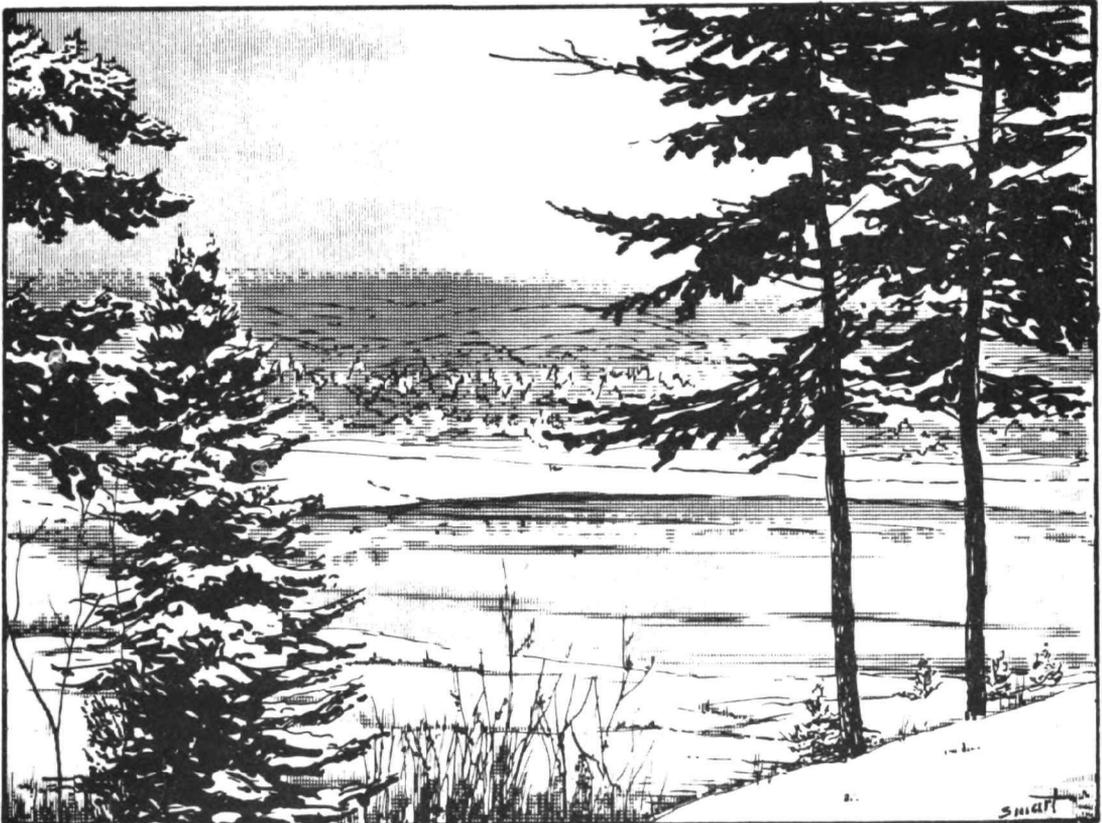


THE REGIONAL REVIEW



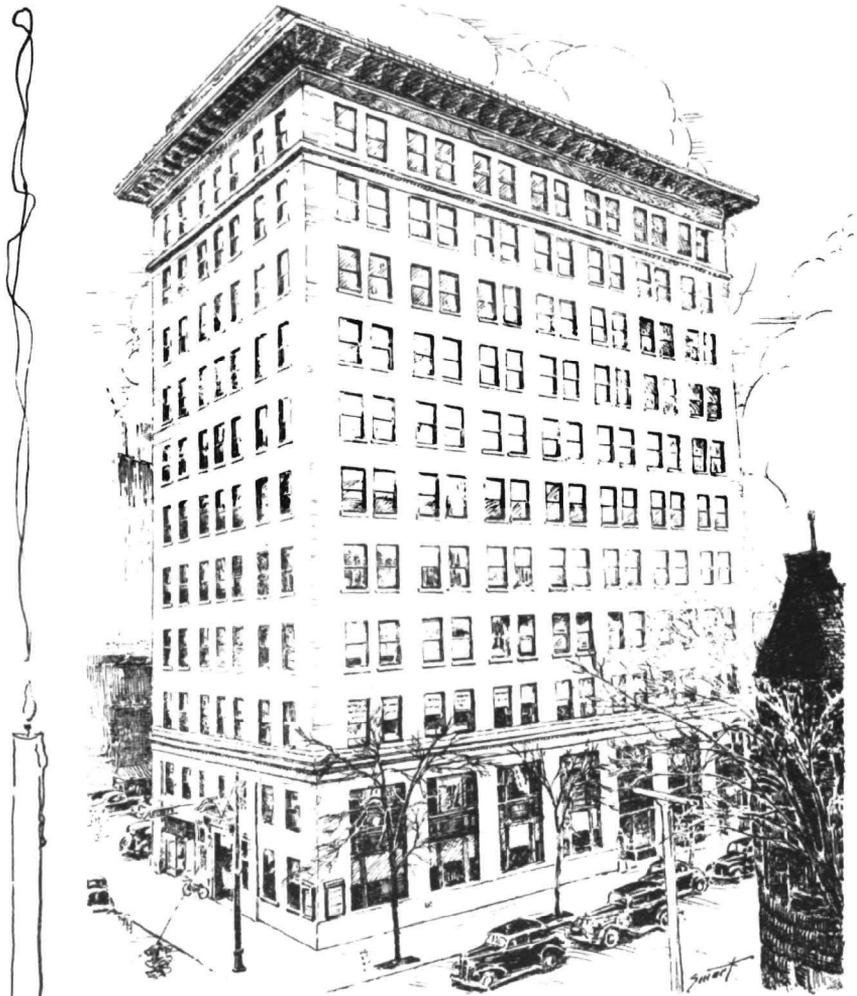
HICKORY RUN R.D. AREA

PENNSYLVANIA

NATIONAL PARK SERVICE
REGION ONE
RICHMOND VIRGINIA

DECEMBER 1938

VOL. 1-NO. 6



REGION ONE HEADQUARTERS
RICHMOND VIRGINIA

301 GRACE STREET

The Regional Staff extends
cordial wishes for a
Merry Christmas and a
Happy . . . New . . . Year.

THE REGIONAL REVIEW

VOL. 1 - NO. 6

DECEMBER 1938

CARL P. RUSSELL
REGIONAL DIRECTOR



HUGH R. AWTREY
EDITOR



SAMUEL O. SMART
ART EDITOR



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ISSUED BY THE
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SECTION UNDER
DIRECTION OF
IRA B. LYKES

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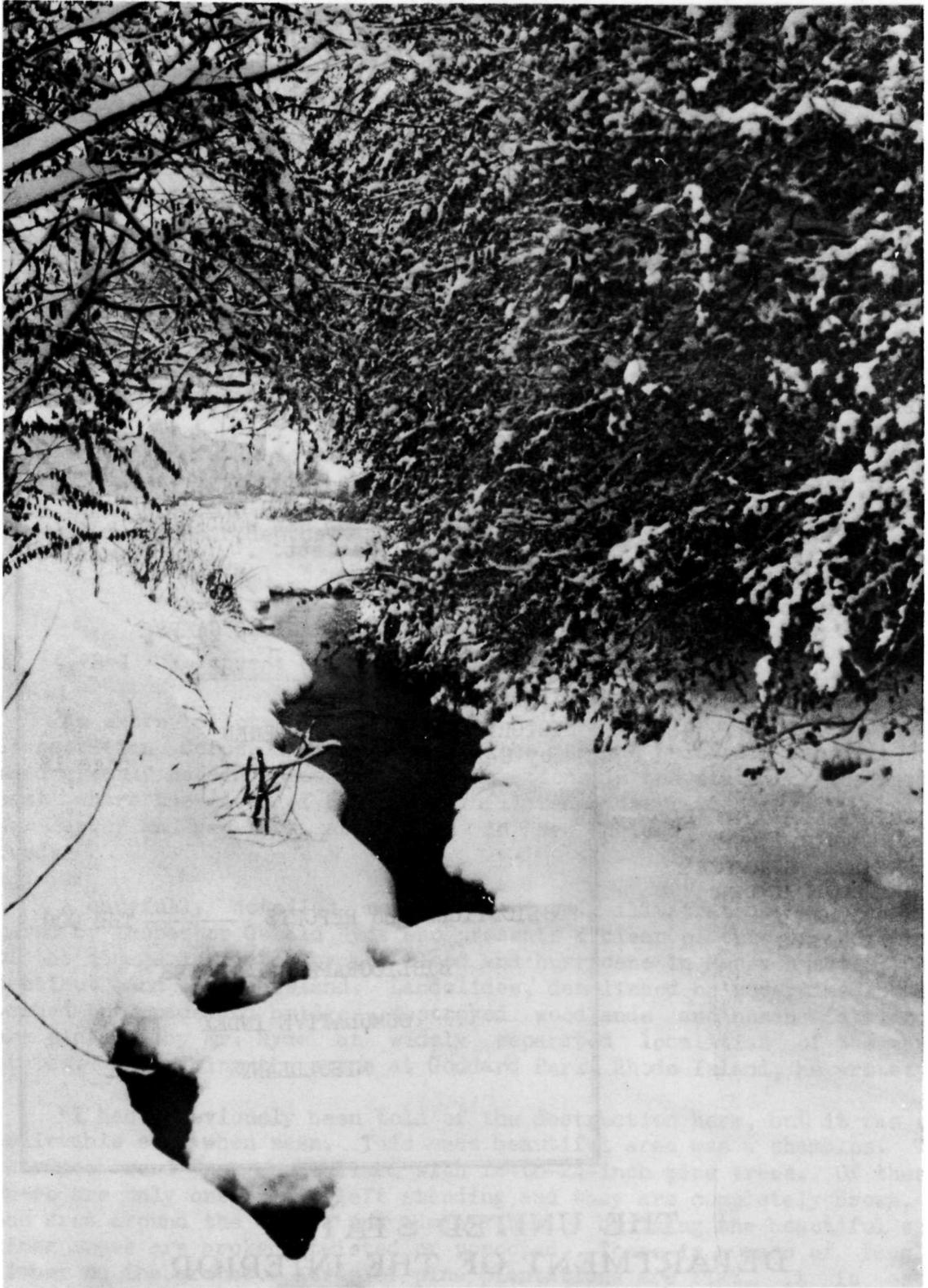
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THE UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION ONE ~ RICHMOND, VIRGINIA



GREAT SMOKY MOUNTAINS NATIONAL PARK

NEW HORIZONSA Letter Addressed to the Workers of Region One

By Carl P. Russell,
Regional Director.
(Supervisor-Designate of Research and Information)

Not many months ago I heard a speaker state, publicly, "The National Park Service is progressing backward: Progressing like a crayfish with its tail foremost and its eyes focused upon past events." He used the warped simile to arrest attention. He succeeded.

