HIGH SIERRA TRAIL
SEQUOIA NATIONAL PARK
Photo by Padilla Studios
On Page 5 of the last Bulletin you may have noticed the statement that copy would go to the press in the future on the 25th of each month instead of the 10th as heretofore, to meet submission date of the various field reports, which now are due in Washington on the 20th.

In this connection field officers are requested to send to this office material for inclusion in the Bulletin while it is still of current interest, rather than letting the Bulletin editor pick it up from the reports.

NOTE: By direction of the Secretary of the Interior the matter contained herein is published as administrative information and is required for the proper transaction of public business.
press until June 25, will not come off the press until about July 5, and will be in the hands of our western readers about July 15 -- two and one-half months after its occurrence, with all possible cooperation on the part of the Washington Office.

Under present conditions, many items of interest are omitted from the Bulletin because of the loss of news value in handling; and many other items are printed because of their inherent interest or the enthusiasm of the field officers concerned, although their news value has completely vanished.

So, ATTENTION, FIELD! Will not this idea work? Why not appoint an individual in each park, monument, or other area to send in news items?

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LAWRENCE C. MERRIAM DESIGNATED ACTING SUPERINTENDENT OF YOSEMITE

Secretary Ickes has approved the appointment of Lawrence Campbell Merriam as Senior Conservationist in the National Park Service, at the same time designating him Acting Superintendent of Yosemite National Park. The appointment will be effective upon the date of Mr. Merriam's entrance on duty by transfer from his present post of Regional Officer in charge of Emergency Conservation Work activities under the Service's supervision in the States of California, Oregon, Washington, Nevada, and Utah.

Mr. Merriam during his college days worked in Yosemite National Park. He has hiked through its hundreds of miles of mountain trails, made camp in the high altitudes of the Tuolumne Meadows, and scaled Mount Lyell. He graduated from the University of California in 1920 with an A. B. degree and received a B. S. degree in 1921, with a major in forestry.

Mr. Merriam's business career began in 1921 at Madera, California as timber cruiser and assistant logging engineer with a lumber company and later he served as forest engineer and consultant for an Oregon firm. In 1931 he went into business for himself in San Francisco as consulting forest engineer and consultant to timberland owners. Among the organizations he served were the Save the Redwoods League and the California State Park Commission.

His first service with the Federal Government was with the Tariff Commission some years ago, where he served six months as special expert and lumber investigator. His special contribution was a study of production costs of Douglas fir lumber.

Mr. Merriam is a son of Dr. John C. Merriam, President of the Carnegie Institution of Washington.

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COLONEL THOMSON--HUMORIST

Those of us in the National Park Service family who knew the personal side of the late Superintendent C. G. Thomson of Yosemite will miss his droll humor and dry wit perhaps as much as the Department will miss his valuable public service. The Colonel's stories were always good. Many serious discussions have been turned aside.
by appropriate yarns drawn from his years in the Philippines or those trying months in France.

The Colonel told of a long report he once prepared for his superior officer. He worked on it for days. It covered many pages and was, to him, very important. After several months, and no action had been taken on his lengthly recommendations, he inquired about it. The blunt Commandant looked at him blankly, and replied, "Oh, that long report...I never read 'em when they are that long."

At a staff meeting in the Superintendent's office last fall, Park Naturalist Harwell commented on the fact that while bears are considered dangerous, they had sent only seventeen people to the hospital during the summer, while skiing the previous winter had resulted in eighty-two hospital cases. Colonel Thomson looked up quickly, thought a moment, and said: "That is interesting! But now, Bert, you wouldn't advocate shooting some of our 'tough' skiers, would you?"—Submitted by Ralph Anderson, Information Clerk-Photographer at Yosemite.

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SERVICE PARTICIPATING IN PARIS EXPOSITION

Materials to be exhibited by the Service at the Paris International Exposition include dioramas dealing with Yosemite, Grand Teton, and Devils Tower, a number of transparencies, and two motion picture films, one dealing with the national parks in general, the other covering the Boulder Dam Recreational Area. These exhibits will be on display in the Pavillon des Etats Unis from July 4, official opening date, of the United States Government Exhibit, until sometime in November.

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TRAVEL CONTEST SPONSORED BY EDUCATIONAL MAGAZINE

The Instructor, an educational magazine published at Dansville, New York, is again holding a travel contest, offering 25 cash prizes totaling $1,000 for the best travel letters submitted by teachers, also any persons employed by schools in executive or secretarial work, or as librarians. These travel contests were inaugurated in 1928, and in each of them a good percentage of the prize money has been awarded to persons who described visits to national parks.

According to the travel contest editor, W. D. Conklin, any public means of transportation may be used on the trips—train, ship, bus, or airplane, or any combination of these. Private automobiles may be used as incidental conveyances, but accounts of trips taken wholly or mostly by private automobile cannot be admitted. The contest closes October 15th next.

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Official opening for the season of Craters of the Moon National Monument on May 23 was celebrated with a picnic arranged by members of various local clubs.

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Mrs. Roosevelt on a recent trip through Great Smoky Mountains National Park. "By her graciousness she charmed everyone with whom she came in contact" writes Superintendent Eakin in a recent report to the Washington Office. Incidentally, Superintendent Eakin is the recipient of a souvenir from Mrs. Roosevelt's factory in Hyde Park.

A few other notable visitors to park and monument areas during the spring months: Secretary Ickes and WPA Administrator Hopkins were at Fort Jefferson National Monument April 13. Mr. John Boettiger, Editor of the Seattle Post-Intelligencer and Mrs. Boettiger, daughter of the President, visited Mount Rainier National Park April 17 and 18 to witness special ski events. George Goodwin, former Chief Engineer of the National Park Service, was a visitor to Grand Canyon on April 14. Mr. Goodwin supervised construction of the first bridge built across the Colorado River near Phantom Ranch. Eduardo Hay, Secretary of State of the Republic of Mexico, accompanied by Assistant Secretary Enrique R. Ballesteros and Senor Gustavo P. Serrano, international boundary commissioner, visited Carlsbad Caverns early in May. On May 8 Superintendent Bolles was host to 1,200 school children. Mrs. Mary Campbell of New Jersey, a world traveller, who represents the organization "The Seeing Eye", was a visitor to Montezuma Castle National Monument in April. Irvin S. Cobb, G. J. Olsen of the Museum of the American Indian, New York City, Karl P. Schmidt of the Field Museum of Chicago, Emil Haury of Gila Pueblo, and Dr. V. Gordon of Edinburgh University, Scotland, noted authority on the Bronze Age of Europe,
were visitors to Casa Grande National Monument in April. Mr. Cobb also visited Mesa Verde National Park.

Grand Canyon National Park was host to former President Calles of Mexico and his son April 22-24. Joseph Heresheimer, novelist, biographer, and short story writer, visited the park recently to seek "atmosphere" for a Civil War novel, the opening chapters of which will feature Fredericksburg. Mr. R. P. Jennings, Superintendent of Banff National Park, Alberta, Canada, and Mrs. Jennings were visitors to Yosemite. Approximately five hundred librarians attended sessions of the Forty-Second Annual Conference of the California Library Association held at Camp Curry in Yosemite National Park May 19-22 inclusive. On April 28 Alice Hamilton of Klamath Falls made her 48th consecutive yearly visit to Crater Lake. Her first trip was made in 1899 at the age of 7, when with her parents she journeyed via wagon. She advised Superintendent Canfield she expects to make many visits to the park. Natsumi, famous Japanese photographer, was a visitor to Shenandoah National Park on May 16 with Dr. Wilbur Nelson of the University of Virginia, and took about 100 pictures. He previously photographed at the University of Virginia, and advised Dr. Nelson that some of the University pictures might be reproduced in the June 7 issue of Life Magazine. It is possible that some of the Shenandoah pictures may also be reproduced in that same number.

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INDIAN CELEBRATIONS

Dates of this year's intertribal ceremonies at Gallup, New Mexico, are August 25, 26, 27. The Gallup Chamber of Commerce is in a position to furnish material concerning this celebration.

On July 3, 4, 5, the Southwestern Indian Pow-Wow will take place at Flagstaff, Arizona. Practically every tribe in the Southwest will be represented. The event is being sponsored by the Flagstaff Celebrations, Incorporated, a non-profit community enterprise.

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EVEN THE ARCHITECT HAD TO ASK FOR DIRECTIONS

Recently a man wandered into one of the National Park Service offices in the new building and asked to be directed to a certain office. After receiving the directions, he said sheepishly, "I'm the architect of this building, but I can't find my way around in it."

After reading this those in the Washington office who have been "lost" in the huge structure shouldn't feel so badly about it.

