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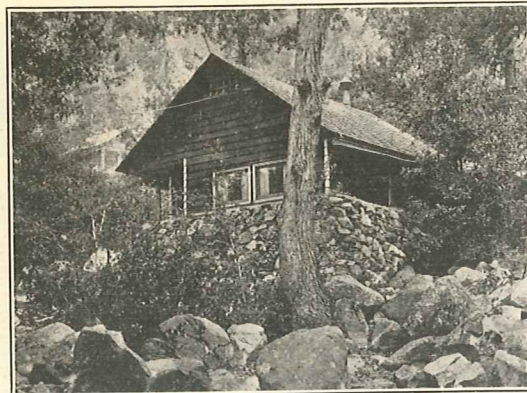
TRAILS MAGAZINE



FORESTRY NUMBER

Spring 1936

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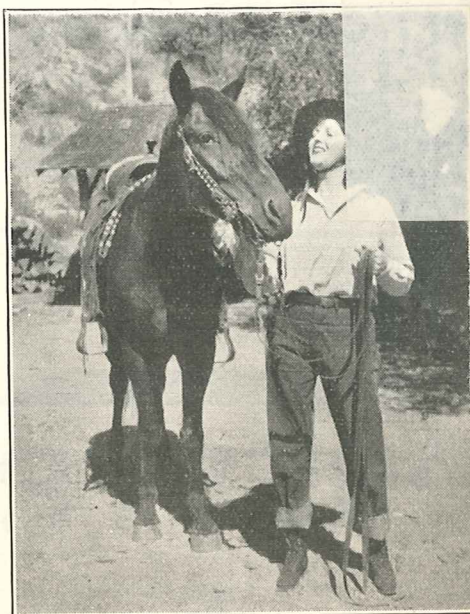
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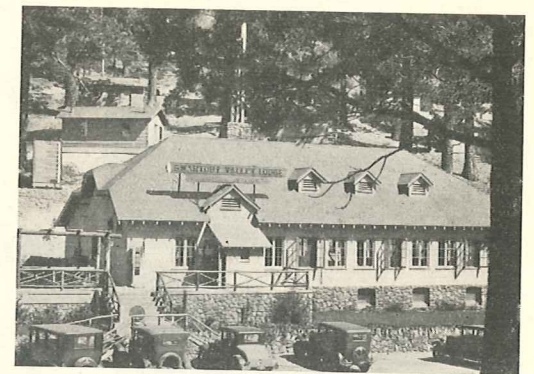
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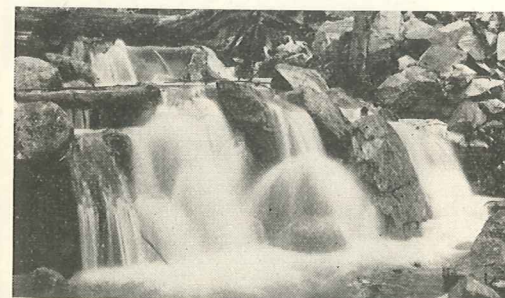
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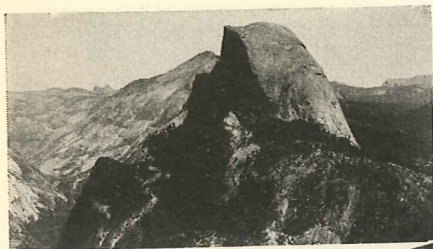
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Trails Magazine

VOL. 3

SPRING, 1936

NO. 2

Published Quarterly by
THE MOUNTAIN LEAGUE
of Southern California

A non-profit organization of representatives of Public Departments and Outing Clubs, formed for the purpose of stimulating the development and use of mountain trails and other facilities for outdoor recreation in Los Angeles County.

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U. S. FORESTRY NUMBER

We of TRAILS MAGAZINE feel highly honored that the Federal Forestry Department, Angeles Forest Division, has chosen this Spring Number to carry their message to the people of Southern California.

We know our readers will greatly appreciate the careful research which has lifted from out the forgotten past, this history of the early days and the desperate struggles of a few to save for us these things so vital to our continued growth and prosperity.

Not only for this, but for assistance and favors too numerous to mention, we owe our gratitude to Forest Supervisor William V. Mendenhall and his corps of assistants, to our Assistant Editor, Junior Forester Jack Kerns, and to Charles Naasson, artist and draftsman of the Forestry Department, who gave us this very attractive cover.

Let's give all possible support and assistance to the Forest Service and to its representative in the mountains, our good friend the Forest Ranger.

FOREST SERVICE OBJECTIVES

By A. K. CREBBIN, *Asst. Forest Supv.*

The United States Forest Service, as manager of the public resources within the National Forests, is striving to so manage these resources that they will be the greatest good to the greatest number of people. These resources are held, protected and developed by the Forest Service for the benefit of the people.

The principal foundation of this administration was stated by the Secretary of Agriculture to the Chief Forester on February 1, 1905, as follows: "All land is to be devoted to its most productive use for the permanent good of the whole people and not for the temporary benefit of individuals or companies."

The Forest Service practices a policy of conservation through use and the use of the resources is planned on permanent perpetuation and betterment of all forest values. This broad objective of the fullest use to the greatest number of people, for management purposes is broken down into the greatest benefits to be derived by the local communities from the individual values. The individual values are as follows:

1. The preservation of the forest cover to regulate streamflow, prevent erosion, supply hydroelectric power, furnish domestic and irrigation waters, and to preserve the natural beauty of the mountains.

2. To harvest and perpetuate a supply of timber by cutting the mature trees and growing successive crops of timber by natural reproduction or planting nursery grown trees.

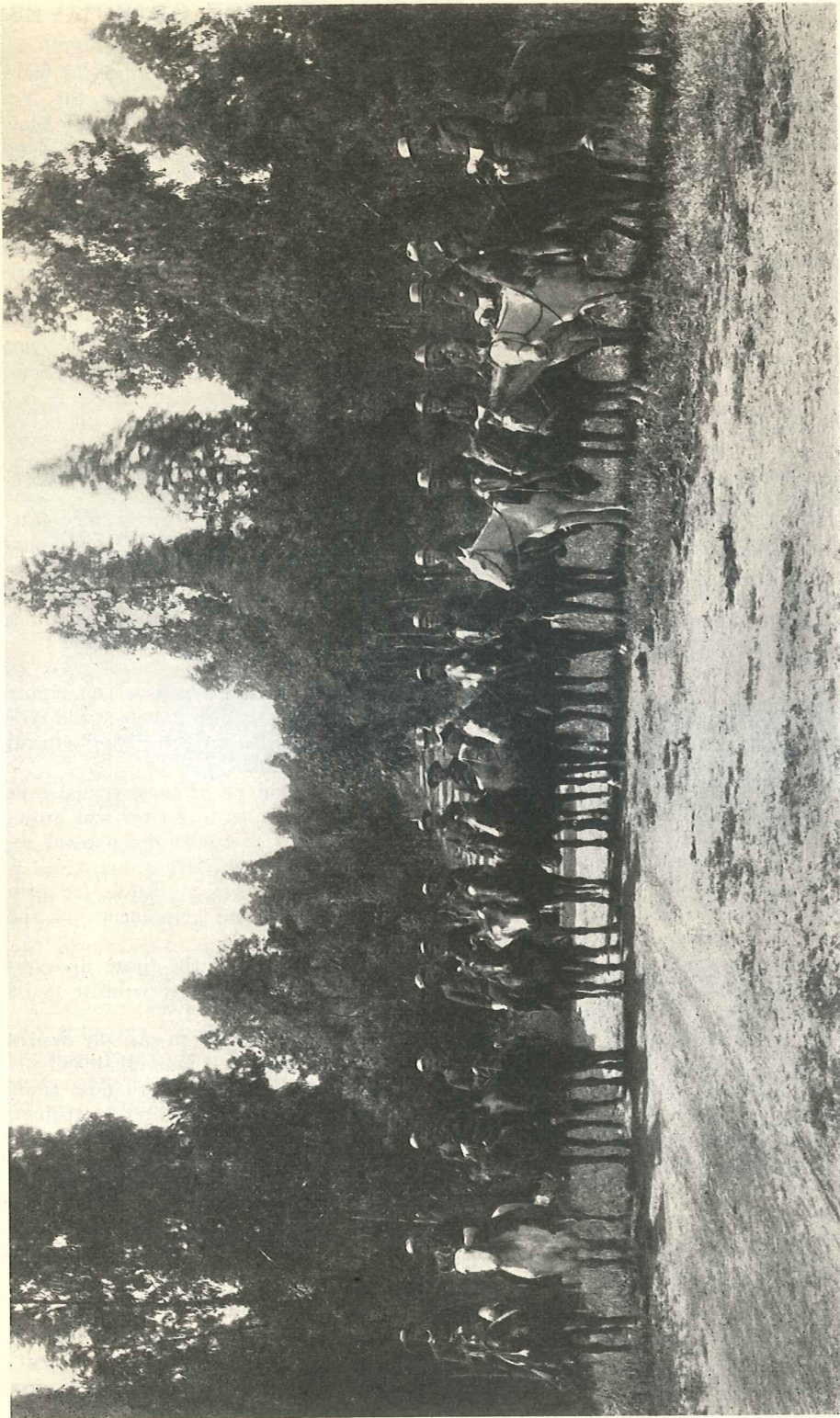
3. To manage the grazing lands for protection of the lands and permanency of the live stock industry.

4. In cooperation with the State divisions of Fish and Game, to increase wildlife to its natural balance.

5. To develop recreation to suit the desires of all; summer homes for individual and organizations, camp and picnic grounds, trails for hikers, ski trails for the winter sportsman, roads for the motorists, stores and resorts to benefit all form of users, and primitive areas for the more rugged individuals who like nature in the roughest and untouched form.

When the uses of the forest conflict or overlap, the dominant use of the community is considered first, but with as little restriction of minor uses as is possible.

The Forest Service is managing the resources of the National Forests to increase the benefits for the citizens of the United States and to preserve and better them for future generations.



(6)

Part of the Old Rangers of the San Gabriel Timberland Reserve

Starting at the left they are: (1) Charles P. Hardy, (2) Bob Taylor, (3) Guy Bisbee, (4) Bob Ryerson, (5) Miller, (6) Joe Hutchins, (7) Bob Hiatt, (8) William Hall, (9) Jack Cook, (10) Forest Supervisor E. B. Thomas, (11) Lou Newcomb, (12) O. A. Blodgett, (13) James Bradford, (14) Tom Lucas, (15) Willard Sevier, (16) Irving Carter, (17) Phil Beque, (18) Jack Baldwin, (19) Ben Hines.

CABIN LANDMARKS OF THE ANGELES

We continue our history of the early days with the story of the San Gabriel Timberland Reserve. Of the Forest Guardians of the old days who fought forest fires with axe, shovel, burlap bags and often with their clothes and bare hands; who pitted their nerve and daring against the fiery scourge, and with remarkable success too, or we would today have no forest playground.

HISTORY OF THE ANGELES NATIONAL FOREST

By W. L. SEARS, Sr. Forest Ranger

The Angeles National Forest needs no introduction to the people of Southern California. Its close proximity to the many cities and towns with only two hours travel from sea level to mile high elevations over excellent roads and trails makes it one of the most frequented playgrounds in the State of California and probably in the United States. Its many beautiful canyons with convenient and attractive camping grounds improved by the CCC boys afford excellent accommodations for the picnicker, camper and hiker at all seasons of the year.

The many little attractive summer homes, conveniently located far removed from the hustle and din of the great city, afford a haven of rest to the office worker. The 862 miles of excellent trails winding through beautiful canyons to the highest peaks, some of them passing through the State game refuge where wild game abounds, affords the hiker an opportunity to enjoy the more unfrequented places. The many miles of highways and good mountain roads offer to those who cannot hike an equal opportunity to enjoy the scenic beauties.