The National Park Service is not moving tail foremost nor does it have its eyes focused upon past events. Perhaps some of its critics manifest inverted vision.

After seventeen months of some association with the broad program of Region One I find it easier to look into the future than to review the events of the past. I do not mean to imply that there is no satisfaction in a backward glance; quite the contrary. My Region One assignment has been a most pleasant and enlightening experience. But the future is so full of obvious opportunities that it presents a picture stirring to contemplate.

One's eyes may be opened to those opportunities when he has gained a vantage point from which to look both forward and back. He sees for example, that the so-called expansion of the National Park Service program is not merely the assumption of added new duties by certain units of the Service, but that it is the manifestation of an advance in sociological thinking; the result of a public action that has brought about a new attitude toward parks generally. It is a trend which the public itself may not wholly understand. Perhaps it should be elucidated for the layman and park employee alike. I may say quickly, however, that it is not my intention to elucidate here.

As a regional worker I have been especially conscious of thoughts expressed by one or two cooperative friends outside of the Service who doubt the security of a Service program involving expansion into the general field of recreational administration. They have said with sincerity that they believe our participation in the administration of recreation on State Park areas, on Recreational Demonstration Projects, and elsewhere on Federally owned lands, will be accomplished at the expense of ideals and with dilution of administrative strength. It is not necessary to review the history and justification of the recreational study conducted by the Service. The story is readily available in the report, "Recreational Use of Land," by the National Park Service for the land planning committee, National Resources Board, Superintendent of Docu-

ments, 1938. That the conduct of this study has broadened the views of many Service officials is an obvious fact; that it has injected a new element into the Park Service personnel is likewise true, and it is agreed that it has demanded the best thought of some employees, who, except for the recreational program, could have applied themselves to studies in National Primeval Parks. But the important truth in this connection seems to be that ultimate gains will accrue also to the scenic parks since the recreational areas provided under the study are destined to relieve some of "the destructive effects of mass visitation" to National Parks, so feared--and reasonably so--by the same friends who look askance at the Recreational program.

I believe that our work in recreation and land planning plays a most important part in laying the foundation upon which rests the superstructure of the Service edifice. This long-range planning provides the equipment and develops the technique essential to proper handling of problems in National Parks. It orients the Service in the field of recreational problems and makes for discernment of critical spots in the Federal areas. Through it we are prepared to make proper appraisal of current methods used in meeting visitor demands in National Parks. One grasp of recreational problems in Tennessee brings direct results in planning for Great Smoky Mountains National Park; intimate association with the state program in California makes for intelligent procedure in Muir Woods National Monument. In short, the understanding of broad recreational needs in the entire United States that the Service thus has gained gives the very best preparation for the administration of National Parks. Being so prepared we may hope to solve the rather staggering problem of how to preserve the National Parks and at the same time make them available "for the enjoyment of the people,"--a dual responsibility imposed by law when the Service was established.

To those old friends in the field who have not had occasion to enter into the administrative scheme set up in the regional office I should like to say that a remarkable coordination of all activities characterizes the organization. Dividing lines between groups, regular NPS, CCC and ERA do not exist. Objectives in planning, development, preservation and interpretation are defined and known to all. The program of the region, varied as it is, is very well comprehended by each technician. All are working toward a common end in advancing the new park idea. Traditions are not forgotten but neither do they restrict in meeting new situations. The work of Region One differs widely from the early program of work in western parks but it is no less a thrilling program, and definitely it is as great an undertaking in service to the public. The responsibility of the historian is notable and the approach of every worker involves consciousness of historical values. The ideals of preservation of the American scene are quite as applicable in historical areas as in primeval areas. The technique, of course, is specialized and therein lies some of the distinction of Region One. Responsibilities of the recreation specialist, the historian, other technicians and the general administrator are focused upon problems in State and Federal areas, alike, in good coordination. In the more than 300 areas with which the region

is concerned is presented a cross section of the Eastern United States, - geology, biology, prehistory and history. In the Region One staff is found a group of workers capable of preserving and presenting that great picture.

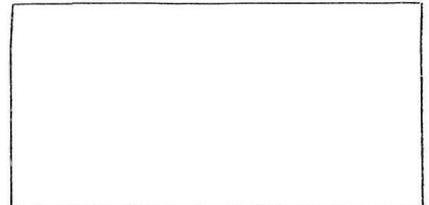
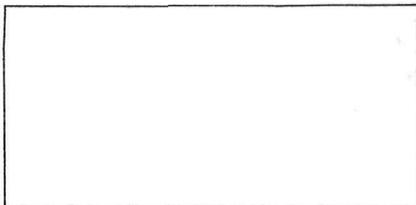
The suspected "dilution of administrative strength" has not been felt. On the contrary administrative offices are so adequately filled as to maintain a most satisfying and continuous supervision of the long-time program and, at the same time, provide great flexibility in the assignment of executives to the many special tasks of importance which arise in the field. The capacity of individuals holding key positions has been tested by long trial and the mobility of this central administrative staff is adequate.

In the will of the forty men holding responsible administrative positions in Region One to adhere to ideals of public service lies an administrative strength that, in my opinion, will withstand any critical scrutiny. In addition to some 45 state, county, and metropolitan commissions, and more than fifty National Park Service Superintendents and Custodians, this group of executives deals with scores of organized bodies of private citizens. The record of transactions and evidence of progress reveal a notable success in meeting the exacting demands of nearly half the nation. My congratulations go to the untiring leaders of the regional organization who, consistently, have applied themselves in advancing the defined program of work and in developing the regional consciousness of Service objectives now so evident throughout the States.

In coming to Region One, I anticipated pleasing associations and enlightening experiences. They have exceeded anticipations. I shall always be grateful to the many friends in the Richmond Office who have made my place in the organization a pleasant one and my path an easy one. Their self-effacing support has been all-important in the brief role I have played. They will, I know, give to Mr. Tillotson the same cordial welcome and unstinted assistance. Congratulations, "Tillie", on your prospects!

To all in the region I extend warm greetings and the best of Christmas wishes. I regret that I could not make personal calls in all of the areas where work is in progress, but I value the new friendships that I did make and I recognize in the projects inspected the new Service which holds a promise of horizons destined to persist.

It will please me to see Region One friends in Washington.



MAMMOTH CAVE YIELDS NEW WONDERS

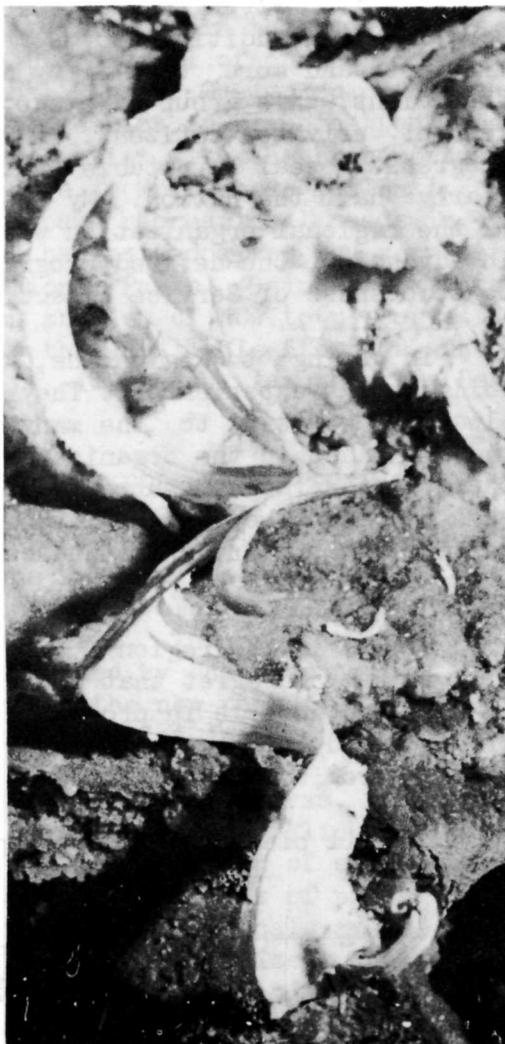
By Donald C. Hazlett,
Assistant Inspector

Since the Mammoth Cave of Kentucky was first opened to visitors in 1816, it has been estimated that more than a million persons have viewed its wonders. While most of these visitors have made the pilgrimage mainly for the novelty and the scenery which the Cave affords, some have gone there for scientific purposes; yet all have been impressed with the Cave's great magnitude—its voluminous chambers and its seemingly endless avenues. To all those who have trodden its famous passageways and observed the numerous cross passages, some of them merely crawl-ways, where eternal darkness and mystery reign, the announcement of the discovery October 9, 1938, of a great new passage did not come as a surprise.

In discussing this new discovery an attempt will be made to explain the manner in which Mammoth Cave was formed and to describe some of the most outstanding features found in it.