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DEATH VALLEY AND SEQUOIA INCLUDED ON NATURE SCHOOL SCHEDULE

From May 21 to 27 students of the West Coast School of Nature Study at San Jose, California, held sessions in Death Valley National Monument, and a field trip in Sequoia National Park from June 27 to July 3 has been scheduled for the students by the Director of the School, P. Victor Peterson.
PHILCO PHONE DONATED TO YOSEMITE

James H. Schwabacher, San Francisco merchant and Yosemite Honorary Ranger, has presented a Philco Phone to the Yosemite Natural History Association for use in the Yosemite Museum. Park Naturalist Harwell says the device has been temporarily installed between the geology room and his office and that later on one of the units will be placed at the Information Desk and the speaker will be set up in the geology room, thereby making it possible in summer for a naturalist to "broadcast" announcements of special features or trips from one central location.

ART SCHOOL IN GLACIER TO OPEN JUNE 15

Again this year the summer session of the Winold Reiss Art School will be held in Glacier National Park, with the opening scheduled for June 15. Winold Reiss, probably best known for his striking pastel portraits of Blackfeet Indians, who established the school in 1934, will again direct its activities. School headquarters will be at St. Mary Chalets on the shore of Upper St. Mary Lake. Courses will be offered in drawing and painting from life; landscape painting; and decorative design and sculpture.

Glarier's art school has been so successful that another school will probably be established at the Cody entrance to Yellowstone early this summer.

CONTRACT AWARDED FOR BOULDER DAM FACILITIES

Contract for construction, maintenance, and operation of concessions within the Boulder Dam Recreational Area has been awarded by the Department of the Interior to the Grand Canyon-Boulder Dam Tours, Inc.

Under the terms of the contract, which becomes effective July 1 and runs for a period of 20 years, the corporation will provide hotels, cabins, and chalets for visitors; will provide air transportation over the region, build airports, provide motor launch service on huge Lake Mead, build boat docks, and provide pack and saddle horses and general transportation facilities.

The Federal Government will provide utility services, including water, sewerage, electricity, and telephone, whenever practicable and possible.

RANGERS' CONFERENCE HELD IN GLACIER

Seventeen Rangers attended the annual Glacier Park Rangers' Conference held in the park May 20, 21, and 22.

Highlight of the three-day conference was a lecture by W. A. Rorer, District Manager, Federal Bureau of Investigation, Salt Lake City, who outlined modern methods used in crime detection, obtaining evidence, and presenting evidence. Superintendent Scoyen opened the conference with a talk on "Fride
and Morale", and gave a brief outline of the development of the Ranger force from the "horse and saddle" days to the present high-speed automobile travel.

Final events of the Conference were a baseball game staged the afternoon of May 22 and a dance in the evening sponsored by the local chapter of Federal Employees.

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SERIES OF POSTAGE STAMPS HONORING AMERICAN INDIAN PROPOSED

Secretary Ickes has given his approval to the proposal made by leading philatelists throughout the country that a series of postage stamps intended to dramatize the story of the American Indian be issued.

"This plan," Secretary Ickes wrote in a recent letter to James Waldo Fawcett, Stamp Editor of the Washington Star and President of the Washington Philatelic Society, "appeals to me not only because of my enthusiasm for stamp collecting and my keen concern for the welfare of our Indian people, but also because it is in harmony with my belief that a Nation should employ its stamp designs to send its history, ideals, and aspirations throughout the world.

"Our National Park series advertised the beauty of our national playgrounds as nothing else could. Similarly, the territorial series soon to be released will publicize our possessions in Alaska, Hawaii, Puerto Rico and the Virgin Islands.

"But there is an especial reason for the projected Indian series. It happens that a new day is dawning for our Indian fellow citizens. The world is interested in them, and such stamps as have been proposed could educate and strengthen that interest in many helpful ways. I think the designs should show Indian arts and crafts, industries, community life—the elements of progress which destined to save the Indian race from extinction."

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VALUABLE NOTES ON SMOKIES, PLANTS NOW IN POSSESSION OF PARK

Park Naturalist Stupka of Great Smoky Mountains National Park reports the accession of 17 typewritten pages from Horace Kephart's journal, entitled "Trees and Plants", listing flowering plants according to month, habitat, and color of bloom.

Noticing a footnote to a 7-page article in the November 1936 issue of the Journal of the Southern Appalachian Botanical Society entitled "Early Spring Flowers of the North Carolina Mountains" by Horace Kephart, Naturalist Stupka wrote to Robert G. Stone of Milton, Mass., the man mentioned in the footnote as having supplied the notes to the magazine, informing him that he had thought all along the Great Smoky Mountains National Park had in its files Kephart's complete journal. Mr. Stone kindly volunteered to contribute the notes so as to complete the set.

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SERVICE LECTURES WELL ATTENDED

More than ten thousand persons attended the eighteen free illustrated lectures given under the auspices of the National Park Service this past winter and spring.

Fourteen of the lectures were given in the Departmental Auditorium located between the New Labor and Interstate Commerce Commission Buildings, one was presented in the auditorium of the Commerce Department Building, and the last three were given in the auditorium of the recently completed Department of the Interior Building.

Field Coordinator Julian Harris Salomon of the Service's Branch of Recreational Planning and State Cooperation has the distinction of being the first person to give an official lecture in the new Interior auditorium. His talk, given on the evening of April 28, dealt with camping in national and State parks.

The first lecture of the series was given November 4 and the last on May 19.

SENIOR PARK NATURALIST HALL NOW HEADS MESA VERDE OPERATING COMPANY

The contract of the Mesa Verde Park Company is being taken over by the Mesa Verde Company. Ansel F. Hall, who until recently held the position of Senior Park Naturalist, in charge of the Service's Field Division of Education, is a director in the new company and will be in active management of its affairs. His nearly 20 years as an official of the Service have given him a thorough knowledge of Departmental requirements and policies with regard to the administration of national parks. The new company will open the facilities this season and Mr. Hall is confident that there will be an improvement in the service.

ANOTHER CASE OF SERVICE RENDERED

When other parks "blow their horns" about some special service, Crater Lake can send forth a note also, says Park Naturalist John E. Doerr, Jr.

"We found a film" reports Park Naturalist Doerr. "It was developed in the park's photo lab. The negatives produced a picture of a car with a Washington license, No. A 92419 for 1936. Inquiry from the State's Director of Licenses produced car owner's name. Negatives were mailed. A letter of appreciation and check was received. The lost was found and the owner now has negatives of several good shots of Crater Lake."

The American Forestry Association is holding its 62nd Annual Meeting jointly with the Ohio Forestry Association at Cincinnati, Ohio, May 31, June 1, 2, and 3. Water conservation and flood control will be featured at the sessions, and a visit to Southern Ohio's beautiful Hocking State Park is on the program.
Persons on hand for the Rocky Mountain National Park flight on April 25 which inaugurated the series of broadcasts made by the National Broadcasting Company and the United Air Lines over certain western national parks.

Left to right: Superintendent Allen, Co-pilot Emeress, Mrs. Allen, Pilot Ralph Johnson, Mrs. Ralph Johnson, Mrs. John Preston, Assistant Superintendent Preston, Mrs. Hager of Washington, D.C., a representative of the North American Newspaper Alliance, Park Naturalist Gregg, United Airlines Engineer Stangbye, Program Manager Kenneth Carney, Chief Ranger Finn, Arranger and Announcer Don Thompson of N.B.C., and Radio Engineer E.C. Callahan of N.B.C.

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RIVER EXPEDITION PLANNED BY SERVICE OFFICIALS

Navigation of swift rapids in the boulder-choked Rio Grande through the picturesque 15 miles of Santa Helena Canyon wilderness in the proposed Big Bend National Park area of Texas will be undertaken soon by a party under Dr. Walter Prescott Webb, consulting historian of the Service. The start of the expedition was originally scheduled for mid-May but delay in the arrival of one of three specially constructed steel rowboats caused the change in plans.

Dr. Webb, author of "The Texas Rangers" and "The Great Plains", is making the trip to get additional information on this comparatively unknown area to include in a report he is preparing on the historical
background of the Big Bend country. William R. Hogan, associate historian of the Service, and Thomas V. Skaggs and Joe Lane, experienced river men of McCamey, Texas, will accompany Dr. Webb.

Arrangements call for the wearing of life-preservers by all members of the party throughout the trip, which is expected to require at least 2 days. The flat-bottomed boats to be used are equipped with air chambers and are built in sections so they can be knocked down and carried over obstructions. They will fly both the American and Mexican flags. Coast Guard airplanes will fly over the canyon each day to note the progress of the expedition.