From La Canada the Angeles Crest Highway winds up the Arroyo Seco Canyon to Redbox, from which point it is now being constructed toward Charlton Flat. From Redbox we take the Mt. Wilson road to the Observatory at Mt. Wilson. This point commands a magnificent view of the San Fernando and San Gabriel valleys, 5,000 feet below us with their thousands of citrus groves and their many cities and towns. In the distance can be seen Mt. San Antonio (Old Baldy), Mt. San Geronio (Greyback), Mt. San Jacinto, and on a clear day the blue Pacific glimmering in the sunlight. Then, when the evening shadows fall and twilight merges into night, the millions of lights in the multitude of cities and towns form a veritable garden of gleaming splendor.

On the north, the roads wind through Sole-

dad Canyon and Aliso Canyon, around Mt. Pacifico to Chilao and on to Buckhorn Flat, the most beautiful camping ground by far on the Angeles Forest. From Mint Canyon an excellent road meanders through the low foothills skirting the Mojave Desert, on up through a magnificent pine forest to Big Pines Park. This park is maintained and operated by Los Angeles County's Department of Recreation Camps and Playgrounds and is noted for its winter sports and summer playgrounds.

From Table Mountain above the Lodge, a fine view can be had of Swartout Valley, Blue Ridge and the headwaters of the San Gabriel Canyon. Also a closer view of Mt. San Antonio (Old Baldy), the top of which is 10,080 feet above the sea. This same point commands an excellent view of the Mojave Desert to the north with its broad expanse and ever changing colors; its rosy dawn, its glowing sunrise, its midday mirage, its blazing sunset, appalling, frightening, yet beautiful in its vastitude. All these and many more scenic beauties on the Angeles National Forest are yours to enjoy but not to destroy.

Even though so many people are familiar with the Angeles National Forest under present conditions, few if any—except possibly some of the early day rangers now retired—are at all familiar with its early history. The National Forests were formerly called timberland reserves or forest reserves. The President was authorized in 1891 by an Act of Congress to set aside areas for the perpetuation of the timber supply and to insure the regular flow of water in the streams.

The first reserve—the Yellowstone Park Timberland Reserve—was created by Presidential proclamation, signed by Benjamin Harrison on September 16, 1891. The San Gabriel Timberland Reserve, which is now in part the Angeles National Forest, was proclaimed by President Harrison on December 20, 1892, and was the first forest reserve to be created in California and the second in the

(7)

United States. It contained 555,520 acres and covered the San Gabriel mountains from about the mouth of Pacoima Canyon on the west to the Cajon Pass on the east. The south boundary of the reserve was located on the approximate foothill line where it is today, but the north boundary extended further north into the edge of the Mojave Desert. Many changes have been made in the boundaries, both in additions and eliminations since the first proclamation was signed.

On March 4th, 1907, the name "forest reserves" was changed to "national forests" to indicate that the forests and their resources were not reserved, but were for present as well as for future use.

The San Bernardino National Forest joined the San Gabriel National Forest on the east in Cajon Canyon and embraced all the San Bernardino mountains from Cajon Pass to the Whitewater River. On July 1st, 1908, these two national forests were consolidated by Presidential proclamation signed by Theodore Roosevelt and the area named the Angeles National Forest. What is now the Saugus District of the Angeles, that is all the present territory between the Santa Clara Divide to the Piru Canyon, was formerly a part of the Pine Mountain-Zaca Lake Timberland Reserve. Later the name was changed to the Santa Barbara National Forest.

This area was added to and made a part of the Angeles Forest on September 30th, 1925. At the same time and by the same proclamation the San Bernardino mountain area was taken away from the Angeles and with the San Jacinto Mountain area was again made the San Bernardino National Forest. The San Jacinto mountains were formerly in the San Jacinto Forest Reserve; later made a part of the Cleveland National Forest until 1925.

From the creation of the San Gabriel Timberland Reserve in 1892 until 1897 there were no forest administrative officers in charge. In 1896 there were several large fires in the reserve in the vicinity of the Big Tujunga Canyon and the Dalton Canyons. These fires burned from August until November, lasting nearly three months and burning over several townships of land before they were finally put out. It took the combined efforts of the County Commissioners and the different water companies to stop them. In consequence of these conflagrations, the county officials with the water companies interested in the water supply of the Los Angeles Basin, brought pres-

sure to bear in Washington, and the following year—1897—Mr. B. F. Allen was appointed a Special Forest Agent & Supervisor with headquarters in Los Angeles, to take charge of all the reserves in California, Arizona, and New Mexico, with special instructions from the Commissioner of the General Land Office in Washington to concentrate on forest fire prevention and the depredations of sheep.

Mr. Allen's first duties were to seek the cooperation of the settlers and others interested in the reserves in the prevention of forest fires. With no forest rangers to assist him and being entirely dependent upon the public for assistance, Mr. Allen was faced with a tremendous problem which he attacked with that zeal characteristic of the early pioneers of the Forest Service. After a thorough investigation of the conditions confronting him, he submitted his report and recommendations to the Commissioner in Washington and on July 18, 1898, he was authorized to employ twenty forest rangers for all the forest reserves in California, Arizona and New Mexico, two of which were allotted to the San Gabriel Reserve (now Angeles Forest).

On July 21, 1898, the first three forest rangers were appointed; the two for the San Gabriel Reserve were Everett B. Thomas and Frank Allen, a son of the special forest agent. Ranger E. B. Thomas was assigned to the western end of the reserve in the vicinity of Sunland and Frank Allen was in charge of the eastern end. Glen C. Shepard was appointed at the same time but was stationed on the San Bernardino Reserve and was the first ranger for that reserve.

Other forest rangers who were appointed for the San Gabriel Reserve the same year were: Philip S. Allen, James Bradford, Louis Newcomb, Norman Melrose, James L. Parker, Robert Taylor, J. S. Carter and Ben S. Casey. There were in all thirty-two forest rangers appointed in 1898 for California and Arizona. These first rangers were employed for the summer season only and were dismissed in the fall of each year. They received the magnificent salary of \$50.00 per month and paid all their own expenses.

There were in 1898 two Forest Superintendents; B. F. Allen, located at Los Angeles, was in charge of the San Gabriel Reserve and all those north. Mr. C. S. Newhall was Forest Superintendent for the San Bernardino, San Jacinto and Trabuco reserves with headquarters at Redlands. Each reserve had a

forest supervisor who served under the superintendents. W. A. Bonder was the first forest supervisor for the San Gabriel Reserve with headquarters at Pasadena, California, and W. A. Buick was the first forest supervisor for the San Bernardino Reserve, with headquarters at Redlands. While this is primarily a history of the Angeles National Forest, it is thought advisable to mention the early personnel of the San Bernardino Reserve, as it later played a prominent part in the Angeles Forest, it becoming a part thereof in 1908.

Everett B. Thomas, one of the first three forest rangers appointed in California, was later promoted and became the second forest supervisor of the San Gabriel Reserve. He served until 1905 and was succeeded by T. P. Lukens, who served from 1907 until 1920, when he was detailed to special work for two years, during which period S. W. Allen served as forest supervisor. Mr. Charlton returned in 1922 and continued until January, 1925. From January, 1925, until March, 1929, Geo. H. Cecil served as forest supervisor, and from March, 1929, to the present date Wm. V. Mendenhall has been in charge. In all, there has been seven forest supervisors and one forest superintendent since the Angeles National Forest was created.

During the succeeding years from 1898 to 1907, many forest rangers were appointed, among whom the most prominent ones were: Everett B. Thomas, Myron Pine, Chas. H. Fick, N. O. Torstensom, L. A. Harvey, R. H. Hiett, Philip Begue, Louis Newcomb, Thomas Lucas, John H. B. Allen, Wm. Hall, Chas. S. Bauder, Willard L. Sevier, Robert Taylor, James Bradford, Samuel B. Clifton, Delos W. Colby, O. A. Blodgett, Fred J. Jeken, Orland Chandler, W. S. Caley, L. C. Tilghman, Wm. B. Bacon, Joseph H. Hutchins, Burt M. Switzer, Thos. McC. Hall, Robert Waterman, Irving D. Carter and Jesse Sevier.

Many of these old time forest rangers have crossed the Great Divide and some are still living in the vicinity of the Angeles Forest, among whom are Philip Begue, La Crescenta; Robert Waterman, La Crescenta; Tom Hall, La Canada; Tom Lucas, Ybarra Ranch in Big Tujunga Canyon; Chas S. Bauder, now quite prominent in the Division of Fish & Game, State Building, Los Angeles; Fred Jeken, San Bernardino, and Louis Newcomb, Sierra Madre in winter and at Chilao in summer. Jesse Sevier lives in Long Beach and

is still periodically employed on the Angeles National Forest, sometimes as lookout and sometimes as patrolman and foreman of construction.

If any of the "Old Timers" have been missed the writer humbly offers his apologies and will be pleased to hear from them. The information in this article has been gleaned from the early office records of the San Gabriel Timberland Reserve.

To these "Old Timers" goes a tremendous share of the credit for the success of the Forest Service. They were the ones who laid the foundation upon which our wonderful organization has builded. It was their implicit faith in the cause, their loyalty, their untiring efforts and their will to succeed in those first discouraging years that held them to the task; surely not the mercenary wage which they received.

After the first few years some of the Forest Rangers were retained during the entire year to build fire trails, fire breaks, roads and telephone lines. A report of December 10, 1904, shows that 43 miles of new trails, 15 miles of combined trails and fire breaks, five miles of roads and sixty miles of telephone lines had been built since the creation of the San Gabriel Reserve in 1892. These were built during the winters of 1900-1901, 1901-1902 and 1902-1903, making a total of 383 miles of trails, 105 miles of roads and 60 miles of telephone lines, there having been 340 miles of trails (such as they were) and 100 miles of wagon roads on the reserve when created.

On the San Bernardino Forest Reserve which later became a part of the Angeles Forest there were built up to December 10, 1904, four miles of fire breaks and 25 miles of fire trails, making a total of 325 miles of trails, 4 miles of firebreaks and 195 miles of roads. On the Angeles Forest at the present writing there are 862 miles of trails, 487 miles of fire protection roads, 713 miles of fire breaks and 381 miles of telephone lines. In addition to the fire roads, there are county roads and State highways; the information regarding these is to be found elsewhere in this magazine.

(To be concluded in the Summer number)

Back Numbers

1935 issues of TRAILS MAGAZINE on sale at Room 300

240 South Broadway, Los Angeles

OUR FOREST GUARDIANS

Oh that! just the Ranger in charge of this district;
Easy, care-free life, a soft job has he.
In nifty brown khaki or snug olive drab,
No place, finer figure of a man will you see.

Writes out your permit and warns you take care;
Quotes rules of the forest which you must obey;
Makes himself generally useful and helpful;
Enthuses with you when you've had a fine day.

Drowns out campfire which you had left burning;
Picks up the trash which you threw away;
Renders first aid to the sick and the injured;
Brings from the wilds those who've wandered astray.

But when the Red Demon is running hog-wild,
With the wind blowing a gale and humidity low;
When in City's streets we stand aghast
And wonder who next will be called on to go.

Then it's "Where is the Ranger and why don't he stop
The fire at this canyon, that road or yon break?
My God! does he realize what we are losing,
That our property, homes, very lives are at stake?"

Well, up there they're facing a wall of flame
With only their bodies, a shovel and axe;
Worked for hours along that ridge without water,
A furnace in front and the sun at their backs.

Do you sense what is doing on that far crest,
The desperate fight there to stem the red tide?
Shoot her boys; that's the last, only, desperate chance,
And they set the backfire to sweep clean the side.

Then a blazing brand is carried across
In the red-hot draft of that roaring hell,
And the desperate battle is now on again
And where it will stop no mortal can tell.