Mammoth Cave National Park lies in the south-Central part of Kentucky in Edmondson, Hart and Barren Counties. The absence of surface streams is one of the striking features of the region. Rain which falls on the surface drains into sinks and flows in underground channels to Green River, the only openly running stream in the immediate area. Such a drainage system is characteristic of limestone regions, and a sink-hole topography is an accurate indicator of a cave area.

The limestone in which Mammoth Cave has been developed was formed in the sea which covered the area in early Carboniferous time. This limestone is composed of two formations, the Gasper oolite and the St. Genevieve limestone*, which have a combined thickness of about 250 feet. During Pennsylvanian



*Butts, Charles: "Mississippian Series in Western Kentucky." Ky. Geol. Survey, 1917.

18-Inch Gypsum Spiral
in Newly Found Section

time a great thickness of coarse sediment was deposited on top of this limestone. At a much later date -- following a regional uplift -- these conglomeratic beds were eroded, and the gravels which are found on the higher hills today probably represent the level at which Green River once flowed. As a new cycle of erosion started and this stream began down-cutting in the limestone, solution channels were afforded which initiated the formation of Mammoth Cave.

Geologically, Mammoth Cave is very young, dating probably from the glacial epoch. It was formed during the last erosion cycle -- while Green River was eroding its present valley. Like all limestone caverns, it owes its entire formation to the slow action of rain or carbonated water upon the limestone strata in which it occurs. While limestone, composed largely of calcium carbonate, is only slightly soluble in water, it becomes much more soluble in water which contains carbon dioxide or organic acids. Rain water charged with carbon dioxide absorbed from the atmosphere and leached from decaying vegetable matter on the surface is able therefore to dissolve the limestone and carry it downward.

Thus, as rain water trickled down through crevices or joints of the limestone and flowed horizontally along bedding planes, gradually dissolving some of the limestone as it went, the passageways were enlarged until good-sized streams could enter. The process of erosion or abrasion was then added to that of the solvent action of water, and the enlargement of the passages went on much more rapidly. Such enlargement, however, depended upon several variable factors -- the amount and character of the sediment carried by the streams, the resistance and comparative solubility of the limestone, the volume and rate of flow of the water in the passages, etc.

As Green River deepened its valley, the underground streams which drained into it either cut their passages vertically downward, forming what resemble box canyons, or they abandoned them as new channels were opened and enlarged at a lower level. Four of the five levels in Mammoth Cave represent these abandoned channels; the highest level is the oldest and probably was formed when Green River was flowing in a shallow valley; on the fifth, or lowest, level is Echo River, one of the present active streams.

Echo River, as well as the other streams in Mammoth Cave, has a special fascination for many people. Visitors thrill at the thought of taking a boat ride 300 feet beneath the surface. The river is 20 to 60 feet wide, 10 to 30 feet deep, and may be explored by boat for several miles before the ceiling becomes too low to allow passage. It flows through a symmetrically-arched corridor 10 to 35 feet high during the dry seasons. In its waters are found blind fish -- fish that have lived in darkness for so many generations that they have become sightless. Other creatures to be seen in the damper and less frequented portions of the Cave include blind crickets, which make their way along the walls with the help of long sensitive feelers, and mollusks, beetles, spiders, worms, crustaceans and cave rats. Bats also spend a part of their time in the cave and may be seen flying about in some of the avenues or hanging, head downward, from the ceiling.

Some of the most interesting features in Mammoth Cave owe their existence to solution and abrasion. The visitor may walk miles and miles through meandering subterranean stream channels which bear striking resemblance to canyons, although roofed over by rock and thus protected from the usual agencies of weathering. In many places the walls of these channels are vertical; in others, where the streams worked laterally, the walls now overhang the stream beds. One of the finest examples of such a channel is The Narrows, or Beckey's Alley. This narrow slit in the rocks is in places only 18 inches wide while its walls are 50 to 80 feet high.



Stalactites, Stalagmites, Columns and Flowstone in Violet City.

Perhaps the most impressive features resulting from solution and abrasion are the pits and domes, of which nearly 100 are known in Mammoth Cave. Mammoth Dome, the largest, consists of several domes close together with the partitions broken down to such an extent that a cavity of irregular outline exists, about 400 feet long, 150 feet in maximum width, and 192 feet high. Pits and domes are formed in the same manner and the terms are interchangeable according to the elevation of the observer who views them. Pits (or domes) are openings which extend vertically downward (or upward) through the layers of rock. The process of their formation may be explained as follows: Rain water collects on the surface in sinks and flows through underground passages until it finds a joint or vertical break in the rock, then a waterfall develops. These falls, through solution and abrasion, enlarge the joint or crack into a pit (or dome).

When Green River deepened its valley many of the old underground channels were drained of their waters and stream erosion along these channels ceased. Solution by underground waters was retarded greatly or stopped altogether. In some parts of the upper chambers the deposition of travertine (calcium carbonate) commenced. Such deposits are found today in the greatest abundance in the higher levels of the Cave, relatively close to the surface. The process of formation of these travertine deposits may be described in brief: After calcium carbonate is dissolved from the overlying limestone by percolating ground water, it is carried in solution downward through crevices and joints until the underground cavity is reached. The air of the cave evaporates the water and provokes the escape of carbon dioxide from it, thus compelling it to deposit its load of calcium carbonate. Travertine deposits vary greatly in size, shape, form, color and abundance, depending on the conditions, both physical and chemical, which prevailed at the time and the place deposition

was made. The most common of the many types of travertine deposits are stalactites, which resemble icicles and hang from the ceilings, stalagmites, which build upward from the floors, and flowstone, which covers the walls and floors.

The newly-discovered, yet only partly explored, section of Mammoth Cave contains a profusion of these travertine deposits. Stalactites, snow white in color, have been found by the hundreds along the ceilings of certain passages. The less common branchlike stalactitic forms, helictites, have developed in one location. Stalagmites have been found, and in a side passage off the main avenue a stalactite and a stalagmite have united to form a peculiarly-shaped column, approximately seven and one-half feet high.

If the ground water which enters the cave carries calcium sulphate in solution, the resultant deposit is gypsum. Such deposits include crystalline and fibrous gypsum, incrustations of gypsum, and curious curved forms, often grouped in rosettes, etc. A portion of the recently discovered section of Mammoth Cave is adorned abundantly with these flower-like masses. For several hundred feet in one passageway the rosettes completely cover the walls, ceiling and floor. These decorations are more lavish and spectacular than any heretofore found. Many of the flowers have a diameter of 14 inches, while the petals of some protrude ten inches or more.

The arched ceiling of Snowball Dining Room is decorated beautifully with incrustations of gypsum, so protruding in spherical masses as to resemble snowballs. In this room, which is a portion of one of the abandoned stream channels, 267 feet below the surface, a chicken dinner is served daily (for those taking the all-day cave trip), and drinking water is obtained from the "Upside-down Well," cartooned by Robert Ripley. This well was drilled from the surface into a small side passage adjoining the main corridor in which the dining room is located. By means of a novel system of packers and pipes it is arranged so that the water can be taken



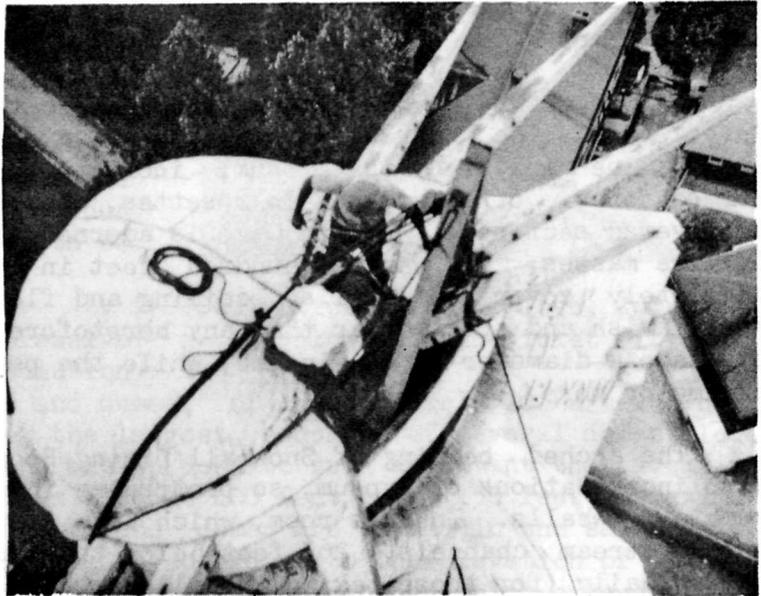
Boats on Echo River, One of the Underground Streams in Mammoth Cave National Park, Which Flows 360 Below the Surface.

from the bottom of the well by the force of gravity. Surface telephone and power wires lead through the well into this portion of the Cave.

The "historic" part of Mammoth Cave contains much of interest to the historian and archeologist. Evidence of prehistoric man's occupation is registered unmistakably in certain portions of the second and third levels. But the newly found section shows no trace of its ever having been entered before its discovery a few weeks ago. The avenues in their entirety are in the natural state.

STATUE REOPENED

Fifty-two years ago in October President Cleveland dedicated the gift of France to a sister republic and Liberty Enlightening the World began her dual task of upholding the torch of freedom and battling the all-year elements in New York harbor. Like all earthly garments, her classical robes of 3/16-inch copper, skilfully draped by Bartholdi over her 152-foot stature, finally began to show wear at the seams and the colossal folds of her dress let the rain



Removing Spike from Crown (View from Torch)

come in. Besides the disrepair of her wardrobe, other defects developed. Extensive renovation accordingly was begun in the summer of 1937 and, by last spring, restorative operations necessitated closing the statue to the public.