A similar trip made in 1899 by a party under Dr. Robert T. Hills, veteran Texas geologist now living in Dallas, required considerably more time than planned by Dr. Webb. The Hills party, using three boats, was locked in at one point for three days by huge blocks of stone which had fallen from the canyon walls.

** *

CANYON IS "NOT A MESS" SAYS YOUNG VISITOR

As a Utah newspaper editor and publisher, his wife, son, and six-year-old daughter stood on the brink of the Grand Canyon taking their first long, silent look at the awe-inspiring view before and below them, the father finally broke the silence by saying "My! Isn't it immense!"

"Immense" was a new word for the little girl and she misunderstood her father. Quickly she replied with plenty of emphasis: "I don't care if it is a mess, it's pretty any-how!"

** *

YOSEMITE FIELD SCHOOL OF NATURAL HISTORY STUDENTS SELECTED

Fourteen men and six women, representing 10 states, have been selected for the 7 weeks' course in the Yosemite Field School of Natural History offered by the Service each summer at Yosemite.

Sessions will be held from June 21 to August 2, inclusive. Park Naturalist C. A. Harwell will serve as Director and Joseph H. Dixon of the Service's Wildlife Division as Associate Director.

One hundred persons submitted applications for membership in the school.

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A species of bat, new to Grand Canyon records, has been collected in the Canyon bottom at Phantom Ranch. It is probably Nycteris cinerea.

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What was formerly the Bear Lake Entrance to Rocky Mountain National Park is now known as the Thompson River Entrance. A rustic sign erected by CCC enrollees at that point bears the new name.

** **
Early in May the Bulletin Editor advised Superintendent White of Sequoia National Park that several pages in the June issue of the Bulletin would be reserved for data concerning his park and the following article on THE SEQUOIAS written by Park Naturalist Frank T. Been has been contributed.

THE SEQUOIAS

Many millions of years ago, when the present coal deposits existed in the form of dense, luxuriant vegetation, representatives of the trees we now call "sequoias" were thriving among the tree ferns and palms of that period. As the climatic conditions of the earth changed, the sequoia came to be one of the predominating trees in the Northern Hemisphere. This fact has been definitely determined by the discovery of sequoia fossils in New Jersey, Connecticut, North Dakota, Montana, Arizona, Greenland, France, Germany, Western Europe, Siberia, and Australia.

Due to the Ice Age and other radical changes in the topography and climate of the earth, the sequoias gradually became more and more restricted in their range, until, so far as human knowledge was concerned, these trees were non-existent. That is, they were non-existent until 1769, when the Portola expedition of Spanish explorers landed upon the shores of California near Monterey Bay. At that time Father Crespi noted in his diary, under date of October 10, "as we knew not the names of the trees we gave them the names of the color of the wood, Palo Colorado." Thus, for the first time, the name Redwood was applied to these new and wonderful trees.

In 1794, an English botanist collected specimens of the redwood and sent them to England. The tree, however, was not classified until 1823, when the English botanists determined it to be an evergreen species of Taxodium, Bald Cypress, which is a genus of deciduous cone-bearing trees. The tree was consequently called Taxodium sempervirens, Evergreen Bald Cypress - "sempervirens" meaning "ever living."

This name persisted until 1847, when Stephen Endlicher, an Austrian botanist, decided this tree was not a Bald Cypress, but an entirely new genus. Endlicher was a linguist as well as a botanist, and through his studies of languages had learned of the remarkable Indian alphabet prepared...
by the Cherokee Indian, Sequoyah. This botanist apparently thought that the unusual Redman should be honored by having his name applied to the great red trees - both of which were projects of the same little known continent. The new tree was, as a result, named Sequoia sempervirens. This classification was accepted by other botanists. The tree also became commonly known as the Redwood.

Because of their proximity to the coast, it was natural that the sempervirens should be the first sequoias discovered. As settlement extended further inland, people came into contact with other large trees that resembled those of the coast but were much larger. The earliest record of these trees was dated 1839, when the Joseph R. Walker exploration party made a journal entry concerning them. In 1852, A. T. Dowd, a hunter, discovered the upper Calaveras Grove while tracking a wounded grizzly bear.

The discovery of the this new species of red-barked tree seemed to arouse greater excitement among botanists than had the discovery of the coast species. The English botanists, deciding it was of an unclassified genus and waxing patriotic, called it Wellingtonia gigantea. The American botanists, determining it as a new species of Bald Cypress, and being equally patriotic, applied the name Taxodium washingtonianum. The controversy was eventually settled by a French botanist, who determined it to be another species of Sequoia, and called it Sequoia gigantea. This name has been universally accepted by all botanists except a few English botanists and an American, G. B. Sudworth, the latter of whom in his publications uses Sequoia washingtoniana. The former name, however, through popular choice, is generally used. The second Sequoia was at first spoken of as the "Mammoth Tree", but is now commonly called the "Big Tree."

Base of General Sherman Tree

The Sequoia gigantea is restricted in its range to the west slope of the Sierra Nevada of California, between the elevation of 4,500 feet and 8,000 feet; and extends from Placer County, on the north, to Tulare County on the south. Within this 250-mile strip, the trees occur in isolated groups called "groves." There are approximately 76 such groves, 23 of which are in Sequoia National Park.

The coast species are restricted to the summer fog belt of the Coast Range from the Santa Lucia Mountains north to the most southwestern corner of Oregon.
Within their range these trees form a belt 450 miles long and between one to forty miles wide. The maximum elevation is usually about 1,000 feet. Although the coast sequoia occurs along the Pacific Coast, the tree does not grow where it is exposed to the cold sea breezes.

This wide difference in habitat between the sequoias of the Coast and Sierra results in a great difference in growing conditions. On the coast the climate is very mild and moist, so that the sequoia grows amid dense and luxuriant vegetation. Because of these advantageous growing conditions it develops very rapidly and is, as a result, one of the fastest growing of all our timber trees.

Botanically, there also is a wide difference in the Coast and Sierra sequoias. The Sierra species, which will be considered first, averages about 275 feet in height, but occasionally taller trees are found. The tree commonly attains a diameter of 25 feet, and frequently grows to a size of over 30 feet. The roots supporting this great bulk do not penetrate downward much more than 6 feet, but laterally may reach out 200 to 300 feet. This lateral spread, however, varies with the age of the tree and with soil conditions; occasionally roots lay so close to the surface that a part of their length is exposed.

In the Sierra, the winter climate is cold, with deep snow. In the summer there are between 3 and 4 months of warm, nearly rainless days - a condition which the Coast Redwood very probably could not survive. On the other hand, the Big Tree, being accustomed to more severe growing conditions, would very likely thrive in the moist, mild habitat on the coast.

Although a thickness of more than 24 inches is known, the Big Tree bark is usually between 2 to 12 inches thick; and on the mature trees is so deeply fissured as to give the trunk the appearance of an immense fluted column. The rich, brownish red coloring sometimes takes on a faint purplish sheen - particularly on the young trees, as Big Trees are judged, where the bark is exposed to sunlight and weathering. The soft, fibrous, almost stringy consistency of the bark appears to be a rather imperfect protection for so rugged a body. Nevertheless, it is so well adapted for its function that it has no doubt contributed greatly in enabling the Big Tree to resist the ravages of fires and insects. As an additional protection, the bark is almost asbestos-
like in its resistance to fire, and probably because of a high tannin content is repelling to insects.

The wood of Sequoia gigantea is a salmon pink to a rich, dark maroon, but turns very dark when weathered. It is soft and so brittle that it breaks off transversely with almost no splintering. Although very soft, the heartwood is practically invulnerable to decay and insect attacks, as it, like the bark, contains tannin. Because of this durability, fallen trees lay upon the ground for centuries without showing appreciable signs of decay, except for a gradual rotting of the sapwood, which is not so lasting as the heartwood. The almost complete lack of pitch causes the wood to burn slowly, compared to most conifers. This quality, together with the resistance to decay and insects, has made possible the continued existence of the sequoia, despite numerous devastating forest fires. The tree seems equipped by Nature to endure as an individual and as a race for thousands of years.

In foliage, the Big Tree somewhat resembles the Incense cedar, except that the Big Tree twigs and leaf sprays are round instead of flattened, as in the cedar. The leaves of the Sierra Sequoia are one-quarter to one-half inch long, and are attached to the stem like closely arranged, sharp pointed scales. The flowers are catkins, of which the staminate (male) and ovulate (female) are borne on the same stem. In early spring the pollen, which is wind disseminated, is often so abundant as to color the snow a rich yellow. The tree may produce fertile seeds after it is about seventy-five years of age and throughout its life.

