A STUDY OF THE NATURALIST PROGRAM AT McCORMICK'S CREEK STATE PARK SPENCER, INDIANA

Thesis for the Degree of M. S.
MICHIGAN STATE COLLEGE
William Roy Overlease
1952

THESIS

SUPPLEMENTARY MATERIAL IN BACK OF BOOK

This is to certify that the

thesis entitled

A Study of the Naturalist Program at McGormick's Greek State Park Spencer, Indiana presented by

William Roy Overlease

has been accepted towards fulfillment of the requirements for

M. S. degree in Conservation

Gmouser Major professor

Date Nay 27, 1952

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A STUDY OF THE NATURALIST PROGRAM AT McCORMICK'S CREEK STATE PARK SPENCER, INDIANA

Ву

William Roy Overlease

A Thesis

Submitted to the School of Graduate Studies of Michigan State College of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

Master Of Science In Conservation

Department of Lands and Waters

1952

All things by immortal power,

Near and far,

Hiddenly to each other, connected are,

That thou canst not stir a flower

Without the troubling of a star.

Francis Thompson's "Hounds of Heaven"

No, our parks and preserves are not merely picnicking places. They are rich storehouses of memories and reveries. They are guides and counsels to the weary and faltering in spirit. They are bearers of wonderful tales to him who will listen; a solace to the aged and an inspiration to the young.

> Richard Lieber, Regional State Park Conference, Minneapolis, Minnesota, 1935

The author wishes to express his gratitude to Professor Lee Roy A. Schoenmann whose understanding of the aims of the author have made this thesis possible.

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The writer wishes to thank the School of Graduate Studies of Michigan State College for a graduate scholarship which aided him substantially in continuing his graduate work.

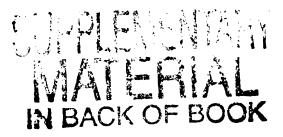


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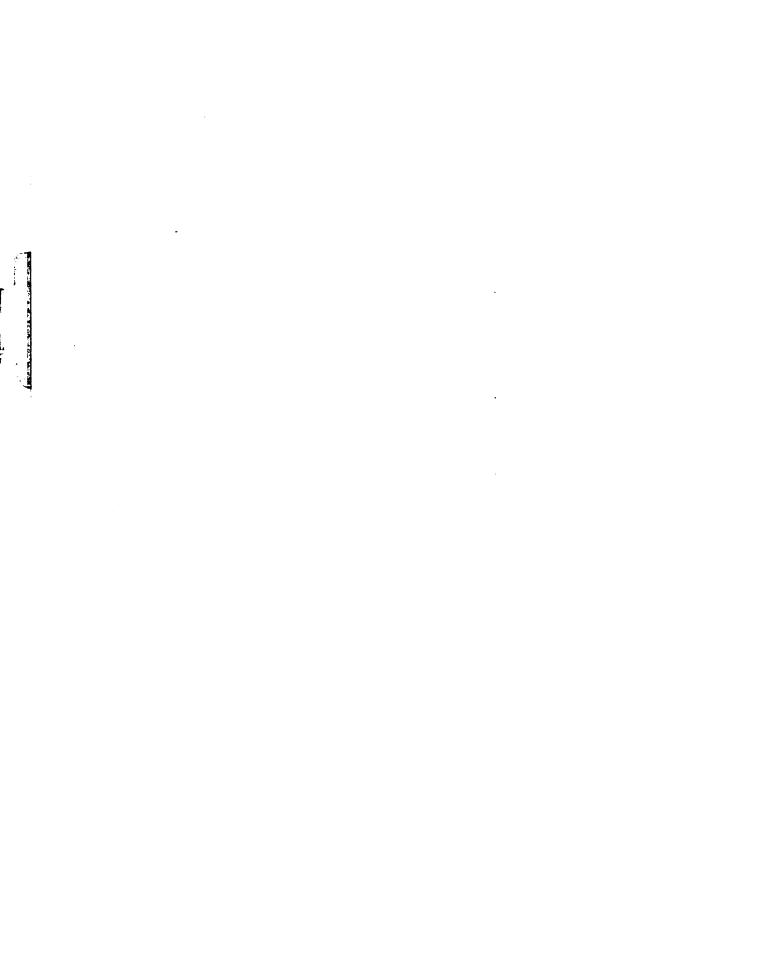