Visitors were readmitted this month after workers under supervision of the Service had: 1) overhauled, cleaned and repainted the structural steel skeleton; 2) repaired the anchorage attaching the copper exterior to the frame; 3) removed the antiquated, unsafe steel stair and installed a reinforced concrete stairway from the lower landing to the top of the pedestal; 4) repainted the entire interior of the statue and pedestal; 5) rebuilt the seven spikes of the headdress (They range from 11 feet 5 inches to 7 feet), and, 6) provided a modern electric distribution system for interior illumination. As a result, the Statue of Liberty National Monument, most famous Service area of the recent era, has been made safe again and far more convenient for the thousands of Americans who visit it annually.

Meanwhile, several features of the general program of development for Bedloe Island are in progress. Demolition of the buildings which were used by the Army is under way and construction of a seawall is advancing.

HOW A STATE OPERATES ORGANIZED CAMPS

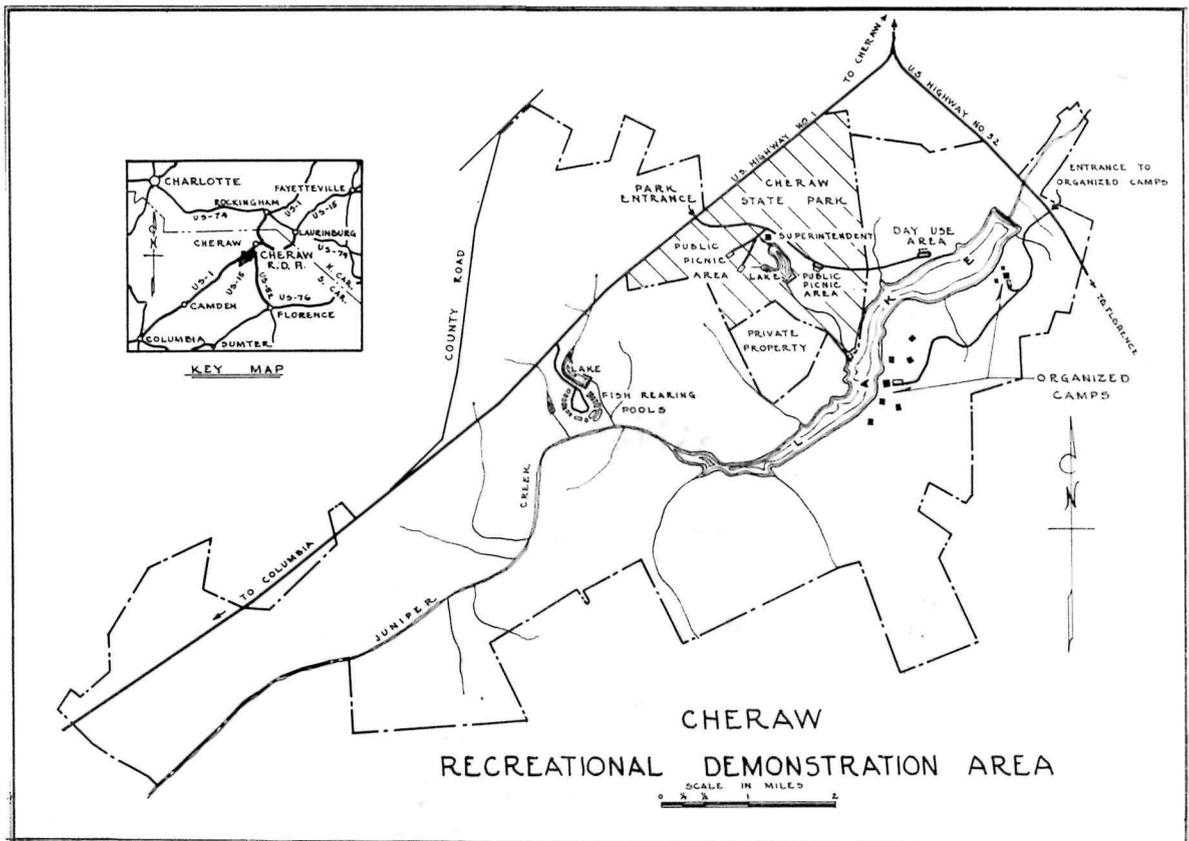
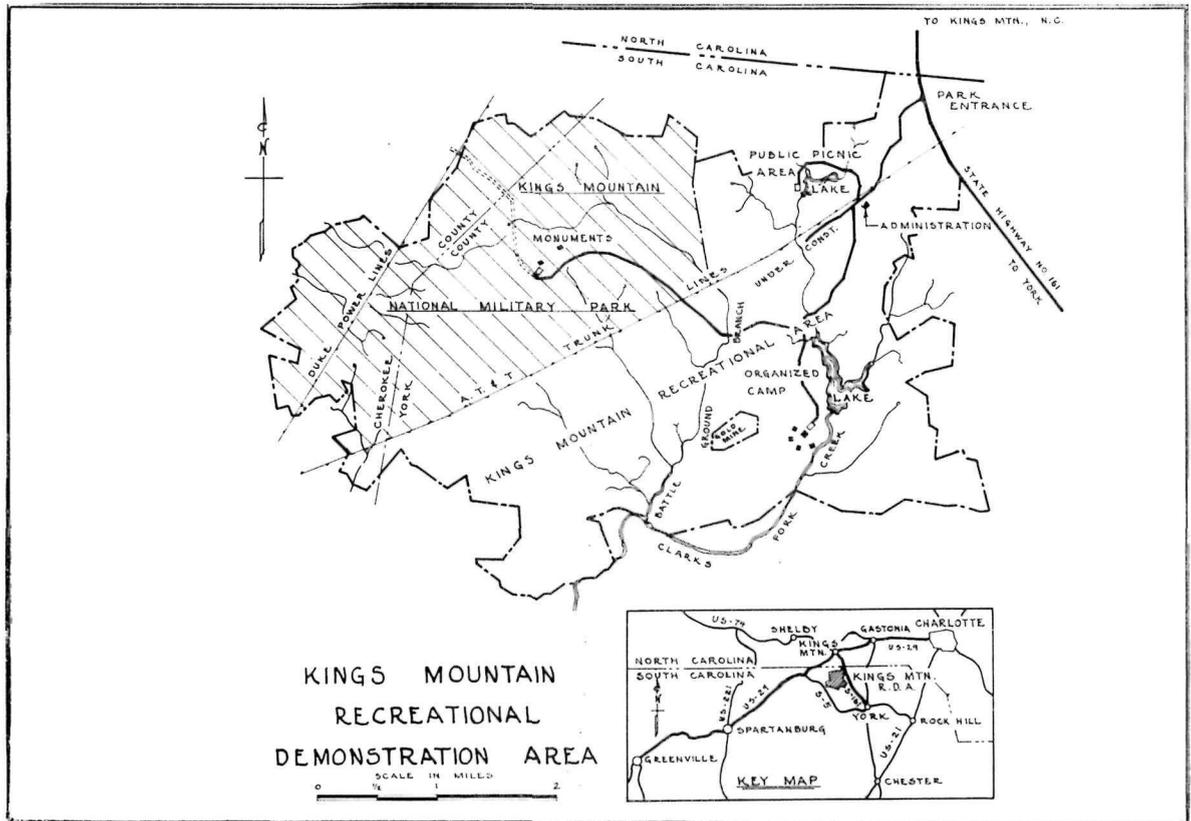
By R. A. Walker,
 Assistant State Forester in Charge, Division of State Parks,
 South Carolina State Commission of Forestry.

The group camps at Kings Mountain and Cheraw Recreational Demonstration Areas were leased from the National Park Service by the South Carolina Commission of Forestry for the summer of 1938. It had seemed evident for some time that there were no organizations in the State able to assume the obligations of taking these camps for the whole summer, equipping them and supplying the necessary personnel to insure proper operation. It did appear, however, that there were many organizations interested in short-term camping of one, two and three weeks, with definite, worthwhile programs but with no facilities, equipment or trained personnel to make camping possible. It also was apparent that the organizations, if provided with those essentials, would conduct short-term camps and that their activities would embrace many young people in the low-income groups and other deserving persons.

The Commission felt that, if it should take over the leases on the camps, equip them properly and supply the necessary administrative personnel, the cost of these items could then be prorated among the short-term users so



AT CHERAW



that the expense to each would be within reason. Not desiring to make any profit from the enterprise, the state agency decided to make a rate of \$5 per person per week, which, if the camps were kept reasonably well filled, would be sufficient to defray all expense save that of equipment. The leases therefore were taken by the Commission and the camps furnished with kitchen and dining room equipment, cots and mattresses (some supplied by the National Park Service), life guard and first aid equipment, and a limited amount of athletic equipment. Personnel supplied at each camp consisted of one camp administrator, one life guard, one cook and two helpers, and one dietitian.