Two years are required for the cones of the Big Tree to mature. These are from two to three inches long, and rather roughly egg-shaped. The scales are woody and remain attached to the cone. When mature, the cone is bright green, but as it ripens becomes brown in color, and the spaces between the scales open up to liberate the seeds. These tiny germs of Sequoia life are about 200 seeds in a cone, and they are so light that from seventy-five thousand to one hundred thousand are required to weigh a pound.

Between the scales with the seeds, is a purple crystalline substance that is particularly characteristic of the sequoia cone. The value of these crystals to the cones or the seeds is not definitely known, although chemical analysis has shown them to be almost pure tannin. When dissolved in water, they form a purplish ink or dye. Experiments conducted by Walter Fry indicate that seeds soaked in this solution retain their fertility longer than unstained seeds.

As hundreds of cones are produced by the mature trees, the profusion of seed production should result in abundant young growth. The contrary, however, is actually the case, because the seeds, although quite high in fertility, in order to sprout must fall upon soil perfectly suited for germination. Under ordinary conditions, there is a very remote possibility of the seeds sprouting, because the forest floor is covered with a deep layer of forest litter which prevents the wafer-like seed from reaching the soil beneath.
If the soil beneath the litter is exposed by fire, uprooted trees, or clearing
Big Tree reproduction often comes in very thickly.

The Big Tree reproduces only from seed.

The Redwood of the Coast Range attains an average height greater than
that of the Sierra species, and may reach 350 feet. In diameter, however,
the Big Tree averages much larger than the Coast species, as the latter seldom
grows larger than 16 feet through the base. This difference in size indicates
a divergence in age, as the Redwood, although reaching over two thousand years,
does not attain the hoary life span of four thousand, as does the Big Tree.

Texture and general appearance of the bark of the two species are quite
similar, but the Coast Redwood is more distinctly brown. Resistance to fire
is a joint characteristic. The wood of Sequoia sempervirens is nearly the
same in color and durability as the gigantea, but is not so brittle—hence
better adapted for lumber.

In external appearance, the most conspicuous difference in the two species
is in the foliage. The leaves of the Coast Redwood are arranged along both
sides of the stems so as to form flat sprays quite similar to the leaf arrange­
ment of the white fir. The Redwood leaves are darker green, more sharply
pointed, and somewhat stiffer than the fir leaves. The new growth tips of the
Coast sequoia foliage occasionally resemble the general leaf arrangement of
the Sierra Tree.

The flowers of the Sequoia genus are similar, but the cones of the Coast
Redwood mature in one year and are one-quarter to one-half as large as the Big
Tree cones. Seeds of both species are similar except those of the Coast tree
are darker and smaller than those of the Sierra species.

Reproduction takes place by seeds and root-crown sprouts. The Coast Red­
wood is one of the few strictly coniferous trees that have the habit of sprouting
to any marked degree. When a Coast tree is felled, young trees sprouting
from the roots of the stump form a circle which loggers call a "goose nest." The Big Tree does not sprout.

Because the sequoia was at one time a predominating tree of the Northern
Hemisphere and is now restricted to a very limited range in California, it is
generally supposed to be a vanishing species. However, considering the
phenomenal age of the tree and the present gradual changes in the crust of
the earth, it may be destined to extend as far into the future as it has into
the past. Even if the Sequoia should disappear from California, the genus
may continue to exist in other parts of the world, because man is rapidly in­
troducing it into other climates. New Zealand, particularly, with a climate
ideally suited for Redwood growth, is becoming a new home for the Coast Redwood
through the planting of hundreds of pounds of seeds.

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LEGISLATION AFFECTING THE NATIONAL PARK SERVICE

(As of May 1, 1937)

Below is a list of the Bills introduced in Congress since the preparation of the April-May issue of the Bulletin; also those bills already mentioned in the Bulletin on which additional action has been taken.

Bills Introduced

H.R. 6244 To provide for the acquisition of the Mulberry Grove Plantation in Chatham County, Georgia, site of the invention of the cotton gin by Eli Whitney, and the establishment thereon of a national monument to be known as the National Cotton Gin Museum.

Introduced by Mr. Peterson, April 8, 1937.

H.R. 6652 To provide for the administration of the Natchez Trace Parkway, in the States of Mississippi, Alabama, and Tennessee, by the Secretary of the Interior.

Introduced by Mr. Ford, April 26, 1937.

S. 2000 To make available for national park purposes certain lands within the boundaries of the proposed Isle Royale National Park.

Introduced by Mr. Brown, March 29, 1937. Reported upon favorably by Department to Senate Public Lands Committee, April 13.

S. 2130 (H.R. 6243) To authorize an appropriation of $50,000 with which to make a survey of the old Indian trail and the highway known as "Oglethorpe Trail" with a view of constructing a national roadway on this route to be known as "The Oglethorpe National Trail and Parkway".

S. 2130 Introduced by Mr. George, April 12, 1937. H.R. 6243 Introduced by Mr. Peterson, April 8, 1937.

Bills already mentioned in the Bulletin on which additional action has been taken:

H.R. 35 To provide for the creation of the Saratoga National Historical Park in the State of New York.

H.R. 35 Introduced by Mr. Mead, Jan. 5, 1937.

S. 635 (H.R. 4852) To provide for the acquisition of lands for the National Park Service in the State of New York.

S. 635 Introduced by Mr. Copeland, Jan. 12, 1937. Reported upon favorably by Department to Senate Public Lands Committee, March 13.
H.R. 35  (Continued)  

H.R. 1500  To make the Civilian Conservation Corps a permanent agency.
(See H.R. 4431) 
(H.R. 5046)  
(H.R. 6180)  
(S. 2102)  
(H.R. 6551)  

H.R. 1570  To provide for the establishment of a national monument at Warner Hall, to be known as Mildred Warner-Washington National Monument.
(See H.R. 123)  


H.R. 4655  To accept the cession by the State of Arkansas of jurisdiction over all lands now or hereafter included within the Hot Springs National Park, Arkansas.
(S. 1543)  


H.R. 1500  Introduced by Mr. Doxey, Jan. 5, 1937.  
H.R. 4431  Introduced by Mr. Citron, Feb. 8, 1937.  
H.R. 5046  Introduced by Mr. Boren, Feb. 24, 1937.  
H.R. 6180  Introduced by Mr. Connery, April 6, 1937.  
S. 2102  Introduced by Mr. Black, April 7, 1937.  
H.R. 6551  Introduced by Mr. Connery, April 21, 1937. Reported out favorably by House Committee on Labor, April 23, 1937.  

Introduced by Mr. Bland, Jan. 5, 1937. Reported upon adversely by Department to House Public Lands Committee, Apr. 20.  

Introduced by Mr. King, Jan. 6, 1937. Reported upon favorably by Department to House Public Lands Committee, March 26. Passed House Apr. 19.  

S. 1543  Introduced by Mr. Adams at the request of the Department, Feb. 15, 1937.
H.R. 5472  (S. 2330)  To authorize the exchange of certain lands within the Great Smoky Mountains National Park for lands within the Cherokee Indian Reservation, North Carolina.

H.R. 5594  (S. 1996)  To make available for national-park purposes certain lands within the area of the proposed Mammoth Cave National Park, Kentucky.

H.R. 5831  (H.R. 6097)  To provide for a survey of the old Jackson Military Road and the establishment of a national parkway along the route thereof, and for other purposes.

H.R. 5884  (H.R. 5599)  To provide for the establishment of the Katahdin National Park in the State of Maine, and for other purposes.

S.J. Res. 69  To authorize an investigation of the proposed Sawtooth National Park in the State of Idaho.

S. 92  To provide for the creation of the Saint Croix Island National Monument, located near the mouth of the Saint Croix River in the State of Maine.

S.J. Res. 94  To create a Commission to study and report on the feasibility of establishing a national monument, or monuments, in the territory occupied by the Spanish Colonial Missions and other buildings, in the States of Texas, New Mexico, Arizona, California, Florida, and Louisiana.
S. 442  To establish the Shoshone Ice Caves National Park of Idaho.

S. 534  Granting the consent of Congress to Montana and Wyoming to negotiate and enter into a compact or agreement for the division of the waters of the Yellowstone River.

S. 1060  To authorize loans for the construction of recreational housing accommodations in national parks and national forests.

S. 1216  Authorizing the Secretary of the Interior to convey certain land to the State of Montana to be used for the purposes of public park and recreational site. (Includes Lewis and Clark Cavern National Monument)

S. 1627  To establish the Shoshone Ice Caves National Monument.

S. 1791  To provide for the acquisition of certain lands for and the addition thereof to the Yosemite National Park, in the State of California.