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PART I

INTRODUCTION

INTRODUCTION

The purpose of this thesis is to give a complete picture of the features of McCormick's Creek State Park that most pertain to the naturalist program conducted there; to describe the naturalist program as conducted during the summer of 1951; and to analyze and make suggestions and recommendations concerning this program.

McCormick's Creek State Park was chosen for this study on the advice of the Chief Naturalist of the Indiana State Park System as an Indiana state park with one of the more complete and varied naturalist programs.

The summer of 1951, from June 16 to September 9, was spent by the author as a naturalist at McCormick's Creek State Park gathering factual information and experience. Considerable time was spent during the fall of 1951 in going through literature concerning outdoor and state park programs. Two trips to gather further information were made to Indianapolis, Indiana, and the Park during the fall and winter of 1951-52.

It is the sincere hope of the author that this study may be of value to the naturalist program of the Indiana State Park System, and to McCormick's Creek State Park in particular.



Gatehouse at the entrance of McCormick's Creek State Park

Plate 1

PART II

A GENERAL DESCRIPTION OF THE INDIANA STATE PARK SYSTEM

A GENERAL DESCRIPTION OF THE INDIANA STATE PARK SYSTEM

A. Indiana Department of Conservation

The Indiana State Park System is under the supervision of the Department of Conservation, Division of State Parks, Lands and Waters. The Department of Conservation is headed by a director who is appointed, with the approval of the Governor, by a Conservation Commission of four members who are in turn appointed for four-year terms by the Governor. The Division of State Parks, Lands and Waters is one of ten divisions in the Department of Conservation, each of which has a director who is appointed by the director of the Department. A flow sheet giving a breakdown of the Department and showing the relationship of the various divisions may be found in the Appendix, Chart I.

B. Division of State Parks, Lands and Waters

1. General Administration

Under the director of the Division of State Parks,

Lands and Waters and appointed by him are the State Park Superintendents, a Supervisor of Recreation, a Supervisor of Concessions, and a Supervisor of State Memorials. A Chief Naturalist is appointed by the Supervisor of Recreation and is responsible for the naturalist programs in the State Parks, and recommends to the Division the park naturalists

to be hired.

A flow sheet of the Division giving the responsibilities of the more important positions, their relationship to the Director, and a list of State Parks and Memorials may be found in the Appendix, Chart II.

2. Functions of the Division

In regard to the functions of the Division, the following is quoted from the "Description of Properties and Facilities Operated by the Indiana Department of Conservation": 2

The chief function of this division is to conserve for all time to the people of Indiana certain areas of typical Hoosier scenery in its virgin state. Such areas of outstanding beauty, unusual formations, historical settings and places closely related to early Indiana development were thought worthy of preservation. In addition to this, it had long been known that a state, as a unit of government, had a definite obligation to its citizens; it should protect and preserve such areas, and in so doing provide access to them, provide means for their fullest and most complete enjoyment by the people, and also provide, without detracting from their natural appeal, such outdoor recreations and facilities as were compatible with the surroundings.

In September, 1951, there were sixteen State Parks and fourteen State Memorials under the jurisdiction of the Division, totalling nearly 45,000 acres.

²Description of Properties and Facilities Operated by the Indiana Department of Conservation, Division of State Parks, Lands and Waters. Indiana Department of Conservation, 1948.

PART III

A DESCRIPTION OF MCCORMICK'S CREEK STATE PARK

A DESCRIPTION OF McCORMICK'S CREEK STATE PARK

A. Location

1. Geographical Location

McCormick's Creek State Park is located somewhat south and west of the central portion of Indiana. It is in the White River valley in Owen County, Washington Township. The entrance to the Park is on U. S. Highway 46, fifteen miles west and north of Bloomington, Indiana, and three miles east of Spencer, Indiana.