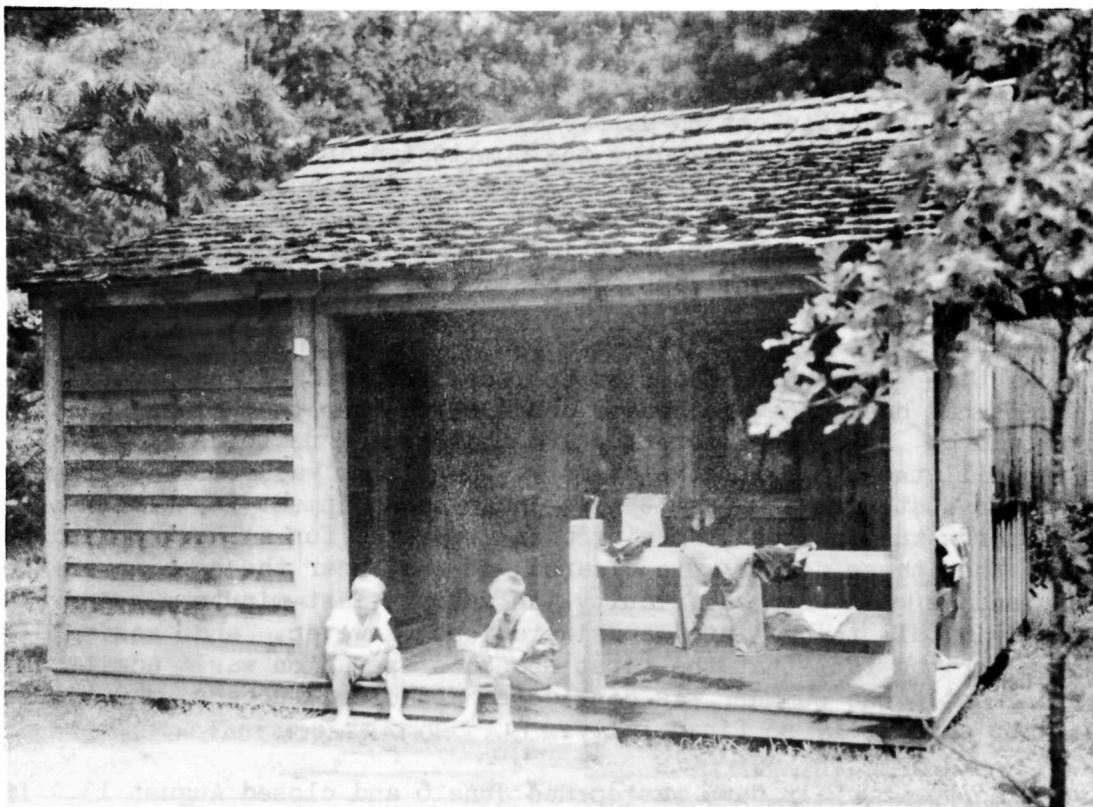
Some time after the decision to lease was reached and several reservations had been made, it became doubtful whether the Kings Mountain camp would be ready for occupancy and that caused us to delay our efforts to fill two camps for the summer. There also was some uncertainty whether the State could manage the purchase of equipment for Kings Mountain (Cheraw was equipped, having been operated for a short period in 1937). When these doubts were cleared it was near the opening of the season and we had some difficulty in making last-minute reservations. Taking all things into consideration, however, and making allowances for the fact that the first season's operation was admittedly an experiment, the summer was considered a decided success, even though it was not completely so financially.

The Kings Mountain Camp was opened June 6 and closed August 13. It was operated each week during that time except from July 4 to 10 and a few scattered days between reservations. Six different organizations used the facilities: The Childrens Bible Mission of Charlotte, N. C.; the Salvation Army of North and South Carolina, Stanley County 4-H Club, Armstrong Memorial Presbyterian Church, Gastonia, N. C.; Piedmont Boy Scouts of South Carolina, and Gaston County 4-H Club.

A total of 700 campers made use of the camp for a total of 4,416 camper days. Without the facilities offered, these organizations admit that they probably could have had no encampment during the summer and we feel safe in saying that 700 young people had opportunities under our method of operating who otherwise could not have camped at all. There was difficulty concerning the size of some of the groups. One had only 46 campers, one 52 and another 57. It is believed that 75 are necessary to meet expenses.

Receipts and Expenditures at Kings Mountain

RECEIPTS	Camping Fees and Extra Meals	3,175.20	
	Canteen	249.14	
			3,424.34
EXPENDITURES	Salaries	845.45	
	Travel	58.94	
	Food Supplies	2,064.61	
	Fuel Supplies	21.00	
	Laundry Supplies	35.29	
	Medical Supplies	16.88	
	Educational Supplies	38.48	
	Agricultural Supplies	5.85	



Boy Scout Campers (upper) at Sleeping Cabin. (lower) Awaiting Lunch at
KINGS MOUNTAIN RECREATIONAL DEMONSTRATION AREA, SOUTH CAROLINA.

Clothing Supplies	2.60	
Other Supplies	3.05	
Merchandise	235.29	
Rents	576.00	
Household Equipment	602.48	
Educational Equipment	<u>24.25</u>	
		4,530.17
Deficit		1,105.81

Although the total deficit appears high, about \$625 of the \$1,105 can be accounted for by equipment purchases. Only about 20 per cent of this cost should be regained in one year, so \$500 might be classed as outside of operation expense. The deficit then would be approximately \$600 for the summer.

The Cheraw Camp was opened June 8 and closed August 18 and was operated each week during that time except the weeks of July 4-10, July 24-31 and a few days between reservations. The Sumter Y.M.C.A., Plaza Presbyterian Church of Charlotte, Board of Christian Education of Orangeburg, and the Horry County 4-H Club were the organizations using the site. In addition, individual campers were received during the periods June 12 - 26 and August 3 - 14. A total of 631 campers made use of the camp for a total of 2,804 camper days.

As in the case of Kings Mountain, the greatest cause for concern at Cheraw was the number of days during which the camp was unreserved and during which time salaries of personnel continued. Also, as at Kings Mountain, many of the groups were far smaller than they should have been, but this condition, we believe, can be corrected by the next season.

Receipts and Expenditures at Cheraw

RECEIPTS	Camping fees and extra meals	2,170.17	
	Canteen	<u>302.00</u>	
			2,472.17
EXPENDITURES	Salaries	655.02	
	Water, heat, light & power	29.40	
	Contingencies	6.70	
	Repairs	11.00	
	Food Supplies	1,366.19	
	Fuel Supplies	51.00	
	Laundry Supplies	44.89	
	Medical Supplies	23.31	
	Educational Supplies	28.43	
	Clothing & dry goods	5.82	
	Other Supplies	15.64	
	Merchandise	214.47	
	Rents	720.00	
	Insurance	57.00	
	Household Equipment	1.95	
	Bathhouse Equipment	<u>7.25</u>	
			3,238.07
Deficit			765.90

The deficit is attributed to the vacant dates and failure of some of the organizations to enter the number of campers anticipated when the reservations were made.

The methods of operation were considered very successful and met with complete satisfaction of organizations using both camps. The camping groups, although required by the State to have a well planned program, were solely responsible for its execution, but had no duties in connection with purchase or preparation of food or other administrative details, since these were handled by the State employees. The State employees were available to help the camping organizations at their request and insofar as the State employees' administrative duties would permit. Such help with the program usually consisted of promoting and organizing athletic games and field events, nature and forestry hikes and similar activities. This method of operation is logical, since the administrative part of the camp was run continuously, accounts were kept easily and organizations found no need for lengthy periods of orientation. They simply moved in and started their program immediately.

Some of the camping standards required by the National Park Service were adopted by the State, and additional requirements were in turn placed by the State on the organizations. For instance, each camper was required to "check in" with the State's Camp Administrator and to present a health certificate and, in the case of minors, parents' permission to attend camp. A camp doctor was not always on duty at the camps, but arrangements were made to have one present at each checking in and to have one always on call. The life guards at each camp had a first aid certificate to care for minor injuries.

The duty of the camp dietitian was to plan meals, supervise the preparation of food and enforce rules of cleanliness and sanitation in the kitchen. From observation during the past summer, it is believed that this position could assume more responsibilities and further duties and it is our plan to have next summer a trained nurse who also has had a course in dietetics.

Campers themselves were charged with the responsibility for clean up in and around their cabins, served themselves in the dining room and cleared the tables and cleaned them after each meal. Regular inspections of the camp were made daily by the administrator in company with the director of the organization to insure that regulations as to cleanliness were being adhered to.

The life guard at each camp held a Red Cross Aquatic Instructor's Certificate and had complete charge of the swimming area. Organizations were required to furnish help in the form of junior and senior life savers. Instruction in swimming and water safety was given by these men.

As stated above, we were confronted many times with unsatisfactory cases of organizations bringing in far less campers than had been expected. Our terms did not fix a minimum fee and we did not feel we could charge more than \$5 for each camper. Next year, however, before we make a reservation, the reserving organization must guarantee 90 campers for Cheraw or \$450 minimum fee per week and 75 campers for Kings Mountain,

or \$375 minimum fee per week. With this guarantee required, together with our fair assurance that we can have both camps filled next season to capacity, we feel that the summer of 1939 will be highly successful in all ways. Of the ten organizations using both camps last summer, all have signified intention of using them again, and most of them have made definite reservations.

The State Commission of Forestry went into the camping field in a manner different to that followed by any other State. It was an experiment that has proved it will work and the experience of the past summer, from which we may profit and iron out the kinks, has laid the basis for a definite policy for our organization in its activities in the field of organized camping.

By bringing camps within reach of those organizations which are lacking in funds, and by the natural encouragement that the simplicity of the system offers, we feel we have widened considerably the scope of these fine camps, doubling their contribution towards the betterment of the health and character of the youth of this and neighboring States. They are being placed at the disposal of those most in need.

SOUTH CAROLINA VENTURE CALLED 'EXPERIMENT OF GREAT VALUE'

Herbert Evison, Associate Regional Director, asked by The Review to comment on South Carolina's interesting experience in the operation of two organized camps last season, recommended it as an example which other state and public agencies possibly may follow "with profit."

"The South Carolina venture in group camp management and operation was and is an experiment that appears to me to be of great value," said Mr. Evison. "It is an example which possibly may be imitated with profit by state or other public agencies elsewhere. Three years of experience with the problems of finding suitable operating agencies for group camps has indicated that our normal arrangements frequently do not open the way for camping experience to those who really need it most, and that in other cases even if the way is opened it is utilized with reluctance or not at all because tinged with charity. With such an agency as the state undertaking the operation, it can make its own rules of selection on the basis of the individual's actual need, regardless of membership in an organization or of any other factors which have tended to limit the user field.

"It is true that, as the record frankly shows, this year's operations, both at Cheraw and Kings Mountain, resulted in deficits, and some of the reasons why are plainly shown. It hardly can be expected that any camp will be used to approximate capacity unless there is an ample period in which to work out a program and to building up patronage. Furthermore, the weekly camper fee had to be set more or less arbitrarily since supporting experience was largely lacking. I feel convinced that, with plenty of time for advance planning, and with a weekly camper fee slightly elevated so that the State is not compelled to take all the risks of the operation, the venture can be made to stand on its own feet. Those of us who have watched the steady and sound advance which South Carolina has made in the field of state park development and administration certainly hope so."