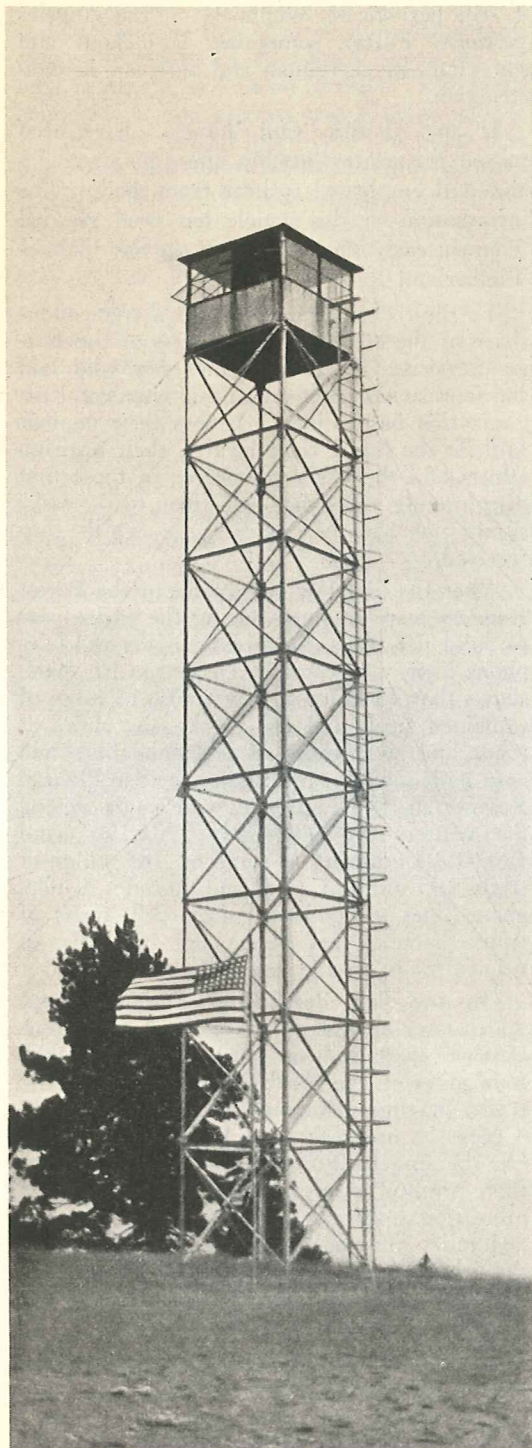
But a change in the wind gives the fighters a chance;
An increase in humidity slows the flames' mad run;
A sparsely brushed ridge, forces rushed to the front,
One last, desperate struggle and the battle is won.

Who, that? that's the Ranger. God, what he's been through;
Forty hours straight he has worked without rest.
Uniform in tatters, bloody bandage on head,
How fortunate for us that he stood the test.

Let's honor them then, these men of the forest;
Give generous praise where credit is due;
Give them the assurance that we stand behind them
In this splendid work that's for me and for you.

Pitifully few for the ground there to cover,
A mighty small force for the work to be done;
But trained to the minute and careless of danger,
They're a gallant and loyal body of men.

WILL H. THRALL.



The eyes of the Service are the watch-towers on the mountain tops. From thirteen of these every part of Angeles Forest is in view.

A FEW LEAVES FROM THE CAMP GROUND HISTORY BOOK

By J. C. KERN, *Junior Forester*

Beneath the shower of dust from the old files on early public camp development in the Angeles National Forest there comes to light many of the policies, much of the pioneer work which lead to the upward trend of this highly important Forest Service activity—Recreation.

Prior to 1914, and due to the wide separation of that small band of men comprising the early Ranger force, camping and picnicking went on throughout the Forest at most any point chosen by the individual. It was impossible to regulate or contact all of the recreationists who "motored" to the mountain country in the old family buckboard, or to the chosen few who donned goggles and duster and vibrated out over narrow, rock-strewn roads to their favorite camp spot via the old 1908 chain drive special. With the advent, however, of more improved motor vehicles, the establishment of a few scattered links of Forest highway, and a general public awakening to the values of mountain recreation over trails into the back country, it became obvious that more regulatory measures were necessary in the fields of public camp sanitation and fire prevention.

Old timers point with pride to the early camp fire permit first inaugurated on the Angeles in 1914 and designed to meet in part this growing problem of scattered camping fires. This permit, printed in Washington for the sole use of the Angeles National Forest, was good only at one specific camping point and for one trip only, as contrasted with the seasonal, region wide permit of today. In the Arroyo Seco Canyon 26 areas were cleared in advance of the fire season and lettered alphabetically and as campers applied for permits at the old Ranger Station (formerly at the site of the present Forest Service Warehouse) he was instructed to camp at "A" or "M", or in the case of the hardy hiker at "X" below Switzer's. Originally the old permits were issued by Forest Officers only, but in 1916 a few of the leading sporting goods dealers in Pasadena, Azusa and Glendora were authorized to make this service available to the public.

Probably the first effort to further improve cleared, regulated camping areas was made with the Berry Flats Public Camp in 1917. This camp was situated in the floor of the San Gabriel Canyon about four miles below the

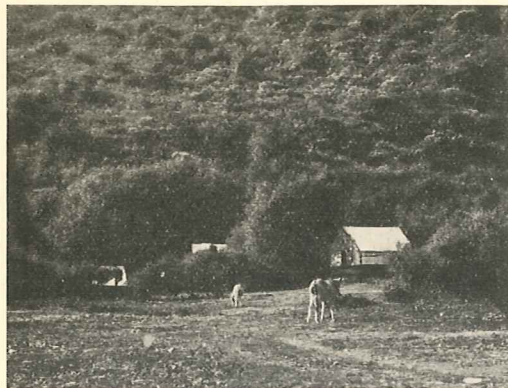
Forks of the River. Through the financial aid of the Auto Club of Southern California, it was possible for the Forest Service to build several tables, benches, sanitary improvements and develop a spring, and pipe a protected water supply to this popular area, which in later years became inundated by the waters of the Pasadena reservoir behind the Morris Dam.

Congress, during these days, frowned upon any bill bearing the tab of appropriations for recreational developments. In using cooperative funds, persistent argumentation was necessary before these monies could be used to build fireplaces. Many thought that the old "open hearth" of rock and soil would suffice.

During the same period, before the War, it was possible to add a few meager improvements to the Arroyo Seco Camps. A. J. Mueller, now Assistant Forest Supervisor and at that time Ranger in the Santa Anita Canyon, also constructed tables, stoves and other facilities for the trail camps in the vicinity of First Water and Roberts Camps. Steadily increasing public demands were reflected in needs for further developments, and the thread of recreation was weaving a broader pattern in the everyday activity list of the Ranger.

In a letter to the San Antonio Fruit Exchange in July, 1919, Forest Supervisor Charlton stated that the fire menace was greatly increasing in San Antonio Canyon due to people pitching their tents and building camp fires "here, there and everywhere." This appeal paved the way for the clearing and establishment of the present Bear Canyon Public Camp, through the use of \$200 from the State and Fruit Exchange treasuries. In May, 1921, Ranger Shay reported that 200 people had used the camp over successive weekends, and requested additional funds for sanitary facilities. On this same site in March of 1923, the first campground planting on the Forest was established. Twenty-three locusts, six sycamores, and twelve deodors made a formal bow to their new home upon donation by County Forester Flintham. They were hauled via "Model T" Ford from the old County Nursery, then situated at the present location of the General Hospital.

Back to 1920—with the help of \$400 raised by the L. A. Chamber of Commerce, supple-



Original Bear Canyon Public Camp

mented by funds of the San Gabriel River Water Committee and the State, the Forest Service added some camping conveniences to the existing clearing which formed the San Gabriel Forks Public Camp. One of the first items of expenditure included fare via Follows Camp stage, for hauling men, tools, food and construction materials from Azusa up the old river bottom road to a point below the Forks where it was packed in the remainder of the distance. 1921 gave an impetus to campground improvement in San Dimas Canyon. Aided by \$200 of the State and San Dimas Fruit Exchange money, additional clearings and camping facilities were constructed in three camps. One was situated at the Forks, one approximately one-half mile up the Main Canyon, and the third about one-half mile up the West Fork. Later development in these camps under E. L. Buxtom, then known as a Division Ranger, gained the assistance of a roadside cleanup crew under Jesse Graves, then Deputy County Forester.

Meanwhile, activity in the recreational field was gaining momentum in the western part of the Forest. Boquet Canyon, with its tumbling stream detouring around numerous oak flats and feeding a narrow canyon bottom fringe of Sycamore, Alder and Willow, soon focused the attention of many "picnic and camping-minded" visitors. In 1920 the Auto Club gave \$800 for the improvement of three camps in this canyon, which at this time was included as part of the Santa Barbara National Forest. Thomas Sloan, whose name was destined to be placed on the familiar trail linking Switzer's and Alpine Tavern, was at that time Forest Supervisor in Santa Barbara. Three points in Boquet were improved. Falls Flat was near old Bridge No. 1, about one-

half mile above the Mexican and Mines Camps. The second area was called the "Narrows," below Bridge No. 2, and the third campground was established on Oak Flats near Lover's Camp in the vicinity of old Bridge No. 5.

J. A. Biddison, who homesteaded the Biddison Ranch in Upper Boquet Canyon, was the Forest Guard in charge of the first work done, which included brush clearing, creek bed improvement, stream crossings, and the construction of 36 tables, 72 benches, 2 fireplaces of sheet iron, masonry design, and others of the plain "pit and rock" type. Condemned 50 gallon gas drums served as incinerators, which were, 14 years later, to be supplanted by the present garbage disposal system. During the period from June 1 to November 30, 1921, Biddison reported the issuance of 500 campfire permits and the checking of 6,500 people using the Boquet camps. During the 1935 season, this figure could have been reached in approximately one quarter of the time. The early day visitors were enthusiastic in their approval of the improvements placed at their disposal.

Thumbing the pages in the 1920-1930 period we see a gradually increasing interest toward adding more and better designed camping conveniences at locations chosen and cleared for maximum safety against fire. The picture shows a trend in the direction of greater regulation of an increasing recreation business; it brings forward gradual increases in the Forest Service personnel trained to contact the public, instilling in them through education, the thoughts of camping safety and forest preservation. Congressional appropriations for recreational usage were still a vague hope and scattered developments in Santa Anita Canyon, the Arroyo, in Big Tujunga, and other front country canyons, were still welded to that link of cooperation between the Forest Service and the many agencies interested in the Out-o-Door program.

Into the dawn of April, 1933, there appeared a sun which was destined to shine with smiles of men and money over the National Forests of our country. The Emergency Conservation Act, giving birth to the C.C.C. program, favored the Angeles National Forest with ten companies of young men eager to tie into the varied forest work program which favored recreational developments. It was as if Paul Bunyan had suddenly awakened from

COMBATING FOREST FIRES THROUGH EDUCATION

By VERNE R. SMITH, *Chief Fire Dispatcher,
Angeles National Forest*

The U. S. Forest Service is charged with the administration of the National Forests and one of the most important duties in this administration is the prevention and suppression of forest fires. On the Angeles National Forest, consisting of approximately 700,000 acres, there were 51 fires during the year 1935.

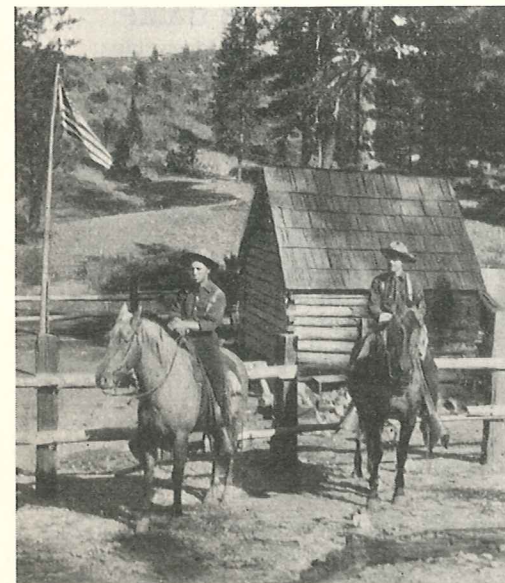
When we realize that the towns and valleys lying adjacent to this forest are dependent on the mountains for approximately 80 per cent of their water supply, and that over a million people use the Angeles Forest each year for their vacation and recreation, we also realize how important it is that the public be educated in the prevention of fires.

Let us look over the records and see how these fires are caused. Out of the 51 fires, 9 were started by lightning. These lightning fires we could not prevent. This leaves a total of 42 fires, which were man created, and which could have been prevented; most of them were started by some person's careless or thoughtless act.