2. Relation to Population Centers

With respect to population centers, McCormick's Creek is in an ideal position. It is near the center of a triangle formed by Indianapolis on the north (Population 436,000--the largest city in Indiana); Terre Haute on the west (Population 60,000); and Bloomington on the east (Population 20,000). A further idea of the distribution of population surrounding the Park can be gained from the following figures which are approximate for the radius listed using the Park as a center:

Radius	Population included in this radiu	เร
10 miles	13,000	
25 miles	210,000	
50 miles	1,070,000	

See map, Fig. 1, p. 9.

²See population triangle, Fig. 1, p. 9.

The figures were compiled from the Sixteenth U. S. Census, 1940.

LOCATION of McCORMICK'S CREEK STATE PARK

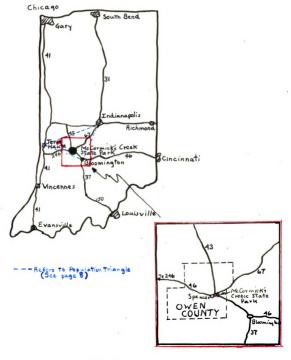


Fig. 1

3. Relation to Transportation Centers

There are good bus connections into both Bloomington and Spencer from the surrounding region, and railroad connections from Chicago, Illinois, and Louisville, Kentucky, at Bloomington.

Hotel guests arriving in Bloomington or Spencer by train or bus are picked up by the Hotel station wagon, if requested.

B. Local History

1. Settlement and Acquisition of the Park Area

When the first white men arrived in the region of what is now Owen County, they found the area claimed by the Miami, Delaware, Potawatomi and Eel River Indians, with the Miami being the dominant tribe. By the fall of 1809 the United States government had negotiated treaties with these tribes, opening the area for settlement. It was not until 1816 however, seven years after the treaties were signed, that the first settlers, Philip Hart and his family, and James Bigger, arrived and began the task of wresting a living from the wilderness.

Two Indian camp grounds have been located in McCormick's Creek State Park, one in the area near Redbud Shelter and the other at the mouth of McCormick's Creek. Both are prehistoric as indicated by arrowheads and other primitive tools and cannot be justifiably attributed to the historic tribes such as the Miami and Delaware Indians.

²Vernon R. Helman. <u>Archaeological Survey of Owen County</u>, Indiana Historical Bureau, Indianapolis, 1950, p. 7.

In 1818 John McCormick, Sr., a Scotchman who migrated to Indiana from West Virginia, took up land in Owen County. The creek that flowed through his land was from then on known as McCormick's Creek. It is said that he settled in the McCormick's Creek area because "it reminded him of the rock-ribbed hills of his own bonnie Scotland."

Eventually the land passed from the McCormicks into the hands of Philip Miller, and upon his death to his son-in-law, James A. Lehman. In the fall of 1888 Dr. Frederick W. Denkewalter, a retired physician from Indianapolis, bought the land and opened a sanitarium there. A great deal of local legend developed concerning the way Dr. Denkewalter ran his sanitarium. As one account has it, "Doc ran a sanitarium of something--barefoot dancing on the lawn at sun-up, and that kind of thing...."

On May 25, 1916, following Dr. Denkewalter's death, an area of about 400 acres embracing McCormick's Creek Canyon was purchased from his estate and surrounding farm land jointly by the State of Indiana and a group of public-spirited citizens of Owen County who had raised money to help finance the purchase. Soon after acquisition, on the

The Indianapolis News, Vol. XLVII, No. 179, July 1, 1916, p. 15.

²Charles A. Sauers. <u>McCornick's Creek Canyon State Park,</u> A History and Description. Department of Conservation, State of Indiana, 1923, p. 9.

The Indianapolis Star, Vol. 21, No. 19, June 24, 1923, p. 17.