HISTORIC GREAT SWAMP OPENED AT LAST

By Gerald H. Hyde,
Inspector for Massachusetts and Rhode Island.

The Great Swamp at South Kingston, Rhode Island, was the site of the last stand of the Narragansett Indians in King Philip's War against the Colonists. In the bloody engagement which took place there on Sunday, December 19, 1675, troops from the Confederation of the United Colonies of New England including Massachusetts Bay, Plymouth, and Connecticut and Rhode Island took part and because of the numbers participating, killed and wounded, the battle had been unequalled in New England up to that time. As a result of the battle, the military strength and resources of the most powerful Indian tribe in New England were broken forever.

A fort in the Great Swamp had been built by the Narragansett Sachem, Canonchet, as a place of refuge. Because of its location on a small island of dry land in the midst of a great swamp, he no doubt considered it impregnable. It was, however, only partially completed and consisted of "pallisadoes stuck upright in a hedge of about a rod in thickness." Two fallen trees formed natural bridges which were the only entrances and the principal one was guarded by a block house. Inside the fort the stores, harvests and accumulated wealth of the Narragansetts had been brought and there asylum had been offered the aged and infirm and the women and children of the Wampanoags of King Philip.

The United Colonies of New England declared war against the Narragansett Indians on November 2, 1675, charging them, among other things, with "relieving and succouring Wampanoag women and children and wounded men" and not delivering them to the English, and also because they "did in a very reproachful and blasphemous manner, triumph and rejoice" over the English defeat at Hadley. They voted to raise a thousand soldiers to be sent against the Narragansetts unless their sachems gave up the fugitive Wampanoags.

The forces of the United Colonies under Governor Winslow marched across Rhode Island and on December 14 attacked the village of the Squaw Sachem Matantuck near Wickford and burned 150 wigwams, killing seven Indians and taking nine prisoners. The Narragansetts then began a guerilla warfare, sniping Colonial troops wherever occasion offered.

On the night of December 15 the Indians surrounded Jireh Bull's large stone house on Tower Hill and massacred all but two of the occupants. The smoldering ruins of the house were found by English scouts the next day. It is possible that the Indians had learned of a plan for the Connecticut contingent to join the other forces at this house and had destroyed it in order to handicap the colonies. Three days later the two English forces joined at Pettaquamscutt and planned to attack the Indians the next day.

Ordinarily the swamp was practically impenetrable, as it is to this

day, but due to the severe December weather the marshy ground had frozen and the English soldiers gained easy access to the island. The Indian outposts retreated into the fort where they were followed by the English. The terrible battle which then began took place amidst ice, snow, underbrush and fallen trees.

At first repulsed, the English continued the assault, though with heavy losses. They contested almost every foot of ground until the Nar-ragansetts, also suffering many casualties, were driven gradually from their fort into the swamp and woods.

Meanwhile, the English had set fire to the wigwams, some 600 in number, and flames swept through the crowded fort. The "shrieks and cries of the women and children, the yelling of the warriors, exhibited a most horrible and appalling scene, so that it greatly moved some of the soldiers. They were in much doubt and they afterwards seriously inquired whether burning their enemies alive could be consistent with humanity and the benevolent principle of the gospel," says one early account.

The retreating Indians were driven from the woods about the fort, leaving the English a complete, though costly, victory. They had lost five captains and 20 men and had some 150 wounded that must be carried back to a house some ten miles distant. To the terrors of the battle and fire were added the bitter cold and blinding snow of a New England blizzard through which the English toiled back to Cocumcussa. The hardships of that march took a toll of 30 or 40 more lives. The Indians reported a loss of 40 fighting men and one sachem killed and some 300 old men, women and children burned alive in the wigwams.

In 1906 a rough granite shaft about 20 feet high was erected by the Rhode Island Society of Colonial Wars to commemorate this battle. Around the mound on which the shaft stands are four roughly squared granite markers engraved with the names of the colonies which took part in the encounter and two tablets on opposite sides of the shaft give additional data.

Until this year, entrance to the Great Swamp Fight Site was possible only over private land and an admission fee was collected by the farmer who maintained the road. The site was overgrown and some of the markers were almost obscured.

The National Park Service CCC Camp on the nearby Burlingame State Reservation has constructed about a half-mile of road to a parking area on the only other island of dry land besides the battle site. A wide path leads from there through the dense swamp to the monument and this area is to be cleared of undesirable undergrowth and a few seats will be provided at the outer edge of the island. Vistas are to be cut into the swamp to give the visitor an idea of the conditions under which the battle was fought. No attempt will be made to restore any traces of the defenses which, after more than two and one-half centuries, finally become accessible as a public historical site.

THE EDITOR'S PAGE

FLOWERS

A fragrant bouquet for the historians popped out of The Review's mail of the month. It came from the General Society of the War of 1812, which was enthusiastic in its praise of Roy Appleman's fine article, A National Military Park for Old Hickory, (v. Vol. I, No. 3), and Charles W. Porter's entertaining study, Perry at Put-in-Bay---Echoes of the War of 1812, (v. Vol I, No. 4). The compliment was not merely a gesture of acknowledgment. It was accompanied by a request from the Secretary General that reproductions of the articles be made available to all officers and members of the Society, an organization composed of descendants of the soldiers and sailors of America's second war with Britain.

Those articles are but two examples of the rich harvest of research fruits now being reaped in widely scattered parts of Region I. The Review seizes this occasion cordially to invite, not only historians, but other researchers as well, to offer for general reading (100 college and university libraries and many learned societies are receiving this issue) the excellent contributions which they are capable, on the basis of studies already completed, of adding to the expanding volume of America's biography as a nation.

COMING

It is gratifying to announce that Thor Borresen, of Colonial National Historical Park, soon will present an article on General Simon Bernard, one-time engineer of Napoleon I and planner of our Atlantic and Gulf coastal fortifications of the nineteenth century, and that

Raleigh C. Taylor is preparing a new study of the technique employed by coal miner-soldiers in the construction of the historic Crater tunnel of Petersburg National Military Park. Meanwhile, Dr. Alfred F. Hopkins, of Morristown National Historical Park, whose recent injury in a fall on the ice is recorded regretfully here, is making ready nevertheless to offer a paper on rifles and muskets used during the Revolutionary War.

THAT MAN AGAIN

The wintry landscape on the December cover is Samuel O. Smart's drawing of a photographed scene at Hickory Run Recreational Demonstration Area, Pennsylvania. The outsize Christmas Tree in the left foreground is one of Nature's own streamline jobs. It is a little too robust to be placed in a living room as the traditional hitching post for the wind 'em-up train of Junior and the silken deedaddles of the Lady of the House. But it serves admirably as a seasonal reminder that That Man is here again.

The Review wishes to voice a sincere hope that our overweight friend from the north may bring to all Superintendents, Inspectors and Technicians a long-needed surcease from reports and job comments; to all typists and stenographers a refreshing respite from their grumpily omniscient bosses, and to the rest of us, the toiling masses, an ample stocking-load of one-eyed jacks, split-whiskered kings and many of life's other minor goodies.



HISTORY IS WRITTEN IN OBJECTS

By Arthur C. Parker,
Director,
Rochester Museum of Arts and Sciences

When the science of archeology began to take form, gradually there dawned the idea that the artifacts of past ages spoke of mankind's record in terms by no means entirely uncertain. The so-called relic became eloquent. No longer was it a mere curiosity of the past but a sentence from the buried record.

The same idea is true of other enduring products of human manufacture. The feathered cape of the Hawaiian, the knot bowl of the pioneer, the spice boxes of our great-grandmothers, all are records of a particular time and environment. It remains for the student who classifies material culture to assign each object to its proper place and then to begin his descriptive interpretation. In other words history can be written by piecing together the evidences of man's thought as revealed by his handiwork.

But this history cannot be reconstructed by haphazard methods. Visible storage in museum cases of miscellaneous articles is not history. It is mere confusion. Order and sequence are necessary; the proper association of artifacts in their intended relations is necessary. Let us give an example.

A telegraph instrument, a desk, a chair, a number of buttons, a hooked rug, an old safe, a ragged ledger and a gas fixture might be distributed in a number of cases or even shown in one. We could state that these things were relics of the Western Union Telegraph Company. But what picture would this reveal? Nothing, perhaps, save that these things were used at the same time, which, of course, would have a certain significance. Let us try them another way. A room can be constructed showing the first Western Union office in Rochester. The articles may be placed in their logical positions and a figure of an early operator or official placed in the room. In this instance we have a picture, a convincing fact vividly presented. The relation is complete.

If we are unable to have such presentations we may still show the horizontal stratification of our culture by showing the typical utensils and implements of each stage of our historical development, thereby "writing" a record of culture progress that will bear comparison with the better types of ethnological exhibits. Indeed, our own productions are records of our own ethnology and should be treated as such. When this is accomplished we shall be able to read history in a new and more convincing manner and museums of history will take on a new and more significant meaning. --- Reproduced from Museum Service, vol. 11, no. 9.

C.C.C.

APPLAUSE

"The work of the Civilian Conservation Corps should not be measured alone in terms of economic conservation work since that was not its sole function. Some 750,000 men who probably would not have sought to improve themselves by further education availed themselves of this privilege offered by the GCC. Most of this education was of the vocational type and presumably improved the chances of the boys for success when they were again on their own. . . The whole CCC activity is an example of what can result when an emergency demands. In view of the vastness of the projects undertaken, it is remarkable that so few serious mistakes have been made. . . The opportunity of service and accomplishment through the CCC should be improved to the fullest." --- Quarterly Bulletin of the American Nature Association, October, 1938.