Introducted by Mr. Pope, Jan. 8, 1937. Reported upon adversely by Department to Senate Public Lands Committee, March 30.

Introducted by Mr. Wheeler, Jan. 8, 1937. Reported upon favorably by Department to Committee on Indian Affairs, March 10, 1937. Passed Senate Feb. 10, Reported out by House Committee on Irrigation and Reclamation April 20.

Introduced by Mr. McNary, Jan. 22, 1937. Reported upon adversely by Department to Committee on Finance, April 24, 1937.

Introducted by Mr. Wheeler, Jan. 29, 1937. Reported upon favorably by Department to Senate Public Lands Committee April 5.

Introduced by Mr. Pope, Feb. 19, 1937. Reported upon adversely by Department to Senate Public Lands Committee, March 30.

S. 1791  Introduced by Mr. McAdoo, March 8, 1937. Reported upon favorably by Department to Senate Public Lands Committee, March 18.

H.R. 5394  Introduced by Mr. McGroarty, March 8, 1937. Reported upon favorably by Department to House Public Lands Committee, March 18. Reported out, with amendment, by Committee, April 30.
Associate Director Demaray has approved a uniform to be worn by laborers and foremen in National Capital Parks. The order requiring the uniform will become effective on June 5. The summer uniform adopted by Superintendent Finnan for the employees will consist of trousers, shirt, and cap in forestry green, with the monogram "N.C.P." in gold letters on the cap.

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Sixteen baseball leagues representing 98 teams and 43 softball leagues composed of 312 teams opened their official seasons on National Capital Parks diamonds during the month of May. The National Park Service has entered a team in the Girls' Government Softball League, and the Department of the Interior is represented by a team in the Men's Government Softball League. The Public Works Administration is well represented on the softball field, supporting a league of 10 teams. The total number of participants in these softball and baseball leagues utilizing the National Capital Parks diamonds is 6,500.

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A sandbag dike erected along the Rock Creek and Potomac Parkway and in the vicinity of the rose garden and pansy beds in West Potomac Park on the night of April 27 prevented serious damage resulting from the swollen Potomac, which reached flood stages early the following morning. Approximately 600 CCC enrollees from Camps NP-6-7-8 and NA-1, 600 WPA workers, and 300 regular employees of the National Capital Parks office were employed in the construction of the dike. Most serious damage was experienced at the rose garden and in East Potomac Park, where the swiftly rising waters deposited silt and debris adversely affecting large lawn areas. The crest of the flood at the Arlington Memorial Bridge was 11.9, as compared with the high crest of 13.8 feet registered at the bridge in the disastrous flood of March 1936.

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On April 22 the anniversary of General U. S. Grant was observed by memorial exercises held at the U. S. Grant Memorial, Union Square, under the auspices of the Potomac Chapter, Grand Army of the Republic. Madam Julia Grant Cantacuzene, granddaughter of General Grant, who was born in the White House during the Grant administration, attended the exercises.

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Approximately 125 "bridle path horses" participated in the first National Capital Parks Informal Horse Show held in Rock Creek Park on May 16. Participation in the show was restricted to bridle path horses, a requirement of the event being that all entries had to be ridden over the path saddle trails to the horse-show grounds along Ridge Road. The show was strictly a post-entry event, competition being held in 6 classes. Cups, trophies, and 4 ribbons were awarded in each class.

Major Frank L. Whittaker, U. S. Cavalry, and Norman Clarke, civilian
horseman, both widely known in Capital equestrian circles, participated as co-directors in the show. Fonton Fadely and Captain Paul A. Robinette served as judges, and Ada Rainey, Park Naturalist McHenry, Administrative Assistant Kelly, and Policeman Lester Mason served on the committee on arrangements. Approximately 750 persons were in attendance.

* * * * * * *

First Assistant Secretary of the Interior Theodore A. Walters roasting hot dogs at the Fort Hunt picnic. (See item on following page.) Superintendent Finnman is at the extreme right and beside him is Administrative Assistant Kelly. R. C. Evans, of the Branch of Buildings Management, is the gentleman looking over their shoulders, and that is Athletic Director Winfree Johnson in the light suit.
Approximately 200 employees of the Washington Office, National Park Service, participated in the dedication of the picnic groves at Fort Hunt, Mount Vernon Memorial Highway, on Saturday, May 1. First Assistant Secretary of the Interior, Theodore A. Walters delivered the address of dedication and Superintendent Finnman was master of ceremonies. A picnic lunch served by the commissioned officers and civilian personnel of CCC Camp NP-6, Fort Hunt, and an afternoon of games and entertainment were included on the dedication program. The picnic committee was composed of Catherine Raab, Branch of Research and Education; T. A. Taggart, Plans and Design; R. O. Evans, Buildings Management; C. R. Brill, Mail and Files; Margaret Stratton, Branch of Engineering; Thelma C. Bruce and E. J. Kelly, National Capital Parks. Charles S. Watson, Superintendent, CCC Camp NP-6, was host to the picnickers.

The annual blooming of the 15,000 dogwood trees in Rock Creek Park was observed by an official "Dogwood Day Celebration" Sunday, May 9. A special schedule of play events under the direction of Athletic Director Winfree E. Johnson, and an illustrated lecture by Chief Naturalist Earl A. Trager, were included on the day's program. Park Naturalist Donald E. McHenry was in charge of the Dogwood Day arrangements.

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New swimming pools in Anacostia and East Potomac Parks, constructed under authorization of the Public Works Administration, will be opened to the public on June 5.

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Memorial trees to be planted by representatives of each of the Thirteen Original Colonies in areas set aside for this purpose in the George Washington Memorial Parkway will mark a part of the official observance of the sesquicentennial celebration of the U. S. Constitution in the National Capital. The area selected for this tree planting is on the Virginia bank of the Potomac opposite the north end of Columbia Island.

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HISTORICAL NOTES

To stimulate interest in historical events on the part of high school students, the Fredericksburg American Legion sponsored a history contest between 33 high school contestants from Fredericksburg and nearby counties on May 7. Junior Historian Ralph Haavel served as one of the judges.

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Park historians took a prominent part in programs commemorating the 4th anniversary of the CCC. At Vicksburg 600 guests were present at a barbecue dinner and copies of a special news sheet containing articles by historians were distributed. At Fort Pulaski representatives of various patriotic organizations following an inspection tour of the Fort were enter-
tained with exhibition boxing matches, a baseball game, barbecue dinner, and dance. Museum Assistant L. G. Crutchfield spoke from Radio Station WH, Newport News, on work accomplishsments at Colonial National Historical Park as a "Monument for the CCC."

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A loan exhibit from the Historic Merchant Marine Survey was on display at Fort McHenry during the month of April.

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The 75th anniversary of the Battle of Shiloh was commemorated by radio broadcasts from Memphis April 3 and 5 delivered by the Superintendent and Park Historian of Shiloh National Military Park.

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A Division on Virginia Antique Furniture has recently been established by the Virginia State Commission of Conservation and Development. The prime purpose of this Division will be to determine a fair value for antique furniture and objects of art now being offered for sale by persons having no accurate information as to their real worth. The Division will also compile an index giving the origin and location of valuable paintings, miniatures, and items of handicraft in the State.

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A full set of slides on the Chancellorsville campaign has been completed for lecture purposes. The set includes map slides showing troop positions in successive stages of the battle in color and views of the field based on Brady Civil War photographs. Park historians are using these slides to illustrate technical lectures given at military schools, etc. Similar slides on other campaigns in the vicinity of Fredericksburg are now in preparation.

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Diving operations in the York River to recover relics from British vessels sunk off Yorktown in 1781, sponsored by the Mariners Museum, Norfolk, have been resumed.

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Vicksburg National Military Park was the scene on May 21 and 22 of the Second Annual National Assembly of the Society of Vicksburg Descendants. Among the honor guests in attendance were Col. U. S. Grant III, grandson of the Commander of the Union forces in the campaign and siege of Vicksburg in '63, and Hon. J. C. Pemberton III, grandson of the Confederate Commander.

Superintendent Heider officially welcomed those attending the assembly, and tours of the new park museum, the battlefield, and the cemetery were conducted by Service historians.

Plans and arrangements for this celebration were made by Bette E. Barber, formerly an employee of Vicksburg National Military Park and now serving as Director of the Society of Vicksburg Descendants.