⁴The purchase price was \$5,280.

Fourth of July, 1916, the area was dedicated as McCormick's Creek Canyon State Park, the first of the many state parks now in the Indiana State Park System.

2. Local Economics

Farming has been the dominant occupation in the immediate vicinity of McCormick's Creek since the area was settled back in the early 1800's. Outside of a clothespin factory in nearby Spencer, Indiana, there is no other major manufacturing activity.

During the last seventy years there have been several significant changes in the local farming picture. Acreages in some crops such as corn and hay have remained about the same, but the acreage in wheat has increased over four times, and oats have decreased to one-third of their former acreage. The most drastic change may be seen in the raising of sheep. Each in 1880 there were over 27,000 sheep grazed in Owen County, but by 1950 there were only about 3,000. Hogs have taken their place as the major meat product, with nearly 31,000 recorded in the county in 1950.

Due to the rolling nature of much of the land, soil conservation has been a problem since farming began in the area. Many farmers have learned through loss of much topsoil resulting in injury to their land, that certain areas should not be farmed. In reference to this, the improved land fig-

¹The Indianapolis News, Vol. XLVII, No. 179, July 1, 1916, p. 15.

ures for the county are quite revealing. In 1880 there were approximately 191,000 acres of improved land out of the 253,000 acres in the county. Ey 1950 this figure had been reduced to only \$7,000 acres.

The economic future of the general area points to a continuation of farming, though in changed form, as new farming methods, hybrid crops and more efficient farming machinery are introduced.

C. Matural Bistory

1. Climate

The McCormick's Creek region has a moderate climate. During the months of June, July and August the temperature averages around 74°F., although the yearly average is 53.6°F. Annual precipitation is approximately 44 inches, March being the wettest month and November the driest. Snowfall which averages 23.6 inches is usually heaviest during January. January is also normally the coldest month of the year, July being the warmest. The prevailing wind is from the southwest twelve months of the year. The average length of the growing season is 179 days, with average frost dates of April 22 and October 18.2

¹This information was obtained from the files of County Agent Fred I. Hoover at Spencer, Indiana.

²Summary of Climatological Data (to 1930). Eulletin W., Third Edition, Vol. II, Sections 34-71, U. S. Department of Agriculture, Weather Division. See Appendix, Table I, p. I, for more complete weather information.

2. Geology

Due to the importance of geology in the formation of the natural features of the Park which resulted in the selection of the area for a state park, considerable attention is given to the geological description.

what is known as the Mississippian period of geological time, a large ocean invading northward from the Gulf of Mexico covered the region. Millions of years passed with layers of sediments being deposited on the bottom of the ocean. Eventually the land uplifted and the ocean receded. The sediments now hardened by pressure into limestone, sandstone, shale, and coal, were exposed to erosion. This erosion continued for many million years, until the layers of sandstone and coal were worn away, exposing limestone underneath.

This long period of erosion lasted until recently, geologically speaking, about 30,000 years ago, when a period known as the ice age began. The climate of the Northern Hemisphere had become cooler, resulting in immense quantities of snow piling up in Canada. The tremen-

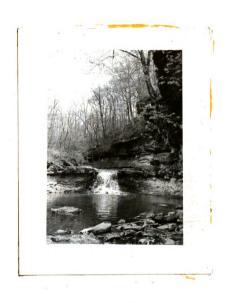
The remains of many of the animals which formed part of the sediments were fossilized and can be found throughout the Fark. Sea coral is the commonly found fossil.

²On the south side of the falls, on the cliff face, may be seen a very good example of shale beds between the layers of limestone.

dous weight of the snow resulted in pressures which caused it to begin to flow southward into the United States as a large sheet of ice, where it covered many of the northern states. There were four periods of advance and retreat of the ice sheet or glacier due to changes in the climate; the next to the last, known as the Illinoisan glacier, covered the McCormick's Creek area.