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52,000 REPLACEMENTS APPROVED

Robert Fechner, CCC Director, announced this month the approval of a replacement enrollment program, from January 1 to 20, providing for selection of approximately 52,000 youths and war veterans. Selections are expected to bring the total Corps strength to about 310,000. The replacement programs are held quarterly to fill vacancies resulting from the honorable discharge of enrollees who have found private employment and of those who have completed their enrollment period.

By the first week of December, more than a quarter-million persons had applied for enrollment.

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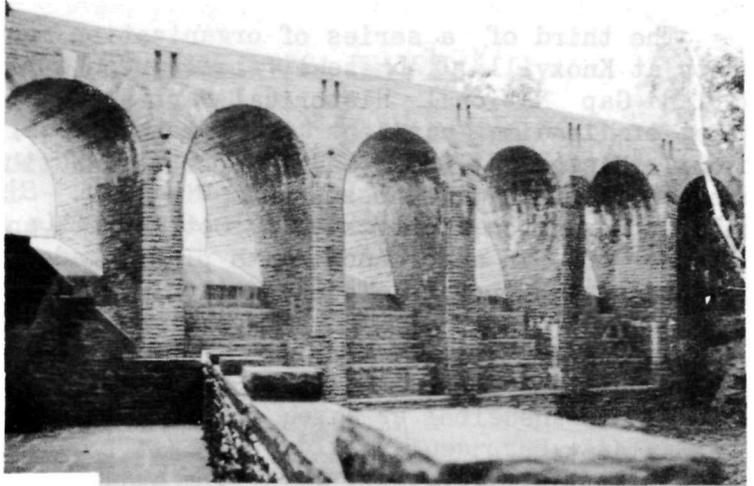
LITTLE COLLEGE IN CAMP

Sixteen universities and colleges are represented in the group of instructors which is providing educational opportunities for Corps members at Alabama SP-5, De Soto State Park, Fort Payne. The State Department of Trade and Industrial Education, in cooperation with the local Board of Education, is supplying seven teachers and there also is a full-time instructor provided by the Works Progress Administration. Service and Army personnel likewise conduct classes. Altogether, 43 different courses are offered by 22 teachers.

Four WPA-supplied teachers have joined the group of instructors at Alabama SP-15, Mound State Monument, Moundville, where class attendance records are being broken. At SP-6, Gulf State Park, Foley, only seven of the camp's complement of enrollees are not entered on the class rosters. The "school term" at that camp begins anew each quarter to permit rapid advancement by those who demonstrate their proficiency.

DAM COMPLETED

The fine concrete-masonry dam pictured at the right is one of the numerous engineering projects which were carried to successful completion during the year by CCC enrollees working under supervision of the Service. It will impound a recreational lake at the Cumberland Homesteads Park, a public play area of the Farm Security Administration, near Crossville, Tennessee. Excavation at the lake site began in November of 1935 and the actual construction of the dam was launched in April, 1936. Flooding of the basin began last September.



Except for the assistance rendered for about two weeks by masons provided by the Farm Security Administration, all construction was carried out by junior enrollees. Despite the natural hazards resulting from the character of the work performed, such as quarrying and crushing large quantities of stone, the most serious mishap recorded during the operations was an injury to a quarryman's finger.

More than a score of dams, embracing a variety of engineering requirements, were completed or in progress during the year throughout the region.

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SAFETY DEMONSTRATIONS IN OHIO

Practical demonstrations of work safety methods are a part of the camp program at Ohio SP-20, Miami Conservancy District, Vandalia. Exact tests of the time and distance required for bringing a moving truck to a halt, the use of extinguishers in putting out fires purposely lighted, the deliberate construction of unsafe scaffolds, all are examples of the devices employed in instructing enrollees in accident prevention. Safety Engineer Matt Baker, a recent visitor at the camp, commended its program.

NEW FEDERAL AREASCUMBERLAND GAP ORGANIZATION COMPLETED

The third of a series of organization meetings, which was held this month at Knoxville, Tennessee, places upon a permanent basis the new Cumberland Gap National Historical Park Association, formed by a tri-state group of leading citizens to promote establishment of the proposed National Historical Park and the proposed National Recreational Area situated in Kentucky, Tennessee and Virginia. Similar conferences had been held at Lexington, Kentucky, on October 26, and at Bristol, Virginia, on November 18, in accordance with plans made at a preliminary meeting of conferees at Harrogate, Tennessee, on August 27.

A president, three vice presidents, a secretary-treasurer and 12 directors compose the executive organization. They are:

President:	Robert L. Kincaid, Middlesboro, Ky.
Vice President for Kentucky:	Tom Wallace, Louisville.
Vice President for Tennessee:	W. I. Davis, Tazewell.
Vice President for Virginia:	T. B. Fugate, Ewing.
Secretary-Treasurer:	Howard J. Douglass, Middlesboro, Ky.
Directors for Kentucky:	J. H. Bailey, Pineville. W. B. Fugate, Middlesboro. Thomas R. Underwood, Lexington. H. H. Fuson, Harlan.
Directors for Tennessee:	George Fort Milton, Jr., Chattanooga. Harold Wimberley, Knoxville, Guy L. Smith, Knoxville. Herbert Walters, Morristown.
Directors for Virginia:	C. F. Connelly, St. Charles. Walter Johnson, Marion. H. E. Jones, Bristol. Lloyd M. Robinette, Jonesville.

Director Cammerer, in a memorandum transmitted this month to Secretary Ickes, described Cumberland Gap as one of the outstanding historic sites of the nation. "It is of prime importance," he said, "as the connecting link between old historic sites of the middle Atlantic States and the historic areas west of the Appalachian mountains. While Cumberland Gap was of some significance during the War Between the States, its prime importance came from the numerous pioneers who passed through the Gap to claim the Northwest Territory for the United States. The scenery of the area is good, and there is an opportunity to develop recreational facilities to serve a large population."

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C. & O. CANAL WORK TO BE SPEEDED

Funds already made available through the Public Works Administration will permit the Service to carry forward a restoration and development program designed to prepare a section of the historic Chesapeake and Ohio Canal for early recreational use by the public. Repairs to the banks, locks and dams between Seneca and Little Falls, a distance of 18 miles, will make usable the 22-mile area which reaches from Seneca to Georgetown

PUBLICATIONS AND REPORTS

'PARK AND RECREATION STRUCTURES' PRAISED

Widespread editorial praise has followed distribution of the three-volume work, Park and Recreation Structures, issued by the Service under editorship of Albert H. Good. Treatment, textual contents, illustrations and general arrangement all elicit generous commendations.

Camping Magazine, published by the American Camping Association, points out (Vol. X, No. 8): "By far the most significant and outstandingly valuable contribution to camp and outdoor literature from the standpoint of physical layout, buildings, and equipment that has ever come to our attention, this wealth of material appears as indispensable to all involved in camp administration. Magnificently illustrated with photographs, sketches, and working plans, each of three volumes are jammed with suggestions useful in organized camps....These books would be an essential investment to the practical camp leader at any price -- at \$2.25 for the set it is a plain gift."

The Architectural Forum: "All types are profusely illustrated, both with photographs and dimensioned drawings. The text is equally useful: the program is stated in each case, and specific recommendations are made as to proper location, materials, and construction. One of the most interesting sections describes the work of preserving and reconstructing historic structures; many of these "living museums" have already been completed in various parts of the country."

California Arts and Architecture (August, 1938): "The scope of the books is far wider than the titles might seem to imply, for quite as much space is given to metropolitan, county and state parks as to National ones. There are approximately a thousand photographs--all good--as well as lucid, readable architect's floor plans and elevations of practically every building pictured....The text is so comprehensive that the volumes could almost serve as text books on two dozen of such varied subjects as fire protection, trail making, camp construction and administration, sanitation, drainage, Nature study and outdoor entertainment, and even the restoration of historic buildings and landmarks."

Landscape Architecture, quarterly publication of the American Society of Landscape Architects: "The author has appropriately called attention to the fact that the majority of these photographs are intended to serve as inspiration for the design of similar features using materials and workmanship available in any respective locality rather than to be copied directly without due consideration for unusual requirements imposed by different locations and varying use....This publication should serve as a great source of inspiration to the thousands of persons who are endeavoring to produce more appropriate and attractive park and recreation developments, and to whom the introduction of many features not designed to be appropriate to the surroundings has been most objectionable in the past. To this government agency, landscape architects throughout the country may well express appreciation for an outstanding contribution to the literature of landscape architecture."

Shore and Beach, journal of the American Shore and Beach Preservation Association, (Vol. VI, No. 4): "Here are 604 pages that transcend anything on their subject, or of their kind—that many pages of specialized architectural conceptions that have proved good in their places, which are the great public recreational areas of the nation's north, south, east, and west. On them are perhaps 1200 choice photographic reproductions, accompanied by an abundance of easy, clear, finely-executed plans.

"All credit to Mr. Good for his lively and sufficient textual exposition, but we think that in his text we divine the author also of the unexceptionable plan of selective illustration which substantially constitutes the book. That plan seems to have demanded almost the limit of photographic perfection and the utmost of skilled workmanship in reproduction. Each page reveals, moreover, the expert's touch in layout and design, and all of these preliminaries to a published book, including unusual and pleasing typographic treatment, have been rewarded with the crowning glory of skilled and careful pressmanship. From beginning to end it is a joy to the eye—no monotony or boresomeness, even in such a massed assembly of pictures on a single theme."

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FORESTRY EXPERT CITES NEED FOR RECREATIONAL STUDIES

General Circulation is being given reprints of excerpts from The Place of Forest Recreation in Forestry, a paper presented to the New York Section of the Society of American Foresters by Fay Welch. Mr. Welch, Special Lecturer in Forest Recreation at the New York State College of Forestry, Syracuse, also is chairman of the National Camp Advisory committee, a body with which the Service cooperates in its organized camping activities on Recreational Demonstration Areas.