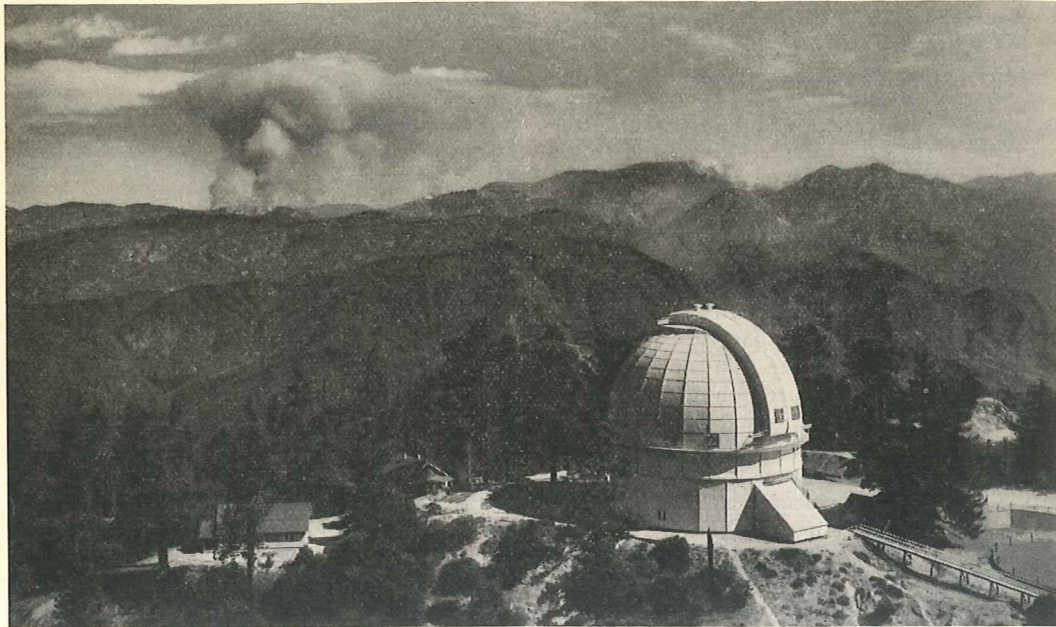
After the careless act of some person starts a fire, it is then our problem to control it. To do this we are building truck trails or motor ways to give quicker access to all parts of the Forest, constructing a network of firebreaks and developing more adequate water supplies. We are gradually acquiring more and better fire fighting equipment, including pumpers and tank trucks. The telephone system of the Forest is being improved and extended. Additional lookouts are being established on high mountain peaks, and these lookouts are in direct communication by telephone and radio with the Chief Fire Dispatcher.

The Forest Service has not stopped there. They have been and are continuing to demand more efficient personnel for the administering of the forest problems and fire protection. Following along this line, the fire protection force is given intensive instruction and training in the work of fire prevention and fire suppression. The C.C.C. enrollees are formed into fire suppression crews, under the leadership of competent forest service foremen. They are given the best known instruction in fire fighting methods, and soon become trained fire fighters.

a twenty year sleep and heaved his shoulder to the wheel of campground progress. This program, designed primarily to build the body and morale of unemployed American youth, served to sway the pendulum toward the Southern California camps. Thirty-five stoves and tables at the Fish Hatchery Public Camp; one and one-half miles of camping areas along the San Gabriel River in the process of completion; one acre in the South Fork of Big Rock Creek complete, even to water system; new wells for Boquet Canyon campers; thirty units for picnickers at Chantry Flats; four camps in Elizabeth Lake Canyon; a scenic view point and picnic area on the Glendora Mountain Road; clearing and improving the 20 odd trail camps near Arroyo Seco; and so on the list reads and grows to include a majority of the improvements on the 180 public camps within the Angeles National Forest. Wielders of axe and shovel, throttling the jack-hammer, master of fire-tool, these broad-shouldered, tan-backed boys of the C.C.C. have cleared the brush, built stove and table, paved the road, bridged the creek, piped water, and landscaped that outdoor home for a million and a half folks visiting the Forest each year. These men have built on those beginnings and aspirations of the Ranger of twenty years ago, crystallizing their dreams, making possible the hopes of the old timers that the Out-o-Doors might become a more cherished ownership of the American people.



Jess Sevier and Bill Bacon at Charlton Flat.
Station—1902



The 1924 Fire from Mt. Wilson, Burning Near Chilao

Under the present conditions these are some of the activities of the U. S. Forest Service in fire protection, all of which is justified and absolutely essential. Through these improved methods of training and additional equipment we are reducing the area burned to a considerable extent.

While we are preparing for the control of fires which are started, we are not overlooking the prevention side of the picture. It is conceded that the prevention of fires is our main objective and to accomplish this it is important that we educate the public to be fire conscious. Our past records prove that the large majority of fires in the forests are man caused, and through education of the public to the danger of fire we hope to prevent a large percentage of these.

It has been suggested that the Forest Service should close the National Forests to public use during the fire season, but we do not favor this method. It is preferable to allow the public use of the forest for recreational purposes, but ask that the public cooperate by using the proper care of fire at all times.

We are attempting to educate the public to the few important fire laws and regulations. Signs are posted showing where smoking and camp fires are allowed. Camp grounds are being set aside and developed for the use of the public. Smoking areas have been estab-

lished along the trails and roads in the forests. A program of education regarding fire prevention is being carried on in the public schools, talks and motion pictures are being given to the various civic organizations. All of this in the belief that it is more important to fight a fire before it starts, by selling the idea of fire prevention to the public.

COMPANY IN CAMP

I lay last night in a lonely lair;
But not alone was I living there,
For I and myself, we make a pair—
He that I am, he I'd like to be.
He I ought to be might make us three;
But quarrels he with myself and me.

A blue-jay came; he made one more;
A chipmunk chattered; we were four.
At daybreak songbirds, many a score,
All chirped and cheered in gladsome glee,
And sang their sweetest songs to me.
I'm mingling with High Societee!

J. E. PEMBERTON, SR.

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EARLY FIRE CONTROL IN LOS ANGELES COUNTY

By J. E. PEMBERTON, JR., *Ass't Co. Forester*

It is interesting to read the history attached to old mountain cabins. It is also interesting to note the history of early fire control efforts—efforts made toward the protection of these cabins and their natural surroundings. Apparently the first recorded fire control effort was in 1792, during the period of the Spanish Governors. Complaints were made of serious damage caused by fires, and requests were made that legislation be enacted against the menace of forest fires during California's rainless summers.

The first effort by Los Angeles County authorities was made in 1896, when the Board of Supervisors allowed a few dollars for fighting fires in the Sierra Madre Mountains near Pasadena, which had endangered the county's water supply. The residents of Pasadena secured this first recorded action toward fire control in the county's mountain areas. Two years later, in 1899, a "Forest and Water Association of Southern California" made a request to the Board of Supervisors for immediate increase in a mountain patrol force, and demanded more adequate protection from brush fires. This Association had been organized by T. P. Lukens, H. J. Bush, John Steven McGroarty, Marshall Hartraft and Colonel Hartwell. It was the pioneer Conservation Association of Los Angeles County. No definite action was taken on this request until May, 1906, when a previously appointed Fish and Game Warden was also made Fire Warden at a salary of \$25 per month. No other

finances were set up and no organized action taken. This year, though, was the turning point in fire prevention, and the Federal Government, the State and County all began to take more definite part in it. Population and property values began to increase more rapidly, and with them developed a more definite interest in the watersheds and an appreciation of their value.

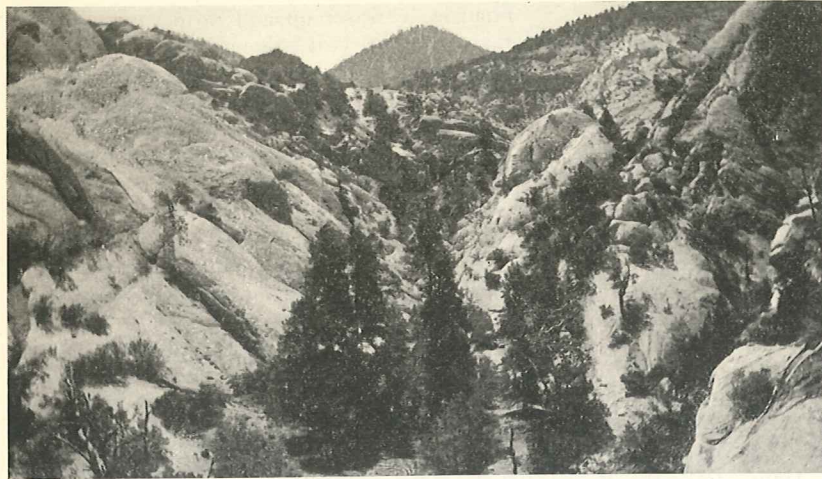
These stages of developing interest in fire control in Los Angeles County might be grouped into several periods: The first, that of the Spanish occupation and early settling by the Americans when great fires raged and some complaint was made, but little done about it. The second period carries through almost to the beginning of the Twentieth Century, when a few ardent conservationists appeared and began to develop a comprehension of the direct relationship between fire, watersheds and community life in Southern California. The third period was one of an expanding conservation idea which ended in 1920. By this date, public support had developed to the extent that fire control units—Federal, State and County—began to function in some sort of organized form. The fourth period we may call one of fire control organization development, being from 1920 to 1935.

Since that time, fire control has been, and from now on will be, a highly organized, intensive and scientifically sound function of all government. This is a necessity when it is realized that with the great civilization now built up in Southern California, there can be no great fires as in the past, without immeasurable loss.

FIRE CONTROL IN 1920

*First tank truck of
Los Angeles County
Forestry Department;
the forerunner of the
600 gallon pumpers
now used in rural
and brush fires.*





DEVIL'S PUNCH BOWL

*Los Angeles County's
Wonderland of Rocks.
Built by the erosion
of countless centuries,
up-ended by great
crustal convulsions, a
natural geological li-
brary of past ages.*

GEOLOGICAL RAMBLES ON THE ANGELES

By J. M. COWAN, Administrative Assistant

As we drive along our highways in the mountains or in the valleys, it is very seldom that we realize what marvelous secrets are before our eyes, just waiting to be discovered. Secrets that run back over a million years, vital history of things that breathed and were alive ages before man showed up on earth; evidence that climates of all varieties have come and gone from even this small space.

Next time you are on the desert side of the mountains, stop and look around the Devil's Punch Bowl near Valyermo, and instead of thinking what a peculiar spot, try to realize what has happened during the ages and unravel this little secret of Mother Nature.

Realize that many thousands of years ago this area was deep under a vast inland sea which teemed with corals, oysters, and numerous kinds of shells and fish, and that for a long period it remained under sea. To the south lay a huge mountain range from which the usual forces of the elements, wind, rain, snow, and even fire were carrying vast quantities of silt and debris toward the sea where they were deposited, forming beds of great thickness.

As years went on, due to pressure and heat far beneath, these layers were cemented together, forming thick strata of coarse sandstone. Perhaps for a long while they remained undisturbed and nearly horizontal, but due to their location near one of the greatest fault lines in the world, the San Andreas Rift, they were subjected to violent shifts and changes.

These changes have been so far-reaching that most of the present topography, and certainly some of the climatic conditions, have been dependent upon the movement along this fault.

Now as you look back into the Punch Bowl, you can realize how Dame Nature twisted and contorted those massive rocks; how she tumbled, sheared, carved, and turned them on edge, until you are fairly bewildered with grotesque shapes and images.

Other parts of the Angeles National Forest also offer much food for thought. Taking a bird's-eye view of the entire mountain range, you are confronted with a maze of canyons, at first seeming to follow no pattern or plan, but closer observation shows that the majority of these follow well defined fault lines which, due to the crushing, grinding action of rock pushing and sliding together, has allowed weaknesses to occur. Here, streams have carried away the broken bits of rock till finally we have vast canyons, some running generally north and south as San Antonio and Big Tujunga; others more nearly east and west as the East and West Forks of the San Gabriel and the Upper Arroyo Seco Canyons.