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m. The Gloucester Historical Society has donated the Wolcott Collection of Fire Arms, property of the late Stephen C. Wolcott of Gloucester County, Virginia, to the Colonial National Historical Park. This collection consists of 118 guns covering the period from early Revolutionary days to the present time. The Society has also loaned to Colonial National Historical Park a large and varied assortment of goldsmith's tools. The firearms and tools are on display in the new museum at Yorktown.

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A carefully selected list of 145 outstanding examples of American architecture surviving in the 13 States of the Atlantic Seaboard which made up the American Colonies has been compiled by members of the Service.

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Evolutionary stages in American military construction of the nineteenth century, combined in a single fortification, are illustrated graphically in restoration work going forward at historic Fort Morgan, located at the entrance of Mobile Bay.

Designed in 1818 as a major link in the system of fortresses placed at strategic sites along the Gulf coast, Fort Morgan was seized more than four decades later by Confederate forces. It was their last great Gulf citadel until its fall in August, 1864, to Admiral Farragut as an aftermath of the spectacular naval battle for control of Mobile Bay and port.

 Portions of the fort were modernized after the War Between the States and reconstruction operations now in progress will provide for visitors an unusual contrast between early and late nineteenth century military works. Coast defense cannon of the Spanish-American War period remain in place and Service historians are preparing to remount artillery pieces of earlier dates.

Restoration of sections of inner and outer earthen slopes, parapets, and other features of the fortress, which had begun to disintegrate, already has been completed and additional reconstruction work will be carried out during the summer.

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The Jackson Wild Flower Preserve at Chancellorsville, under the supervision of Assistant Landscape Architect Robert P. Stevens, attracted many visitors this spring, among whom was Dr. P. L. Ricker, Plant Pathologist of the Department of Agriculture, an authority on wild flowers. Dr. Ricker stated that this Preserve is the only one in Virginia which is adequately marked. Each specimen in the Preserve is labeled with a waterproof card giving both the botanical and common names. In a second visit to the Preserve Dr. Ricker took colored photographs to be used in forthcoming lectures and articles.

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This picture of a section of Fort Jefferson was taken at 10 o'clock at night by the light of the moon -- which gives some idea of how clear the atmosphere is and how bright the moon. Acting Superintendent Puderer reports he always seems to have visitors just about the time the moon is full and such visitors are usually taken on a moonlight tour around the Fort through the second tier casemates. The Fort, he says, takes on an entirely different atmosphere when flooded with moonlight, the huge massive architectural forms, the black ominous openings in the casemates, the jagged free standing walls and chimneys silhouetted against the sky, all producing an exceedingly weird and sinister effect.

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TEACHING EMPLOYABILITY

Project training, which began in a National Park Service CCC camp on Cosby Creek in the Great Smoky Mountains back in June 1933, is now operating throughout the Corps as the most practical method of preparing enrollees for jobs in a competitive world.

It teaches the enrollees the whys and wherefores of their jobs from beginning to end, the need, the planning, the work, and the results. When an enrollee has finished a concrete bridge under the project training system, he has learned almost enough to set himself up as a small
contractor because he has drawn up bids for the job, estimated material costs, and planned time schedules in addition to doing the actual construction work.

When the CCC program began, the burly, busy rush of getting such a gigantic project under way shut out much thought of education for awhile. When it did enter the picture, it came in the form of academic courses. These were very necessary and a boon to some, but to others, who left school because they hated it, evening classes mean little.

To the Interior Department, which has 497 camps and about 80,000 enrollees under its jurisdiction, training on the job, as originated on roads and trails projects in the Smokies, seemed to be the answer to its education problem, the surest way to make certain that the CCC will not only permanently improve the country but also permanently improve the enrollees.

This training was established officially on April 1, 1936, with the appointment of G. B. Arthur as Supervisor. The Forest Service and the Soil Conservation Service of the Department of Agriculture have joined in the training program, and representatives of these services work with Supervisor Arthur, as an informal committee on plans, methods, and procedures.

The type of training is limited only by the scope of the work projects in each camp. The supervisory personnel cannot go outside of their approved projects but within them they may carry their instructions as far as their imaginations and abilities will permit.

Some training is toward occupations found in large cities such as carpentry, machine shop trades, welding, contracting, while other projects train men in nursery work and forestry, range maintenance, seeding and sodding, surveying, maintenance, and construction of irrigation dams and ditches.

Supervisory personnel are instructed in methods of organizing their work and make outlines for every job. Short practical texts on the rudiments of the various occupations involved are published and distributed to all Interior camps. Except for brief instruction at the beginning of a project, time is not taken out of work hours for teaching. Training projects are supplemented by courses in the camp program, taught by the technical supervisors using time and facilities provided by the Army.

As far as practical, enrollees are allowed to select their work project assignments from the camp program so that they may learn occupations in which they are interested.

Today project training is functioning better than ever before. An agreement has been signed by the Army, the Department of the Interior, and the Department of Agriculture and approved by the Director of the CCC, defining the Department's individual functions and cooperative responsibilities for education in the camps. By this agreement, project training becomes the concern of the National Park Service, the Division of Grazing, and Bureau of Reclamation of the Department of Interior, and of the Soil Conservation Service and the Forest Service of the Department of Agriculture, the technical agencies which supervise the jobs in the camps. The agreement recognizes the
need for academic programs in camp to supplement project training and brings the two together on a practical basis.

Early in May the one hundred enrollees who spent the winter months on Isle Royale ended their 6-month exile. Thirty-five of these enrollees have signed up to return to the Island for summer duty.

Survey work at Robert Kochner Recreational Park, eight miles southeast of downtown Savannah, is being started by a side camp of enrollees from Fort Pulaski National Monument, Georgia. The boys are at present housed in tents.

The Fort Pulaski home crew is working on the causeway for the Cockspur Island approach to the bridge which is to be built by a private contractor to connect the island and its monument with the mainland.

Systematic exploration of a cave in a wilderness section of Spavinaw Hills State Park, Oklahoma, which may reveal caverns of considerable size, will be undertaken shortly by the Service.

The entrance to this cave is about six feet high. Dr. L. R. Laudon, Tulsa University geologist, led a group of hikers in th there recently on a brief exploratory trip, using flashlight and candles. The height of the cave decreased shortly after they entered the mouth and they were obliged to crawl on hands and knees along a small flow of water. They encountered a number of side passageways.

Dr. Charles N. Gould, Regional Geologist of the Service, plans to do some exploratory work there shortly in an effort to determine the extent of the channels. He will be assisted by CCC workers, who are carrying on development work in the park under technical supervision of the Service and the Parks Division of the State Planning and Resources Board.

Construction of a large bathhouse and development of a 500-foot beach area are under way at Gold Head Branch State Park, northeast Florida recreational area, where facilities will be provided for varied types of lake sports.

Development of 1240-acre Gold Head State Park has been in progress since April 1935, with CCC crews at work under joint supervision of this Service and the Florida Park Service, headed by C. H. Schaeffer of Tallahassee.

The new bathhouse will be a stone-and-frame structure provided with dressing rooms, showers, sanitation equipment, and space for commercial concessions. It will have a broad terrace facing the
beach on Lake Johnson, a clear, spring-fed basin with a gently sloping sand bottom well adapted to swimming. Boating also will be available.

***

National, State, and county parks, and recreational areas of the East came through the spring fire season, annual period most dreaded by conservationists, with unusually small losses inflicted in the woodlands, according to April reports compiled by foresters of the Service at its ECW regional headquarters in Richmond, Virginia.

Five national parks of the eastern territory, which embraces 23 States, reported damaging fires during the month. Losses were restricted to 178 acres or about one-twelfth of one percent of areas aggregating approximately 215,000 acres.

Seventeen fires were recorded in the 200 State and county parks where CCC work is in progress. Less than 200 acres were burned over in a total of 425,000. Within the boundaries of Federal Recreational Demonstration Areas, where development of low-cost group camping facilities is under way, nine fires caused damage in 116 acres.

With new foliage far advanced and the spring brush-burning season completed throughout most of the region, foresters believe the woodlands now are "comparatively safe" from destruction by flames until the fall fire season begins.

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Beautification of Cottonwood River State Park, Minnesota, through planting of 11,000 trees and shrubs, is provided in a 6 months' work program for the area.

The planting will be done by members of the CCC Work Corps at the park. Varieties to be planted include ash, oak, elm, cottonwood, and willow.

Plans for the work program originated in the Minnesota Division of State Parks, under the direction of Harold W. Lathrop, who is also Minnesota State park authority for the National Park Service.

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An animal census is in progress throughout 65,000 acres of western New York woodland.

A survey being conducted in Allegany State Park, near Salamanca, is designed to record the species and abundance of wild mammals and to determine conservation measures favorable to further increases.