The reprint contains portions of Mr. Welch's paper which point out the increasingly important position gained by recreation in general forestry programs as manifested, in part, by the considerable economic values indicated in fiscal returns from New England and New York. He outlines the types of recreational use which public forests may serve and deplores the fact that long-ago standardized practices often are ignored by some of those who supervise development solely in its board-feet aspects.

"Foresters as a group," said Mr. Welch, "have been exceedingly slow to recognize both actual and potential recreational values and responsibilities.... This is due in part, no doubt, to the training that foresters have received. Most of our forestry texts and not a few of our forestry teachers continually emphasize the fact that producing wood is the highest use to which any forest area can be put. Typical of this attitude is a statement in a recent text that forests 'are capable of affording places of recreation, but such use should be made with due regard to the main purposes of forest production'..."

"I believe it important, that, first, all foresters have a background of general recreational knowledge. To merely modify one's silvicultural outlook is not enough. Such an attitude has been responsible for the fact that frequently in the past the forester on a recreational project has been considered as a kind of head gardener. He was called in for consultation when a question of fuel supply, tree disease or fire protection came up, but was not consulted as to what the recreational needs of given areas were, or as to what land in a given region should be purchased, or as to where roads, buildings, sanitary or recreational facilities were to be located, or as to the conditions under which these facilities were to be made available to the public, or as to the upkeep and administration of these areas. If the reply is made that foresters are not trained for this work then it is time that more training of this kind be given. And in the meantime, I contend that they have as good a background as lawyers, newspaper men, architects, and engineers.

"Secondly, those who take special responsibilities for planning, developing or administering recreational areas need special information and training. They need a good grounding in the basic principles underlying large scale land use planning. They must be competent in designing specific areas and facilities, and they must understand operations and programs. These men will be as much concerned with people, their desires, their reactions and their activities as with trees. They must visualize possible and probable recreational uses to which a given forest area can be put. They must be able to foresee which uses are desirable and practical in view of existing and probable future conditions. They must know how to facilitate such uses, how to safeguard and protect the human users as well as the trees."

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NATURE ASSOCIATION BULLETIN STUDIES CONSERVATION

The American Nature Association is producing a series of Quarterly Bulletins which cover fundamental conservation problems, roadside beautification and methods of measuring progress achieved nationally in reaching general conservation objectives. The fall issue reports comprehensively on a survey of conservation education and discusses the evidences of public sentiment toward its problems. Among other federal agencies, the National Park Service receives attention as a bureau which is actively engaged in efforts designed to promote the dissemination of conservation information.

"It is true that in a democracy such a heritage as our National Parks should be made to meet the needs of the greatest number," says the Bulletin. "There are, however, influences beyond the control of the National Park Service in favor of establishing places in our Parks where dressing for dinner, playing tennis, and dancing would be given equal importance with the unique opportunities now afforded by Nature in these reservations. This is inconsistent with the character and purposes of the Parks."

BULLETIN DESCRIBES TRAVEL BUREAU SERVICES

The United States Travel Bureau, in its second Official Bulletin, presents a condensed outline of the functions performed by that new branch of the Service. The Bureau--

"Distributes to the public (domestic and foreign) accurate and impartial tourist information regarding the United States and its Territories and island possessions.

"Maintains 'over-the-counter' distribution of pictorial pamphlets and brochures supplied . . . by State publicity departments, Government departments and private agencies.

"Refers requests for information and descriptive literature relating to the recreational facilities of a particular State, Territory, or island possession to the proper agency or official for direct reply.

"Displays exhibits depicting advantages of travel and recreation in the United States and in its Territories and island possessions in its San Francisco and New York offices and arranges for the loan of such exhibits to organizations.

"Prepares and presents recreational data concerning State facilities for international radio broadcasts.

"Maintains a reference file of recreational facilities of the entire Nation, for use by writers, reporters, and radio script writers.

"Prepares a calendar of events and maintains a file listing the dates and description of important public events throughout the Nation.

"Cooperates with steamship lines, railroads and travel agencies in the protection of group travel to and within the United States."

Director Cammerer, in another part of the Bulletin, signs a statement which reiterates the objectives of the Travel Bureau.

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HISTORIC BUILDINGS CATALOGUE PUBLISHED

The Government Printing Office has completed publication of a catalogue of the measured drawings and photographs obtained by the Historic American Buildings Survey and filed in the Library of Congress. The data are complete to January 1, 1938. The Superintendent of Documents has placed the publication on sale at 50 cents.

RECENT SPECIAL REPORTS

Borresen, Thor:
1938

Report on Spanish Guns and Carriages, 1686-1800
November. 47 pp. typed. Illustrations and bibliography.

Reviewed by Joseph Mills Hanson

A very interesting study of Spanish guns and carriages of the period from 1686 to 1800 has been prepared by Junior Research Technician Borresen, whose study is accompanied by photographs of a number of cannon and mortars of the period treated and by detailed scale drawings of some of the pieces themselves, or of others of the same type, and of carriages on which they were mounted. There also are views from old ordnance manuals showing in detail the characteristics of various kinds of ammunition used.

Although Mr. Borresen states that the greatest handicap encountered in research on Spanish guns and carriages is the lack of descriptive material about them, he has given a great deal of satisfying information concerning the guns, and particularly the carriages, which he describes, and has provided an excellent bibliography on artillery, ordnance, and gunnery in the period covered by his study. Many of the volumes cited are old and rare.

Most of the pieces which Mr. Borresen describes, about ten in number, are among those which are mounted as decorations around the State and War Building in Washington, or as trophies at the Washington Navy Yard. The old weapons, which once represented the power and majesty of the rulers of Spain on the gun decks of galleons or on the ramparts of forts from Vera Cruz to Manila Bay, and from California to Algiers, are remarkable for the wealth of embellishment lavished upon them. Coats of arms surrounded by scroll work, handles in the form of dolphins or grotesque beasts, wreaths, and pious or patriotic texts usually covered the tubes from base ring to muzzle. Such use of decorations, of course, did not enhance the value of the pieces as weapons, but it does add greatly to their antiquarian interest.

Mr. Borresen has added to his study some valuable observations on methods for the inexpensive reproduction of cannon and mortars such as he has described. By employment of the materials and processes which he mentions, pieces of ordnance can be made which are entirely satisfactory in appearance for display in national parks or other appropriate settings, but very much more economical to build than they would be in the materials of the originals.

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Dacy, Arthur K.:

The Derbys, Their Ships and Shipping. 31 pp.
Typewritten. Appendices and Notes.

The author, a student technician assigned during the summer to Salem Maritime National Historic Site, has assembled in serviceable form the information contained in Derby family papers concerning commerce activities from 1736 until after 1800. Although the data are presented without embellishment, they nevertheless offer a guide to a major source relating to the maritime operations at Salem. The report was edited by Edwin W. Small, Acting Superintendent of the Historic Site.

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 Cheraw Recreational Demonstration Area, camping at, 11-17, Dec., Illus.

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 Cumberland Homesteads Park, new dam completed, 23, Dec.; Illus.

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Morristown National Historical Park, Winter Encampments of Revolution, 3-7, Aug.

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Regional Review, objectives of the, 3-4, July.
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Robinson, R.C.: A Successful Demonstration of Day Use, 20-22, Oct.
Russell, Carl P.: Foreword explaining purpose and objectives of Review, 3-4, July; New Horizons, 3-5, Dec.

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Shelford, V.E., opinion on park standards, 20, Nov.
Shenandoah National Park, beaver, 11-13, Nov.
Small, Edwin W.: Salem--A Pioneer in America's Sea Commerce, 17-18, July.
Speech rehabilitation in organized camp, 23, Nov.
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Sullivan, Maurice: Naturalist Cruises of Acadia, 3-6, Nov., Illus.
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Y

Yellowstone National Park, coyote control, 29, Aug.



THE CONTRIBUTORS

DONALD C. HAZLETT, an Indianan, specialized in geology at the University of Illinois and at Oberlin College. After entering the Service at Washington in 1935, he became District Geologist attached to the Cincinnati office. In that capacity he investigated many miles of the dark avenues of Mammoth Cave, penetrating passages which few men have seen. He now is Assistant Inspector assigned to the proposed Cape Hatteras National Seashore, with headquarters at Manteo, N. C. He recently was elected to membership in the American Association for the Advancement of Science.

GERALD H. HYDE, born 36 years ago in Massachusetts, has been Inspector in New England since July, 1936, but before that time he had served as Associate Landscape Architect. He attended Massachusetts State, is known as Jerry, and long has been a victim of photography in its chronic stage.

CARL P. RUSSELL will end his duties this month as Regional Director and transfer to Washington to assume his new post as Supervisor of Research and Information. Besides his authorship of a volume of Yosemite, his contributions to scientific journals long have been known throughout the Service. Who's Who in America, Vol. 19, P. 2121, says of him, in part: "b. Fall River, Wis., Jan. 18, 1894. . . Engaged in cytological investigations, 1915-17; herpetology studies with Dr. Louis Rule, Nat. Mus. France, 1919; . . . Nat. Park Service since 1923, field naturalist supervising museum developments, 1929-33; in charge of museum program, Eastern Parks, 1934; chief of museum division, 1935; ecological studies Yosemite and Yellowstone National Parks, 1923-32; original research in museum methods with Dr. H. C. Bumpus, museums of Eastern U. S., parts of yrs. 1928-31; research in history, Yosemite region, 1923-38; park naturalist in charge of ednl. program Yosemite National Park, 1923-29. . . 1st Lt. 8th Inf., U. S. A., 1918-19 (overseas) . . ."

R. A. WALKER, a native South Carolinian, entered the Forest Service of his state five years ago as engineer in charge of CCC construction in the southeastern district. Since 1935 he has been Assistant State Forester and head of the newly created Division of State Parks. A graduate of The Citadel, he became a plant engineer in Charleston and served later with the United States Coast and Geodetic Survey in the Carolinas, Virginia and Maryland.