So have been formed our major divides and saddles. Where fault lines have crossed the harder ridges they have weakened the rock, permitting faster erosion and disintegration until they are lowered much more than the surrounding country. Huge earth and rock movements have thus molded our present topography.

Before we leave this fascinating subject, we might touch on two more details that are of interest, although seldom seen and appreciated.

(Continued on Page 20)

WATERSHED MANAGEMENT RESEARCH

The San Dimas Experimental Forest

By J. D. SINCLAIR

An area of approximately 17,000 acres within the boundaries of the Angeles National Forest has been set aside and dedicated to forest research where methods of watershed management for the mountains of Southern California may be studied. This area known as the San Dimas Experimental Forest, a unit of the California Forest and Range Experiment of the U. S. Forest Service, is located in the Sierra Madre mountains northeast of Glendora. It includes all of the San Dimas and Big Dalton drainages within the Angeles Forest.

Here a series of comprehensive experiments have been started and will continue for a long period of years; their purpose being to determine the influence of the chaparral vegetation on the amount of the runoff and erosion and to develop methods of management to insure the maximum yield of usable or clear water from the mountain areas.

An adequate water supply for domestic, industrial and agricultural uses in Southern California has been a problem of vital importance to the population of this region for many years. The rapid growth of this population accompanied by phenomenal agricultural development of the region has led to a serious overdraft of local water stored in natural underground basins which occur under many of the valley floors. This deficit, as evidenced by falling water tables, has increased the value

of water from local sources many fold and has led to its importation from river basins hundreds of miles distant at great cost.

The Forest Service is concerned in this water situation because the Service is charged with the management of about two-thirds of the San Gabriel, San Bernardino and San Jacinto mountain ranges which produce most of the local water supply. This responsibility led to the initiation of the program of research briefly described here.

Watershed management is a complex problem influenced by several factors which must be measured and analyzed separately before an adequate solution of the problem can be made. These include: (a) Rain, snow and other climatic factors; (b) Streamflow; (c) Erosion; (d) Geology and soils; (e) Vegetation; and (f) Transpiration, or use of water by vegetation.

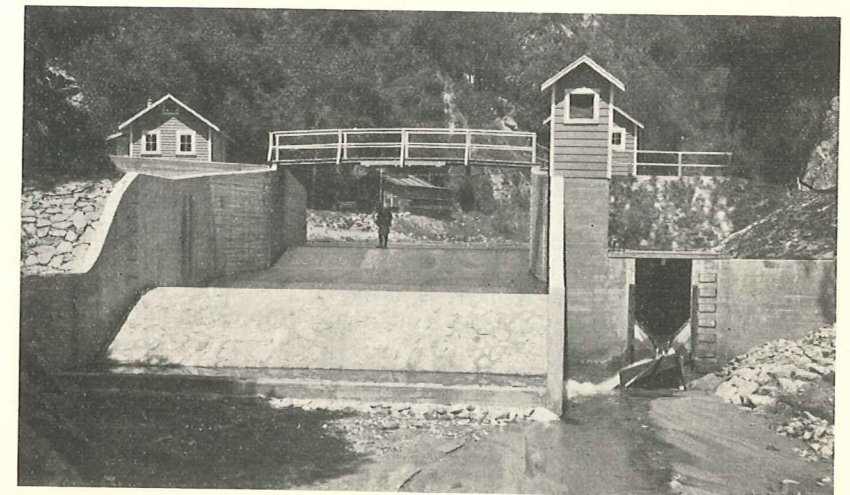
To study these factors the San Dimas Forest is now equipped as an extensive outdoor laboratory. Precipitation is measured by means of more than 300 rain gauges distributed over the area on contour trails. These gauges are read after each storm. The rate of rainfall is determined by 14 automatic recording gauges at representative locations. Climatic factors such as temperature, humidity, wind movement and evaporation are measured at five stations equipped with the necessary instruments.

Continuous records of streamflow are obtained by automatic recorders at 17 stream gauging stations constructed at the mouth of the watersheds varying from 35 to 9,000 acres in area.

(Continued on Page 20)

GAGING STATION SAN DIMAS CANYON

Stream flow from a watershed of 14 sq. miles is measured by means of the large flume for flood flows and the weir at right for small flows. This is the largest of ten similar stations.



ROAD DEVELOPMENT ON THE ANGELES NATIONAL FOREST

By A. J. MUELLER,
Assistant Forest Supervisor, and
J. E. CARTER, Road Foreman

The two most important factors responsible for road development on the Angeles National Forest are fire and recreation. Roads offer a faster means of reaching fires with men and equipment, and also make available large recreational areas heretofore only reached by trail.

The need for roads was very forcibly brought home during the San Gabriel fire of September, 1924, which covered approximately 50,000 acres and burned a month before being brought under control. Shortly after this a new policy was introduced and funds made available for a system of firebreaks and trails to afford protection to those sections in the forest of greatest fire hazard.

Trails, having served their day, were too slow a means of transporting men and supplies to fires in the back country and plans were made to construct a road from Mt. Wilson to the desert, bisecting the forest. This work was started in the fall of 1924. However, this was not the actual beginning of road construction for the forest, as in 1921 the road leading up San Antonio Canyon to Camp Baldy was extended to Manker Flats, a distance of some three and a half miles. This work was done by a regular forest service road crew and marked the beginning of organized crews on road work.

These roads were narrow lanes just wide enough for passage of one car or truck, with turnouts to permit passing of vehicles traveling in opposite directions. The grades were steep and curves sharp, but they were a great improvement over the old trails and transportation was speeded up considerably.

In the fall of 1925 the Construction Division of the Angeles Forest was organized and placed under supervision of A. J. Mueller. This concentrated all construction activities under one head, which had previously been handled by each District Ranger as it pertained to his own district, with the result that a force was built up to carry on the work. This force has increased from a few small firebreak and trail crews to an organization of several hundred men with modern equipment capable of carrying out all types of construction necessary to safeguard the forest and

develop recreational areas. As time went on, standards were raised and more attention was paid to the elimination of steep grades and sharp curves. Trained men were placed in charge of surveys and as construction foremen, so that fairly good roads were built.

Outside agencies had in the past constructed many miles of roads in scattered parts of the forest, prominent among these were the Edison Company, County and State Highway Departments, Water Companies and the Mt. Wilson Observatory. These roads, together with roads into our main canyons, constructed by the early day settlers, formed a nucleus around which the present network was built. Progress was slow for several years due to the lack of funds, and it was not until 1928 that Congress appropriated sufficient money to make possible the purchase of modern machinery and equipment with which to speed up the work. Several camps were established and existing roads were extended into sections of the forest that heretofore were accessible only by pack trails.

As the network of roads began to spread it became apparent that additional recreational areas were becoming available for development. Consequently the need for a better type of road made it necessary to raise the standard of construction in order to increase the safety factor and speed up travel into these sections. The Forest Service was not equipped to construct these higher types as they were restricted to a maximum 12-foot road. In cooperation with the State and County Highway Departments, highways were constructed into the larger areas such as Big Pines Park, San Gabriel Canyon to Crystal Lake Park. The Angeles Crest Highway, now under construction, starting from Foothill boulevard in La Canada, will eventually terminate at Crystal Lake Park in the head of San Gabriel Canyon. This highway will go through Charleton Flats, Chilao, and Buckhorn Flats, replacing the old forest service road in that district.

In the spring of 1933 President Roosevelt created the Civilian Conservation Corps, and sixteen camps of two hundred men each were eventually established on the forest. With the combined forces of the C.C.C. and other emergency workers road construction progressed rapidly. A study was made of the transportation needs to better serve the forest from a standpoint of fire prevention and suppression, administrative use, and recreation.

(Continued on Page 21)

WHAT OF THE FUTURE

By ALFRED K. CREBBIN, *Ass't Forest Sup'rv.*

In forecasting the future of the Angeles National Forest, the general progressive trend of past development must be considered along with present and future requirements of the communities adjacent to the Forest.

In the old days, prior to 1907, when the Angeles Forest was called the San Gabriel Reserve, there was a more diversified use of the resources. The early settlers cut timber for building houses and barns and secured a large portion of their fuel on the Forest. Their cattle and milk cows ranged over the hills and through the canyons finding an abundance of food. Today the picture has completely changed. Adjacent to the Forest is a vast metropolitan area which no longer needs a few logs and a little grass. Lumber and cattle in large quantities are shipped in from great distances, to build many homes and feed a great many mouths.

What are the uses of the Forest at the present time? The answer is an easy one. Adjacent to the Forest are many human lives and thousands of acres of citrus groves that are 80 per cent dependent upon the Forest for the basis of life—*water*. Conservation of water and its economical use has changed Los Angeles County from a semi-desert to a thriving metropolitan and agricultural center. And protection from fire of the chaparral covered hills and mountains is the answer to stabilize the community. Therefore, Forest protection is the major forest activity to be planned for the future.

But the Forest's value doesn't end here. People need recreation, a rest from the toils and worries of a busy life. The Angeles Forest contains natural recreation values in a great many variations; Alpine country on her highest peaks, the cruel but fascinating desert, clear, splashing water, streams varied by deep blue pools, unexcelled views, wild flowers, trees, shrubs of many descriptions and all beautiful, give the Forest a never-to-be-forgotten personality.

The future of the Forest is Water Conservation and Recreation.

Water Conservation.

The future of water conservation is the protection of the natural forest cover to regulate the flow of streams and prevent floods and erosion. And protection in Southern Cali-

fornia means only one thing—*Fire Protection*. The best method of controlling fires is to prevent them from starting. In the last ten years, 90 per cent of the fires were caused by man. The majority of these were caused by cigarettes dropped in thoughtless moments by Forest users. Prevention through education by the Forest Service and all citizens of Los Angeles County will be expanded until a man-caused fire becomes a rarity.

On the actual control of fires, more scientific knowledge and developments will be utilized. In the early days a Ranger and a few settlers with but shovels and axes, and very stout hearts, waged an almost hopeless battle against the flames. Today, we have crews specially trained in the art of fire-fighting. Their tools have also improved. Fast fire trucks, radios, airplanes, water storage tanks, roads for transportation, and firebreaks are now used.

Today, Lookout men report fires almost as soon as they start. Crews, fire trucks, radios, tools, food, cooks, camp equipment, are rushed to the fire in as much time as it takes to radio or telephone. But we know we are only scratching the surface and are therefore continually experimenting with chemicals, water systems, airplanes, tank trucks, firebreaks, tractors, transportation, organization, etc. The future cannot be forecasted but is being worked out scientifically.

Recreation

Recreation has been increasing by leaps and bounds since the first early settlers got their mountain recreation while gathering their cattle and getting out timber. Last year there were nearly two million recreationists who enjoyed the Forest. They were hunters, fishermen, summer home owners, resort guests, campers, hikers, picnickers, and motorists. The future of recreation is readily answered by the people themselves in telling us just what they want.

All of this recreation is free, except for a nominal yearly charge for summer homesites, and we follow the policy "the first come the first served." The Forest is still in the development stage and when new areas are opened up by public need, before any development is started the entire area is planned for its highest use to the general public. Today

is the automobile age. The people come to the Forest with honking horns, and where possible, bursts of speed—are they really enjoying nature? Working days have been shortened, thus giving more leisure time to all. I believe the recreationists will soon learn how to enjoy nature. Everyone can't fish and hunt as there isn't enough water for that number of fish or enough pasturage for that many deer.

The movement is back to nature for real enjoyment. Some people will enjoy the Forest for its trees, flowers and plants, others for its geological interests; then there are a great many who will enjoy its animal life. It isn't the 700,000 odd acres, the many miles of road, or the number of resorts, but the minute details of the working of Mother Nature that make the Forest beautiful and enjoyable to the recreationist.

Citizen, the future of the Angeles National Forest is in your hands. Help us to protect the natural vegetation on the mountains and you will be well supplied with water. As to recreation, Nature offers you her fullest welcome.