Trained CCC enrollees have been assigned the work of recording counts and estimates of the animal population and wildlife specialists will use the figures in improving the environment to develop existing fauna and encourage re-introduction of species forced out by unfavorable conditions. Similar studies of streams resulted in corrections of deficiencies and an increase in the trout capacity of park waters, according to the report.

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Foot bridge across the Merced River to the Old Village, and ECW construction project completed in April. Yosemite National Park.

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ARTICLES, BOOKS, AND PUBLICATIONS

Articles:

Reprints of a paper written by Dr. Carl R. Swartzlow, Park Naturalist at Lassen Volcanic National Park, and W. D. Keller, of the University of Missouri, on the coralloidal opals found in many of the lava tubes and caves in the Lava Beds National Monument have been issued. This paper originally appeared in the Journal of Geology for January-February, 1937.

* * *

"Mount Mazama: Explosion versus Collapse" a paper written by Warren D. Smith and Carl R. Swartzlow which appeared in the Bulletin of
The Geological Society of America, in December, 1936, has now been issued by that Society as a separate. The paper, written while the authors were serving as ranger naturalists at Crater Lake during the summers of 1934 and 1935, contains a list of conclusions, some of which are as follows:

"The distribution, character, and known quantity of volcanic ejecta within a reasonable distance of Crater Lake seen to indicate that explosion is the most acceptable explanation for the origin of the crater of Mount Mazama.

"The shape and character of the materials of the crater are typical of known explosion volcanic craters. The shape of the crater at Crater Lake is remarkably like that of typical nine craters and quite unlike that of subsidence craters.

"Known subsidence craters, like that of Kilauea, exhibit strikingly different features from those found at Crater Lake.

"Subsidence areas in the younger basalts outside the limits of Crater Lake show features in no way resembling what one finds within Mount Mazama's crater.

"All other volcanoes on the Pacific Rim, with possibly one or two exceptions, known to have partially destroyed themselves, have done so through explosion.

"The calderas of the Azores, of Italy, and of the Rhine region, all appear to be of similar origin and have hitherto been explained as caused by explosion.

"The mechanics of the problem, for a mountain of the explosive type, such as Mount Mazama, seen to offer insuperable difficulties to the engulfment explanation.

"The closing stages of volcanism, during which three newer cones of pyroclastic materials were built up within the giant crater, would seem to be quite at variance with general subsidence of the mountain."

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The Seismological Society of America has issued reprints of an article by Dr. Swartzlow, entitled "Recent Seismic Disturbances in Lassen Volcanic National Park." In the article Dr. Swartzlow counters to some extent the highly colored accounts which appeared in the press of the earthquakes of low intensity which occurred in May, June, and July 1936 in the park and vicinity.

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Through the generosity of former Director Albright the Service is in possession of the May 25, 1936, Supplement to the Rand Daily Mail, published in the Union of South Africa, which is devoted to "Kruger National Park: World's greatest Game Reserve." Mr. Albright received the Supplement from the explorer Merle LaVoy.

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Two articles regarding Australia's Lamington National Park have been forwarded to the Service by the Royal Automobile Club of Queensland. This area has many attractions for the
visitor, notably numerous cascades, waterfalls, aboriginal caves, and steep gorges.

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Mrs. White Mountain Smith, wife of the Superintendent at Petrified Forest National Monument, has an illustrated article in the April 1937 issue of Arizona Highways regarding the prehistoric petroglyphs carved in the sandstone cliffs at Petrified Forest National Monument.

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Another interesting article in the same issue of Arizona Highways, written by H. C. Frane of the Fred Harvey Transportation Department, concerns the Grand Canyon country in general. One of the illustrations for this article shows the wife of Assistant Chief Ranger Warren F. Hamilton feeding one of the numerous Kaibab squirrels found no other place in the world than on the North Rim of Grand Canyon. Another illustration shows Chief Naturalist Edwin McKee feeding piñon nuts to one of the park's friendliest birds -- a nuthatch.

One of the "rock drawings" or petroglyphs found in the Petrified Forest region and now on display in front of the Monument Headquarters Building. Photo by George Grant.
An article on the activities and organization of the Historical Section of the Army War College prepared by Major Jos. M. Hanson, Historian at Petersburg, will be published in the Journal of the American Military History Foundation.

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Parks and Recreation for March contained an article by Forester A. R. Thompson of the Washington Office entitled "Tree Cabling Standards."

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The following reviews of articles, prepared in bibliographic form, were furnished by Assistant Director Bryant:


Describes a remarkable concentration of hawks (12 pairs of Sparrow Hawks; 8 pairs of Red-tails; 2 pairs of Prairie Falcons; 1 pair of Bald Eagles) and owls (49 pairs of Barn Owls; many pairs of Horned Owls) because of "potholes" in the lava which make excellent nesting sites and abundance of rodent prey.


Smiley, formerly a Ranger Naturalist at Yellowstone and ECW Wildlife Technician, describes conditions on Mead Lake and lists 9 ducks, the coot, and four species of shorebirds. He believes the caprey will become resident.


Woodbury, formerly connected with the Yellowstone Hatchery, has continued work on parasites of birds and fish. In this note he reports on cestodes and nematodes found in white pelicans and American Mergansers from Yellowstone.


Lindsey, one of the authors, has been a ranger naturalist in Mount Rainier. The authors report on albatrosses, petrels, fulmars, gulls, and penguins out of the 54 species identified on the trip.


An outstanding contribution on the habits of this rarest of woodpeckers. Dr. L. M. Dickerson, ECW Wildlife Technician, is mentioned as a participant. Sound motion pictures for an additional record of this notable study in the Spring of 1935.


Mills, a former Ranger Naturalist in Yellowstone and ECW Wildlife Technician, reports on the numbers, distribution, migrations,
habits, food and diseases as a result of a special study in 1934-1935 under direction of the Wildlife Division. Disturbing is his report on feed conditions as "deplorable."

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Books:

NEW SPAIN AND THE ANGLO-AMERICAN WEST, two volumes of historical contributions presented to Herbert Eugene Bolton, is available by purchase from George P. Hammond, University of Southern California, University Park, Los Angeles, for $10.

Volume I deals with New Spain, the establishment and the spread of Spanish civilization, not merely in what is now Mexico, but throughout the entire southern portion of the North American continent, from Florida to California. Volume II deals with the Anglo-American west - its exploration, occupation, and organization - as a part of the westward movement of the English speaking people during the first half of the nineteenth century.

The documents and essays included in these two volumes were contributed to Dr. Bolton by twenty-four of his former students who are now occupying positions in leading universities and colleges of the United States.

In this connection it is interesting to note that a brother of former Director Albright went to Spain on a fellowship to carry on similar studies but died of typhoid before completion of his work.

Dr. Bolton is a member of the Service's Advisory Board on Historic Sites and Buildings.

The Service's Naturalist Division is preparing a bibliography of publications dealing with the geology of national parks and monuments. This bibliography is a growing file, but it has reached such a stage that it can be very helpful to students of the geology of park and monument areas. The Division will be glad to compile sections of this bibliography for those interested in specific areas.

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Considerable mention of White Sands National Monument is made in DESERT NEIGHBORS, a new text book edited by Edith M. Patch, Entomologist of the University of Maine.

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The first edition of Laura Thornborough's guide book to the Great Smokies, issued a month ago, has been exhausted and the publishers have returned to press for another edition.

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The following guides to wild flowers, known as "The Clements Books" by Frederic E. and Edith S. Clements, are on sale at the H. W. Wilson Company, 950-972 University Avenue, New York City:

- Flowers of Coast and Sierra
- Flower Families and Ancestors
- Rocky Mountain Flowers
- Flowers of Mountain and Plain
- The Genera of Fungi
- Plant Succession and Indicators

* Includes as a frontispiece "The Family Tree of Flowers", a pict-
itorial short-cut to the evolution and relationship of the flowers.

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Publications:

An edition of 5,000 copies of an 8-page illustrated leaflet regarding Timpanogos Cave National Monument has been printed. Practically all copies have been forwarded to Superintendent Patraw who has supervision over that monument. Funds for printing this leaflet were donated.

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Delivery has been completed on all of the 1937 national park circulars of information. The last circular delivered by the Government Printer was the one for Mesa Verde which was received May 21.

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ABOUT

Assistant Director Tolson, Chairman of the Organizing Committee of the proposed Interior Department Recreation Association, has been designated to represent the Service on the Executive Committee of that Association.

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Superintendent Boles posed with two recent Carlsbad visitors—former Director Albright and Mrs. Jack Anderson, daughter of Associate Director and Mrs. Demaray.

