens over the Sierra and for terrestrial viewing as well.

SIGHTINGS - Among the more unusual natural history field observations recently recorded were:

Goshawk (Astur atricapillus). 0.1 mile west of Ranger's Club, Yosemite Valley: G. Kottcamp. (This is a fast or "bullet" hawk which preys on grouse, other birds, chipmunks and squirrels. Bird victims are plucked before being eaten.)

Mountain lion (Felis concolor). Adult lion observed a distance of 75 yards for 5 minutes with 20 power telescope. Was sitting quietly in the sunlight. Top of incline above El Portal: H. & B. Johnston.

Golden Eagle (Aquila chrysaetos.) Three birds working the east faces of the Three Brothers. One was clearly an adult, another was clearly an immature: M. & D. Goodwin.

Osprey (Pandion haliaetus.) "On Stoneman Bridge with Glenn Pol and Dennis Miller when a very large bird flew out of the trees near the river from the east. It flew over our heads and along the river going west, perhaps thirty or forty feet above the river. The size and grace of this bird was most impressive." Yosemite Valley: B. Beldner.

TRAVEL - Members may recall that last year the Association sponsored a trip to Alaska. Twelve members enjoyed 13 days of glacier-camping, kayaking, and observing the bountiful scenery and the wonders of nature in this frontier country. The details of transportation,

lodgings, etc., and the nature guide service were arranged through the UNITREX travel people in Pasadena.

Dr. Timothy Hillebrand, an archeologist and formerly a professor at Occidental College, heads the organization. While the Association this year will not be sponsoring any treks as that to Alaska, members may be interested in some of UNITREX's offerings. Their TREX address is: 1043 East Green Street, Pasadena, California 91106. If you should write UNITRE tell them YNHA sent you!

SEMINARS - SUMMER '75 — We are excited about our summer 1975 Seminar Plans. Possit the best news for the seekers of high country flora is that Dr. Carl Sharsmith will lead two subalpine botany classes as well as two at the alpine elevations.

Four new subjects are on the schedule. ETHNOBOTANY OF THE WESTERN SIERRA INDIANS will be presented by Bob Fry. There is no one source book for the contents of this course. Fry, because of his knowledge and deep interest in the subject, literally has put it together himself. Participants will find themselves preparing (and sampling) Miwok food and medicine, weaving tule-roots, and pondering the magic and the legends. There will be field trips to ancient Yosemite Indian camp and village sites.

Will Neely, one of the senior Tuolumne naturalists, will probe, in DYNAMICS OF CHANGE IN THE SIERRA NEVADA, the complicated physical and biological relationships of the Sierra as they respond to the constantly changing environment. The course will be pursued in the alpine and subalpine zones of Yosemite and the eastern slope.

An examination of the way man and his environment shape one another in a continuous act of creation will be the thrust of Naturalist John Lemons' seminar SYMBIOSIS OF MAN AND HIS ENVIRONMENT. Lemons, an interesting and stimulating man, will interpret nature from a philosophical platform, transcending the purely technical disciplinary considerations.

Comments from participants in last summer's botany seminars indicated an interest in semi-technical instruction in flower photography for personal enjoyment or classroom use. Dana Morgenson, much admired for his 'camera walks' will lead the weekend classes, PHOTOGRAPHY FOR THE BOTANIST' at Tuolumne Meadows and nearby. Dana knows the technical aspects of close-up color photography and where to locate the more obscure high country flora.

The University of California at Davis, Extension Division, accredits YNHA's seminars and, all around, has been most helpful. In addition to academic extension courses, UCD sponsors a number of field trips - a bus camping trek examining Southwest Indian cultures - another, an educationally inspired Colorado River float trip. For more information, write UCD, Extension, attn: Paula Foster, Davis, CA 95616.

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