Geological Rambles

Due to powerful thrusts, many of the rock formations were subjected to terrific strain. Near Red Box on the Angeles Crest Highway, some of the tough banded gneisses and other granites of the basement series assume a vertical position. Further on over toward Big Tujunga Canyon they are pushed over to angles of 45 degrees or more. And finally, near the mouth of the Tujunga, they are shoved out nearly flat and on top of more recent formations, thus showing striking evidence of an overthrust fault.

Between Little Dalton and San Dimas Canyons another demonstration of the power of these earth movements is shown. Great quantities of rock and earth, which at present appear in blocks and benches, are really remnants of a great landslide which happened in bygone ages.

Not all of the interest in the Angeles is locked up in the structural features. Many prospects and mines show indications of the precious metals in varying degrees of richness. In most of the major canyons are mines now operating or long since forgotten. Some of the better known are in the Saugus District near Mint Canyon, the Big Horn mine near Valyermo, the Dawn mine in Millard Canyon above Pasadena, and the many placer

workings in the East Fork of the San Gabriel, while above them in Coldwater Canyon are other mines. San Antonio Canyon alone has the rare distinction of having a mine of Lapis Lazuli, far up on the side of Ontario Peak, from which excellent specimens have been removed.

Last, and surely most important, is water supply. The great fault lines having had such profound influence on topography, also allow the percolation of water through the rock to underground reservoirs, to be tapped for irrigation and domestic use, and furnish, far up in the mountains, a supply to combat our ever present enemy, fire.

Thus, if you are hiking or driving, you may realize that some beautiful vista or scenic site has far more behind it than is just apparent to the casual observer. Then you will begin to realize and appreciate far more what the mountains mean to you and everyone who uses and enjoys the opportunities they offer for health, economic welfare, and beauty.

Watershed Research

Eroded material is caught and measured in seven concrete-lined reservoirs which have been built at the mouths of small watersheds. In addition, the San Dimas and Big Dalton dams of the Los Angeles County Flood Control District afford means of measuring total runoff and erosion from their respective drainages.

Surveys of the geology, soils and vegetation on the watersheds are in progress. More detailed observations of the influence of vegetation on runoff and erosion are made by means of 22 small plots, each 1/40th of an acre in area. Some of these plots have been burned over annually; some only once and others have been left unburned for comparison.

Transpiration, by which is meant the consumption of water by vegetation in its growth, will be studied by growing representative plants in large especially designed tanks filled with soil. These giant "flower pots," some of which are 10 by 20 feet in area and 6 feet deep, are technically known as lysimeters.

Emergency funds and relief labor have permitted rapid progress to be made in improving and equipping the experimental area. Many miles of necessary roads, trails and telephone lines, and the required buildings, have been constructed during the past four years. Under normal conditions this construction program would have required at least ten years and probably much longer. The Experimental

Forest is therefore an outstanding example of real and lasting public benefit accomplished with the aid of such emergency organizations as the CCC, CWA, SERA and WPA.

The very nature of the studies being carried on necessitates the accumulation of many years' records before final results can be obtained. However, preliminary data on certain phases have been released and have already proven useful in explaining how the fire denuded slopes above Montrose and La Crescenta contributed to the flood disaster of January 1, 1934. More recently data was furnished the U. S. Army Engineers Corps for use in formulating flood control plans for the Los Angeles and San Gabriel Rivers.

The San Dimas Experimental Forest is not as yet open to public travel due to construction activities and the high fire hazard during the summer months. Absolute protection of this area from fire is vital to a realization of the human benefits to which this large research program is dedicated.

TRAILSIDE FRIENDS

By ELBERT BENJAMINE

President of The Nature Club of Southern California

The most outstanding difference, I have come to believe, between the people who crowd and shoulder on our city streets and those who swing along our mountain trails, is the spirit of friendliness. Formalities and suspicions seem to remain below, locked in the car where it was left, as if they, too, were part and portion of those mechanical devices with which civilization wracks and tears our nerves. Whatever trail one follows, and however many persons on it one may meet, there is always the smile of greeting, and always a pleasant word exchanged in passing.

Along the trail, also, there are other than human folk, and in their way they smile and extend a friendly greeting. Too bad to pass them by unnoticed, to snub them, as it were, through no token of recognition. It takes so little time to speak their names, to say in passing, "Hello, Fairy Lantern!", or, "You're singing very sweetly today, Mr. Thrasher!", and it adds a fine feeling of camaraderie that lives warmly in the memory after the tramp is done.

For instance, at the foot of the Mt. Wilson trail is a live oak, which like others of its kind, just now is pendant with brownish yellow catkins. But unlike its fellows, many of

Road Development

A priority list was compiled and roads were built according to their importance in relation to: (1) Fire Prevention and Suppression; (2) Administrative use; (3) Recreation.

A study was also made by trained engineers in 1934 and 1935 of the cost of road construction in all its phases in order to obtain data which could be used as a yardstick in determining the cost of future proposed roads.

This study brought out the fact that the maintenance cost was out of proportion to the construction cost and that if more care were taken and more time spent on the original construction a much better road could be built with less annual maintenance.

This program is progressing satisfactorily, the network of roads is gradually spreading throughout the forest and at the present time there are approximately 2,000 miles of forest roads and highways on the Angeles National Forest.

its new and tender leaves are reddish brown, giving the whole a ruddy glow. Oaks of considerable size growing in or near the valley are apt to be live oaks, "Encino," to give the Spanish name, and an occasional one in spring shows this ruddy foliage. So, in passing I remarked to it, "You're a red-top."

Higher up this trail, or almost any other, is another oak which grows to size. In the fall, when the acorns are ripe, it is easily known by the large size of its fruit; but now we look to the leaf for recognition. The older leaves are thicker than those of the live oak. They are dark green above, but most of them are whitish below, as if dusted with fine dull-white powder. One can note this characteristic as one walks along, and give the greeting: "Fine day, Mr. Canyon Oak."

A vine reaches up and over the top of the small scrub oak in places. It is just coming into bloom, a profusion of white starlike angelic faces an inch and a half or two inches across. This is the clematis, or virgin's bower.

Then ascending further the first conifer greets us. A glance at the branchlets show that the needles ranged along them go all the way around, are not two-ranked either side as in the firs to be met higher up, and thus we know the fellow to be a big cone spruce.

The bird off in the bush somewhere that gives the rather loud long trill, the notes descending little if at all, is the most characteristic Californian bird. Unlike our others,

he has no close relatives in other lands, has this wren-tit who, winter and summer, peals forth a joyous welcome from the chaparral.

Yet an even more pleasing song, given by a little bird of cinnamon brown with a patch of white under his chin, also is a long drawn out trill; but the notes descend the scale in regular steps, to their sweet end. Such is the melody of the canyon wren.

Apparently a mocker sings. Yet there is an attractive burr in the tone, and the voice seems low. It's like a mocker singing alto. Thus sings to us the thrasher, he of the sickle bill, a bill like a pick, so he can pry up the earth as he delves for food.

Really, it's rich fun to have trailside friends!

Y. M. C. A. TAKES TO THE TRAIL IN UNIQUE WAY

By PAUL W. SOMERS

Boys' Work Executive, Pasadena Y.M.C.A.

The first experiment in the cooperative use of the Pacific Crest Trail since its inception as an integrated System of Trails from Mexico to Canada, was sponsored by the Y.M.C.A. organizations of the Pacific Coast during the summer of 1935.

A "hiking relay" was conceived, planned, and started which will take three summers to consummate. The aim of the Relay as defined by the sponsoring group was to: (1) Demonstrate that the Pacific Crest Trail from border to border of our Pacific Region was actually a usable, continuous "system" of trails. (2) Popularize and advertise the existence of the trail to the public. (3) Consummate an act of international good will by cooperatively carrying from our Mexican friends to our Canadian friends a message of friendly greeting, by means of Y.M.C.A. boys.

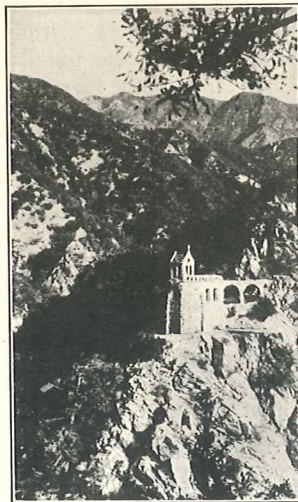
Some sixteen separate teams of "Y" boys under able leadership, participated in the 1935 section of a Relay that is destined to carry the greetings of Frank E. Belcher, president of the San Diego Exposition, and Harry Holmes, General Secretary of the San Diego Y.M.C.A. to their final destination with Stanley Brent, General Secretary of the Vancouver, B. C., Y.M.C.A., in the summer of 1937.

It was on June 14, 1935, that the first team composed of San Diego County "Y" boys received, with appropriate ceremony at the Exposition Grounds, their commission to deliver the Relay "Log Book" safely to the second team of "Y" boys that would "carry on" some

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thirty-six miles from their starting point on the Mexican border near Campo.

The relay of friendship started early the next morning from Mexican soil. Team after team of "Y" boys took their turn in carrying forward the project. By the latter part of the summer 16 separate teams involving 143 hikers have consecutively carried the "Log Book" along the mountain ranges of Southern and Central California, through the Sierra Madre range and well on along the Sierra Nevada Range to Tuolumne Meadows near Yosemite National Park.

Here the 1935 section of the Relay was consummated to be carried forward early in June of this coming summer by the "Y" boys of Northern California. It is anticipated that the Relay will reach the Columbia River in Oregon during the summer of 1936 and be carried to its completion in 1937, from that point to Vancouver, British Columbia, thereby consummating, so far as known, the first consecutive use of the trail throughout its entire length, and the first cooperative effort to popularize the magnificence of this hiking trail of unsurpassed grandeur.

Outing Club News

"AT HOME" IN THE MOUNTAINS

By ETHEL SEVERSON, Sierra Club

It might be said of the Sierra Club member that home is where his bandanna is. When he anchors it beside a stream in the mountains or 'neath a smoke tree in the desert, it means he has squatter's rights to that particular spot as his boudoir, his sleeping room. While this may seem to denote a magnificent indifference to roofs and walls, it does not follow that the Sierran has no roof to cover his head. On the contrary, he has no less than seven mountain homes scattered throughout California.

Fifty miles from Los Angeles, in San Antonio Canyon, is beautiful Aurelia Harwood Lodge. Commodious, comfortable, and accessible by good mountain roads, it is a source of unending pride and joy, beloved by the Sierran and used by all his family.

Higher up, on Mount San Antonio, accessible only by two miles of foot trail, is perched the architectural baby of the Club, a picturesque green-and-yellow ski hut. It is strategically placed at the base of the long alpine slopes of San Antonio's summit, and has just finished its first season of sheltering the Ski Mountaineers of the Sierra Club.

Muir Lodge is close at hand, in Santa Anita Canyon. Mellowed a little by its accumulation of years, it radiates a quiet sylvan charm, an intimate friendliness, that is endearing. This, the oldest of the Club's lodges in the south, was built in a spot beloved by John Muir, founder of the Club, and was dedicated in 1913, the year of his passing.

Let the Sierran wander far afield, as he does at every opportunity. If he essays to climb Mount Shasta, he will find there a shelter of his own. In the Yosemite Valley he may visit LeConte Memorial Lodge, which has an old-world look about it and is a veritable treasure-house of mountain and club lore. He may use rustic Parsons Memorial Lodge, in Tuolumne Meadows, as his headquarters for trips into the hinterlands of the Sierra.

A few miles north of Truckee, at the summit of the Sierra, is Clair Tappaan Lodge, its steeply pitched roof and many-paned windows framed by snow-draped firs. Surrounded as it is by heavy snowfall territory that assures skiing from November until May, and equipped with ski room, dormitories, spacious club room, and open fires, it fulfills every wish of the skier's heart.

Days and nights in these far-flung retreats are preceded by keen anticipation, lived with delight, and followed by treasured memories. The Sierran is "at home" in the mountains.

FOREST CONSERVATION CLUB

278 Grand View St., Pasadena, Calif.

This is one of the newer Outing Clubs, with a large and growing membership and a very active organization. One activity which should prove a lasting benefit and a splendid example has been the gathering of a great quantity of seed from desirable mountain trees and shrubs and the planting, during January, of a large area on the Altadena burn.