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FOLKS

Superintendent Boles posed with two recent Carlsbad visitors—former Director Albright and Mrs. Jack Anderson, daughter of Associate Director and Mrs. Demaray.

Mrs. Anderson accompanied her husband, who is a member of the Service's photographic staff, on a recent tour of the West which included visits to a number of park and monument areas.

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Service officials present at the National Recreational Congress held at Atlantic City, New Jersey, May 17 to 21, inclusive, were:

Assistant Director Bryant, Collaborator J. B. Williams, Field Coordinator Julian Salomon, Attorney Roy A. Vetter, Park Planner Sidney S. Kennedy, Recreational Economist Ian Forbes, all of the Washington Office; and R. C. Robinson, Recreational Planner for ECW Region 1, Richmond; Garrett Eppley, Regional Recreational Planner, Omaha, Nebraska; C. H. Cooley, New Jersey State Supervisor of Recreational Study; J. B. McGovern, Pennsylvania State Supervisor of Recreational Study; and Edward E. Ballard of Boston, Associate Recreational Planner for ECW Region 1.

Assistant Director Bryant served as Chairman of a group discussing nature activities in public recreation, and Field Coor-
ordinator Salomon spoke on the subject of camping in the recreational program.

***

W. J. Winter, former custodian at Casa Grande National Monument and now in charge of all archeological work in connection with the St. Augustine Historical Restoration being conducted by the Carnegie Institution, was a recent visitor to the Washington Office.

Verne Chatelain, Director of the St. Augustine Restoration Project, is now in Yucatan studying the Chichenitza Ruins.

***

Attorney Louis F. Frick of the Washington Office attended sessions of the Chicago Police School held early in May with a view to getting ideas which might improve the police system of the National Capital Parks.

The Chicago school, operated in conjunction with the Northwestern University crime laboratory, is rated as the best in the Nation.

***

Engineer John Cross of the Washington Office is now in Rocky Mountain National Park where he is making an engineering study of the Colorado River - Big Thompson Water Diversion Project.

***

Stuart M. Barnette, formerly a member of the Service's architectural staff, is now connected with the Branch of Historic Sites and Buildings. He is serving as consultant on architectural phases of the Historic Sites Survey and as coordinator of that Survey with the progress of the Historic American Buildings Survey.

***

Perry Meloan, editor of the Edmonson County News, Brownsville, Kentucky, has been named a member of the Kentucky National Park Commission.

***

Guy E. McCarty, former park ranger at Yellowstone, entered on duty as Custodian of Craters of the Moon National Monument on May 2.

***

Appointments for duty in Rocky Mountain National Park this summer have been given to the following: Naturalists Bert Fraser of Denver, Donald Obre of Lawrence, Kansas, and Paul Nesbit of Colorado Springs; Rangers James Berry of Waukegan, Illinois, Ernest Fiel of Ft. Collins, Colorado, Sam Hair of Chicago, Thomas Poe of Beaver, Pennsylvania, James Riley of Fort Collins, John Stivers of Boulder, Charles Terrell of Ft. Collins, Sterling Vaughn of Tucson, Arizona, John Welsh of Bloomington, Illinois, and John Winn of Fort Collins; and Fire Guards Herwil Bryant (son of our Assistant Director) of Washington, D. C., and Richard Knox of Denver.

***
Merlin Potts, who has been serving as ECW Senior Foreman Naturalist at Rocky Mountain National Park, has been given a permanent park ranger post in that area.

***

A National Park Service men's team defeated the Division of Motion Pictures of the Interior Department at a game of soft ball Wednesday afternoon, May 26, at the Reflecting Pool. The score was 37 to 11.

Assistant Director Wirth, in charge of the Branch of Recreational Planning and State Cooperation, pitched the nine innings for the Service and distinguished himself by stopping many infield drives. Fanning Hearon, director of the Division of Motion Pictures, pitched the entire game for his team and also did important infield work. James L. Whittaker of the Division played an outstanding game at second base, crediting himself with the three outs for the half of one inning. Rita Vermillion of the NPS Girls' Team took the bat in one inning and scored a two-bagger.

Associate Director Demaray was among the spectators at the game.

***

April 11 marked the tenth anniversary of the appointment of Superintendent Tillotson to his post at Grand Canyon, and the occasion was appropriately celebrated with a buffet supper at the Tillotson residence. Some fifty guests were present, including department heads, park operators, and those members of his force who were in the park ten years ago.

***

The Service has entered a team in the Government Soft Ball League for Girls of the District, and the players got off to a fine start by winning their first game, May 18, by the score of 16 to 3 over the Works Progress Administration. The games are played on Diamond Number Two, adjacent to the Reflecting Pool east of the Lincoln Memorial.

Members of the team are pictured on the opposite page. In front: Adelaide Walton and Rita Vermillion; Rear: Left to right: Katherine Hudson, Dorothy Moore, Elizabeth Oswald, Fannie Rubin, Mary Scott, Lydia Barton, Gertrude Upczak, and Eileen Hays.

Games scheduled by the team for June are as follows: June 2: Internal Revenue; June 9: W. P. A.; June 14: F. B. I.; June 21: Agriculture; June 25: Internal Revenue.

***

Ed Austin, who was road foreman in Yosemite National Park since 1917, retired from service May 1. During his employment, Mr. Austin witnessed drastic improvements in the Yosemite road system, including
the construction of the All-Year-
Highway, and the new Wawona and
Glacier Point Roads. He had an
active part in the widening of
the old Tioga and Big Oak Flat
Roads, as well as in the construc-
tion of bridle and footpaths
throughout the park.

***

A son was born to Mr. and
Mrs. Darrell Crunley of Yellow-
stone National Park on April 24.
Mr. Crunley serves as warehouse-
man in the park.

***

On May 20, a son was born
to Mr. and Mrs. Gottfried E.
Weber. Mr. Weber is connected
with the Control Section, Branch

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Ethel Landys of Montross, Vir-
ginia, and James P. Hudson of
George Washington Birthplace Na-
tional Monument, were married at
Montross on May 4. Following the
wedding the couple left for a
visit to Carlsbad Caverns.

Mr. Hudson is a graduate of
the Yosemite School of Field
Natural History, class of 1932.

***

Patricia Griffin and Charles D.
Carter, Jr., Resident Landscape
Architect at Mesa Verde National
Park, were married at Santa Fe,
New Mexico, on April 15.

***

Assistant Chief Ranger and
Mrs. John Wegner of Yosemite visited
a number of Southwestern parks on
their recent vacation. Death Valley,
Boulder Dam, Zion and Bryce Canyon
and Grand Canyon were all on their
interesting itinerary. High light
of their trip, however, was a visit
of the Hopi pueblo of Moencopi east
of Grand Canyon.

BIRTHS

On May 10 a daughter was born
to Mr. and Mrs. Kenneth E. Disher.
Mr. Disher is Associate Museum Expert
in the Washington Office. The new
arrival, who weighed 6 pounds, 15
ounces at birth, has been named Pamela.

***

A daughter was born to Park
Naturalist and Mrs. Arthur J.
Stupka of Great Smoky Mountains
National Park early in May.

***

Dorothy Gatewood of the Per-
sonnel Division, Department of the
Interior, and Harold H. Hawkins of
the Branch of Research and Educa-
tion, Washington Office, were
married in Washington, D. C., on
May 14. They spent their honey-
moon in Bermuda.

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DEATHS

George V. Wright, payroll clerk, National Capital Parks, died at Garfield Hospital, Washington, on May 9. Mr. Wright had been in bad health for some time.

During the World War Mr. Wright served in the United States Navy, with a rating of Chief Yeoman. Burial was in Arlington National Cemetery with full naval honors.

* * * * * * *
Let others praise the broad highways,
Whose cars speed up and down;
My song is of a little road,
That strolls away from town;
A little road that saunters on,
Tall pines on either side,
Green ferns a-growing soft and cool,
Where small, wild creatures hide.

There, chattering squirrel and screaming jay
Pursue their ancient feud,
Which, with each season's crop of nuts,
Is lustily renewed.
There, every rough and rugged rut
Is like a gruff, old friend,
Who says, "In just a moment, now,
You'll reach your journey's end!"

There, every turn, and twist, and bend,
Reveals new beauty rare,
And it's a tonic, just to breathe
The forest-scented air.
Let those who will, take book and bag,
To sleep 'neath foreign sky;
Just leave for me my little road-
That turning, twining, twisting road,
That laughing, lazy, little road,
That leads where trout leap high!

--Peggy Kniskern James
Des. Robert Reynolds
Knoxville Penn.

Sr. Brother Samuel Hagin, Shell Ford Co.

and many others the rest.