This club is out with a very attractive schedule of hikes and picnics which includes a trip to Strawberry Peak on April 18; Monrovia Peak, May 17; Big Tujunga Canyon and Fox Creek, June 21; a six-day outing in Sequoia National Park, July 4 to 12, and on May 15 and June 19, picnics at Brookside Park.

Chairman of the Hike Committee is Ed Danner, 1206 N. Michigan Ave., Pasadena.

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GLENDALE COMMUNITY HIKERS

This popular club is out with a very attractive Spring schedule which includes the following:

A moonlight hike in the Verdugo Hills on May 2; Mystery Hike, a deep secret for May 10; afternoon in Sunset Canyon, May 17; Breakfast Hike, May 24; overnight camp in Bouquet Canyon, May 30-31; moonlight on Mt. Lukens, June 5; Orchard Camp, old Mt. Wilson Trail, June 14; afternoon hike and picnic, June 21; Saturday and Sunday, June 27 and 28, South Fork of the Santa Ana River by Jenks Lake and South Fork Meadows to Dollar Lake. This is one of the most beautiful hikes in the San Bernardino Mountains.

The regular meeting place for the start of these trips is on Louise street, east side of Glendale Junior College, where autos are taken to the point where the hike begins. Transportation arranged for those without cars at 1 cent per mile of driving distance.

For information write to R. W. Haight, chairman, 420 So. Lincoln Avenue, Glendale, Calif. Phone Glendale, DOuglas 4872; Los Angeles, VAndike 8785.

THE WOMEN'S ATHLETIC CLUB OF GLENDALE

This enthusiastic group of women hikers has been on the trail every Thursday since the beginning of October. On only one week were they prevented from hiking on account of rain. The trips have been of great interest and of varied length. The attendance has been most gratifying.

An outstanding trip of March was the one to the top of Josephine Peak. The group gathered at 4 p.m. and started up the trail before sunset. Gorgeous sunset views were enjoyed all the way to the top. Supper was eaten on top and the trip down made by moonlight. This trip made this way is a spectacular one worth anyone's time and effort.

For April there will be a similar trip up Verdugo Peak over a four-mile trail.

The spring program includes trips to Brown's Flats, Monrovia Peak and Los Pinetos Canyon.

Women who are interested in hiking and nature study are always welcomed by this group. Information can always be obtained by writing or phoning the chairman of hiking, Mrs. S. M. Estabrook, 1324 Sinaloa Drive, Glendale; 'phone Doug. 9181W.

THE NATURE CLUB OF SOUTHERN CALIFORNIA

This club has had some good hikes and field trips the past month. April 4th have a three-day field trip to Mitchel Caverns, which will be one of the best study trips we have had for some time. Another field trip and hike will be to Cucamonga Canyon, April 26th; reserve with Mrs. Viola Poole, PARKway 6473, 1626 Victoria Ave., Los Angeles. Our main summer trip will be to Lassen National Park, starting August 3, for 14 days. Interesting places en route will be Lake Tahoe, Donner Lake, Morgan Hot Springs, Muir Woods, Big Basin, Carmel, Pfeifer's Redwood Park, near Big Sur. For details concerning this trip telephone Mrs. Viola Poole.

LOS ANGELES GIRL SCOUT CAMP

Al Shira, the Los Angeles Girl Scout Camp, located at Swartout, Big Pines Park, will open July 2, for a period of six weeks. The name Al Shira is the Arabic for Sirius, brightest star in the heavens, and was so named because of the camp's lofty perch, high on the mountain side toward Blue Ridge, a location which assures isolation and gives an inspiring view of the San Gorgonio mountains. Members of the staff, also, choose camp names from the stars and a study of the planets and stars is a favorite part of the camp program.

Over two hundred Girl Scouts will attend Al Shira during 1936. A diversified program of nature study, camp crafts, hiking, swimming, singing, outdoor cooking and camp dramatics, will be offered under able leadership. Girl Scout standards require that there will be an adult leader, trained in camp life, for each eight campers. In previous years advanced campers have taken "gypsy" over-night trips to Guffy's camp on Blue Ridge and to Prairie Forks.

Girl Scout camps use what they term the unit system, where the large group is divided into smaller living units. The four units at Al Shira, under suitable leadership, plan and carry out their own program and activities. The general camp meet together two and three times a week around the main fire-ring with a program of singing and camp dramatics.

Six Girl Scout Day Camps will be operated by the Los Angeles council this summer. They will be located as follows: Montebello, Eagle Rock, Beverly Hills, Willow Lake, San Pedro, and Inglewood. Each camp will be

open one day a week and will present a varied program of nature study, handcraft, archery, pageantry, games and singing. A charge of 10c covers all costs.

ROAMER HIKING CLUB

This popular club, organized in 1920, announces its 37th Outing Schedule for the Spring and Summer of 1936. The following are a few of the high spots arranged for the enjoyment of its members.

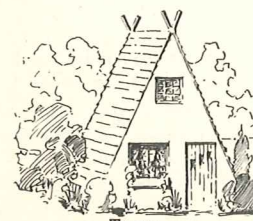
April 25, Fun House party on the Venice Pier; May 3, Semi-Annual Mystery Trip; May 17, Mothers and Fathers Day; May 24, open house at the clubhouse in Dark Canyon near Oak Wilde; June 6-7, Sunrise on Mt. Gleason; June 10, a Hard Times party at the clubhouse; June 21, Los Pinetos Canyon; June 24, the Griffith Park planetarium; July 3, moonlight party; July 11, supper at Brookside; July 19, at the clubhouse; the balance of the summer schedule will appear in Summer "Trails."

Information concerning this club's activities may be obtained from Lillian Crossley, 1421 Echo Park avenue, Los Angeles, or Keith V. Peterson, chairman of Outing Committee, 715 South Hope street, Los Angeles, California.

WOODCRAFT RANGER NEWS

By HAROLD L. BOYNTON, Exec. Sec'y

The Woodcraft Ranger Boys are planning a trip to Camp Ah-Da-Hi during the spring vacation. This camp is located on the west fork of the San Gabriel River Canyon about two and a half miles below Opid's Camp. It is estimated that some two hundred Woodcraft boys will go on this outing and enjoy the outdoor life in the Angeles National Forest. The boys will meet at the end of the Angeles Crest highway and hike into Camp Ah-Da-Hi. The swimming pool will be open and the boys will take advantage of this if the water is not too cold. They also plan to hike to Mt. Wilson, Mt. Lowe, Barley Flats, and many other interesting places.



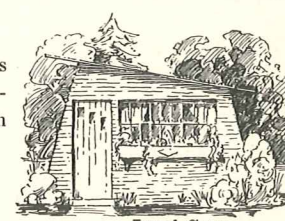
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PACIFIC CREST TRAIL

CLUB NO. 1 ORGANIZES

By DONALD NEILL, Chief Rambler

Growing directly out of our happy experiences on the trail during the summer of 1935, as a unit in the relay hike from the Mexican border to the Canadian border, being sponsored by the YMCA's of the Pacific Region, three boys and their leader organized the Pacific Crest Trail No. 1 on a lucky day, Friday, December 13th. The Club name is the Vagabond Ramblers. Monthly meetings have been held, one of the earliest of which was addressed by Clinton C. Clarke, chairman of the Board of Directors of the Pacific Crest Trail System Conference.

This Club has three primary functions: 1. To gain the personal benefits to be derived from the use of the Pacific Crest Trail and other outdoor areas. 2. To train themselves in the arts of using the trails, with a special view to serving as guides to groups of boys. 3. To assist wherever possible the preservation of the wilderness areas.

It is our hope that many other Pacific Crest Trail Clubs may be formed up and down the Pacific Coast, the aims of which will be to preserve the entire trail from Mexico to Canada as a wilderness, delightful.

SAN ANTONIO CLUB

This club is exclusively a man's organization, most of the outings are for men only and each year some trips are taken into the wildest and least accessible parts of the mountain area. Two trips a year are scheduled to some outstanding spot which may be more easily reached and are designated Ladies' Hike.

Following is the schedule for the next three months: May 10, Cucamonga Canyon and Ladies' Hike; June 7, Bear Creek, Boys' Hike; July 11 and 12, Prairie Fork and Fish Fork from Big Pines Park.

For information write or phone Will H. Thrall, President, 400 S. Garfield, Alhambra, or Edward Coughran, Secretary, 246 So. Putney, San Gabriel, Calif.

Trail Trips

Fossil Ridge of the Malibu—1/2 Day.

Interesting geological formations, fossil shells and beautiful views of ocean and mountains. Drive south from Ventura Highway at Las Virgenes Canyon Road, through Crater Camp and east to end of first loop on new road. Here hike trail along south side of little canyon to trail junction on stream at foot of grassy slope, then right hand trail up slope to summit of ridge, passing through fossil beds on the way. Turn east (left) on road at summit, passing again through fossil beds.

Total hike, 3 to 4 miles.

Royal Gorge of Arroyo Seco—1/2 Day.

Drive to Switzer's Camp and hike trail down ladders and through the gorge to forks of Bear Canyon; beautiful place to lunch. Plenty of water. Numerous picnic grounds where fire is permitted.

Total hike, 2 1/2 miles.

Winter Creek and Hoegee's Camp—1/2 Day

Drive up Santa Anita avenue, Arcadia, and on new mountain road to the end, and park the auto. Hike trail down to First Water Camp, then up the stream to Winter Creek, 1 mile, and turn left up Winter Creek to Hoegee's Camp, 1.5 miles. Just above Hoegee's Camp, cross the stream on a trail which leads around the mountainside back to the auto, 2.5 miles. On the trail back from Hoegee's you pass through a grove of madrone trees, one of three in Southern California. The madrone is a giant heather found only in California and largest heather in the world. Water at convenient intervals. Total hike, 5 miles.

Los Pinetos Ridge—by Little Tujunga Canyon Road 1 Day.

From the corner of Foothill boulevard and Osborne avenue, west of Sunland, drive the Little Tujunga Canyon road to the summit of Little Tujunga-Pacoima divide. Here drive the middle of three roads, down into and across Pacoima Canyon and on to the summit of the Placerita Canyon divide and park the auto. Hike trail turning west (left) from the road, up a north slope, through fine spruce forest, to the summit of the Los Pinetos Ridge, 2 miles. Here turn west (right) along the summit to the Los Pinetos trail, 2.7 miles, and north (right) down this trail a quarter mile to a spring in the canyon. Return to auto by same route. Carry water, one quart for each two persons sufficient, from auto to spring. Cold lunch, as no fires allowed in this area. Total hike, 10 miles.

West Fork—Valley Forge—Opids—1 Day.

Drive Angeles Crest Highway to Red Box and Mt. Wilson road, east to Opids Camp trail, 1 1/4 miles, and park auto. Hike this road toward Mt. Wilson, 3 miles, to trail turning north (left) from road at point three-fourths of a mile west of Mt. Wilson. Hike this trail down through forest to the stream in West Fork, 3 miles. Here turn up stream to Forest Campground No. 2, 1/2 mile, and stop for lunch or have lunch at Valley Forge Lodge, 3/4 mile farther on.

After lunch, continue up stream, 1 3/4 miles to Opids Camp, and take a trail south, through camp, up a beautifully forested slope to the auto, 1 1/4

miles. If planning to use fire, secure permit before starting, as will pass no Ranger Station until after lunch. Carry water, 1 quart for each two persons, from auto to West Fork, plenty balance of the trip. Total hike, 10 1/2 easy miles.

Upper Fish Canyon—Beautiful Waterfalls, 1 Day.

Drive Foothill boulevard to Fish Canyon Road, signed, first west of the San Gabriel River, and to the mouth of Fish Canyon. Here park the auto and hike road and trail to a 200 foot waterfalls, 2.8 miles. Then turn back to a trail, .3 of a mile, up the east slope, around the falls to the canyon above, and on to a Forestry Campground, 1.2 miles, and here stop for lunch. After lunch go on up the canyon trail to the upper falls, 3 miles, passing several falls in the main stream and in branch canyons on the way. Return to the auto by same route, 6.5 miles. If planning to use fire secure permit before starting. Plenty water. Total hike, 14 mi.

Mirror Lake to Spring Hill—from San Antonio Canyon Highway—1 Day.

Beautiful trail around west slope of Ontario Peak. Park the auto by a little bridge where Barrett Canyon road leaves the San Antonio Canyon Highway, 1.5 miles below Camp Baldy. Cross this bridge and hike road to stream crossing, 1/2 mile, then south (right) on road to Cascade Canyon, 1/2 mile, and on to a little grove of pines at the head of Spring Hill trail, 1/2 mile, then back to Cascade Canyon for lunch.

After lunch return on road to trail turning north (right) just west of the stream in Barrett Canyon and follow this trail to the old site of Mirror Lake above Camp Baldy, 3 miles. From here return to auto by same route or by road through Camp Baldy. Carry cold lunch and water from Barrett Canyon for afternoon hike. Plenty of water on the forenoon trip. Total hike, 9 miles.

Wright Mountain and Juniper Point—from Big Pines Park—1 Day.

From Big Pines Park follow trail along foot of range on east side of valley to Oak Canyon trail, 3 miles, turn south (right) up Oak Canyon about 1/2 mile, then leaving the canyon on east side up the slope to summit of Blue Ridge, 2 1/2 miles. Here turn east (left) on the ridge, across the head of Sheep Creek Canyon, gradually swinging to the right until reach a point on about 7,000 feet, contour overlooking North Fork of Lytle Creek, about 2 miles.

This point gentle slope, open forest, and to the right near the edge is a big Juniper tree, probably largest in the world. Return by same route to Oak Canyon Trail, 2 miles, then west by trail and old road along the ridge, over Lookout Point, to Nature Trail, 3 1/2 miles, and down Nature Trail to Lodge, 2 1/2 miles. Carry water and cold lunch. This trip is hard to beat. Total hike, 16 miles.

Mt. Gleason—By Pacoima Canyon—1 1/2 or 2 Days.

Drive the Little Tujunga Canyon road from Foothill boulevard to the summit of the Little Tujunga-Pacoima divide, then the right-hand road to the stream in upper Pacoima Canyon. Then up the road, following the stream to the end near Big

Cedar Camp, and park your auto. Hike trail up stream from here to Indian Ben Camp, 2 miles, and make camp for the night.

Second Day—Leave all equipment in camp except canteen and lunch and hike trail across the stream, up slope to first trail junction, .5 mile, turn left up mountain to Mt. Gleason Campground, 3 miles (fine spring nearby) and on to the Mt. Gleason Lookout, 1 mile. Return by same route to camp, pick up equipment and return to auto. No water between Pacoima Canyon and Deer Spring on Mt. Gleason. Summit covered with beautiful forest. Hiking distance, first day, 2 miles; second day, 11 miles; total, 13 miles.

Big Santa Anita and West Fork—from Mt. Lowe Tavern—2 1/2 Days.

Hike the trail, starting from the trail to Inspiration Point a short distance east of the Tavern, to Eaton Canyon, 3 1/2 miles, down that Canyon a half mile to old site of Idle Hour Camp and stop for the night.

Second Day—Take trail east from Camp around the slope to the Mt. Wilson road, 2 miles, up the road to the Sierra Madre trail, 3 miles, and down this trail a short distance to a trail leading east (left) down to Hoegee's Camp, 2 1/2 miles, on down to the Santa Anita Canyon trail, 1 1/2 miles, turning up this trail (left) to Forestry Campground just below Sturtevant Camp and near junction of trail to West Fork, 3 miles.

Third Day—Take trail over the range to West Fork, 5 miles, turn west (left) by Valley Forge Lodge, 2 1/4 miles, to Opids Camp, 1 3/4 miles, and up a beautifully forested slope to the Mt. Wilson road, 1 1/2 miles. Follow this road east (left) to the Mt. Lowe trail, 1/2 mile, and the trail back to Mt. Lowe Tavern, 3 miles. Take small canteen as three times on this trip it is five miles between water. Secure fire permit before starting.

Hiking distance, first day, 4 miles; second day, 12 miles; third day, 14 miles; total, 30 miles.

This trip may be made much easier and more enjoyable without equipment by stopping at resorts on the way. An afternoon car to the Tavern, a sunset from Mt. Lowe, the lights of valley from Inspiration Point and an early morning start from the Tavern, stopping the second night at First Water Camp, Fern Lodge or Sturtevents, and the late car from Mt. Lowe to the valley, or dinner at Valley Forge or Opids Camp and an evening ride out over Angeles Crest Highway.

Crystal Lake to Devil's Punch Bowl—3 Days.

Drive the San Gabriel Canyon Highway, from Azusa to Crystal Lake Park and park the auto at the Mt. Islip trail in East Flat. Hike this trail to summit of divide, 3.5 miles, elevation 7,800 feet, turn east (right) around Mt. Hawkins and North Baldy, reaching 9,000 feet elevation on the north slope of Mt. Baden-Powell, then down 38 switchbacks to the head of Big Rock Creek, 10 miles. Here turn north, down mountain road to Icy Spring Campground, 1.5 miles, and camp for the night.

Second Day—Go on down the road to road turning left into South Park, 3.5 miles, and left up South Fork to campground at end of road, 1 mile. Leave all equipment here and take trail west,

across stream and over the divide, crossing Holcomb Canyon to the south end of Devil's Punch Bowl, 3 miles. From here go down into and through the Bowl to Cold Creek, down to Big Rock Creek and back up to Holcomb Canyon, 3 miles. Then go up the Holcomb Canyon trail and back to camp on the trail of the morning, 4 miles. This may be shortened 2.5 miles by returning by road to the camp on South Fork.

Third Day—Take the trail up South Fork to the South Fork-Bear Creek divide, 6 miles, then east (left) around Mt. Islip and down to the auto, 8 miles. Carry water, a quart canteen for each two persons sufficient, between Little Jimmy Springs and Big Rock Creek and from the only stream crossing the South Fork trail to Little Jimmy Springs. Secure fire permit before starting or at Rincon Ranger Station on road in.

Hiking distance, first day, 15 miles; second day, 13.5 miles; third day, 14 miles; total, 42.5 miles.

This may be made nicely in 2 1/2 days by leaving out the trip through the Punch Bowl, camping first night at Little Jimmy Camp and second at South Fork.

Camp Baldy to Big Pines and Return—5 Days.

Drive to Camp Baldy by San Antonio Canyon Highway and park the auto. Hike the Forest Service road to Sunset Divide, 1.5 miles, the road to the right until it intersects the Allison Trail and north-west on this trail, crossing Cattle Canyon, 3.8 miles, to Coldwater Canyon and a campground by the stream, 3.4 miles.

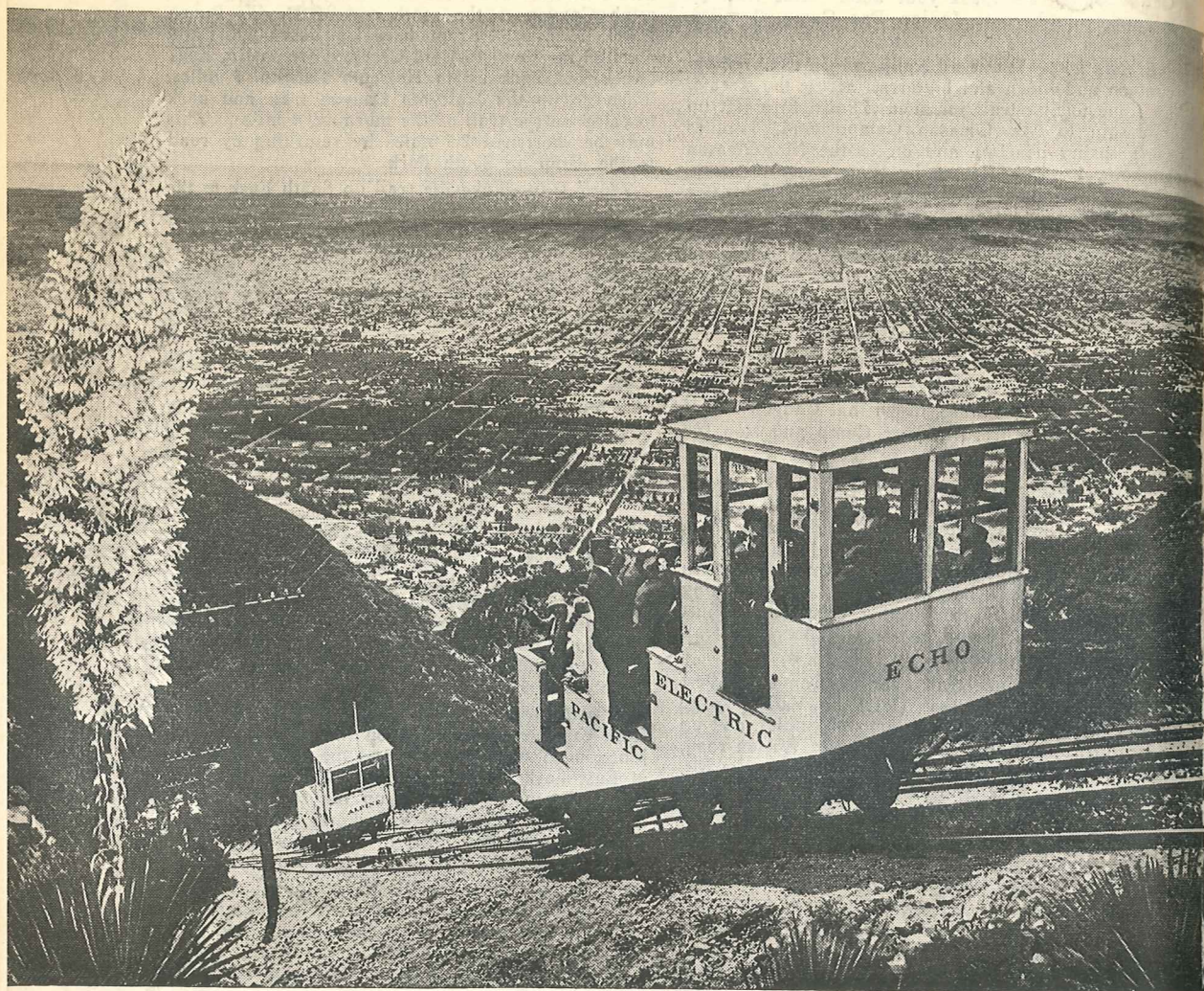
Second Day—A short distance down the road from camp, continue west on the Allison Trail to junction on Allison Gulch and the right hand trail to East Fork of the San Gabriel, above the Narrows. From here follow up the stream, passing Iron Fork, 1 mile, and Fish Fork, 1.3 miles, to a campground at the forks of Mine Gulch, 4 miles.

Third Day—Pass Prairie Fork and take the Vincent Gulch trail to Big Rock divide, 3.8 miles, up road to trail running north from the big loop, 1 mile, and this trail to West Gate Station and Jackson Lake in Big Pines Park, 3 miles. From here by road and trail, east to Davidson Arch and camp, 3 miles.

Fourth Day—Leave by Nature Trail to the summit of Blue Ridge, 2.5 miles, turn east over Lookout Peak and along the crest to Prairie Fork-Lytle Creek divide, 4.5 miles, and down the North Fork of Lytle Creek to Stockton Flat Camp, 5 miles.

Fifth Day—Road and trail southwest to the summit of Lytle Creek-San Antonio divide, 5 miles, trail down the west slope to Manker Flat, 2 miles, and road and trail back to auto at Camp Baldy, 4 miles. Carry water, one quart to each two persons, between Cattle Canyon and Coldwater and the head of Vincent Gulch to Jackson Lake. Water at Guffey Camp, 1.5 miles east of Lookout Point on the fourth day, on both sides of the San Antonio divide the fifth day and at convenient intervals the balance of the trip. Supplies at Swartout store, Big Pines Park. Secure fire permit before starting or at Camp Baldy Ranger Station.

Hiking distance, first day, 8.7 miles; second day, 12.8 miles; third day, 10.8 miles; fourth day, 12 miles; fifth day, 11 miles.



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