The melt water from the last glacier, known as the Wisconsin, formed a large lake just south of the Park, which eventually found drainage through McCormick's Creek. It was the enormous volume of water carried down McCormick's Creek during the draining of this lake, known to geologists as Lake Flatwoods, which did most of the cutting of the deep canyon for which the Park is known. The former bottom of this ancient glacial lake, about 14,000 acres in extent, boasts some of the better farm land of the area.

- b. The Falls. As water roared down McCormick's Creek from the glacial Lake Flatwoods, parts of the softer underlying limestone were eroded away faster than the harder limestone on the surface, resulting in the formation of a falls about twelve feet high. (See Plate 2, p. 16). It has been estimated by a geologist that the undercutting by the water is causing the falls to retreat about five-eighths of an inch a year, and that in 100,000 years they will be over a mile upstream from their present location.
- c. Salem or Building Limestone. At a point downstream from the falls there is an apparent change in character of the



The Falls at McCormick's Creek State Park showing the layering of St. Louis limestone and the undercutting of the Falls due to the softer nature of the underlying limestone.

Plate 2

limestone forming the canyon walls. From a much cracked and layered type known as St. Louis limestone, it abruptly changes to a massive formation known as Salem or building limestone. This change is due to a slope in the general region toward the west, resulting in the higher and more exposed part of the area being eroded away, uncovering the more massive layers of limestone present underneath. (See Figure 2 below).

St. Louis Limestone eruded away which was aroded as well to the stone Limestone

Massive Salem

Limestone

McCormick's Creek

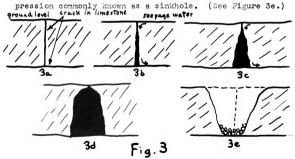
Fig. 2

At one time before the period of erosion just mentioned, McCormick's Creek was covered with layers of sandstone and coal similar to that of the less eroded areas to the west, in particular around Turkey Run State Park near Crawfords-ville, Indiana.

During the late 1870's a stone quarry was operated in what is now part of the Park, thus taking advantage of the high quality, massive, Salem limestone present. Due to transportation difficulties caused by high water in the White River, twice washing out a bridge connecting the quarry to a railroad, the quarry was soon abandoned. Some of the stone that was taken from the quarry was used in the

foundation of the State Capitol building in Indianapolis.

d. <u>Sinkholes.</u> The much-layered and cracked St. Louis lime-stone, sometimes called cave limestone, which underlies most of the Park area, has led to the formation of many sinkholes. These conical depressions are the result of water seeping through cracks in the limestone. As rainwater falls it picks up carbon dioxide (Co₂) from the air, forming a weak carbonic acid. Then as it begins to drain off through the cracks in the limestone into nearby rivers and creeks, it dissolves minute quantities of the limestone. (See Figures 3a and 3b.) Eventually cracks become enlarged into roomlike proportions (See Figures 3c and 3d), which in time become so large that the roof no longer has any support and caves in, forming the conical de-



e. Wolf Cave. Another geological formation of much interest in the Park is Wolf Cave. It is the result of a small, now intermittent, stream which has formed an underground channel about sixty feet long through a hill, going in one side and coming out on the other. The washing and scouring of the water and sediments as they have flowed through the cave have produced curves and shapes of unusual and quite artistic proportions. Small stalactites can be found on the ceiling as well as other formations resulting from dripping water. At one end of the cave part of the roof has collapsed, producing two bridgelike formations now known as Twin Bridges. 1

3. Physiography

From the original purchase area of approximately 400 acres, McCormick's Creek State Park has been enlarged to nearly 1,230 acres (as of Fall, 1951). It is bounded by rough rolling land on the north and east, with the bottomlands of the White River forming the northeast corner, a fertile flat plan on the south known as the Flatwoods district, and rolling farm land on the west.

The Park area resembles a square in outline, with McCormick's Creek flowing from the southeast corner to the north-west corner and into the White River, splitting the Park in two. The split is further pronounced by a precipitous canyon over ninety feet deep which has been formed by erosive action of water in the creek.

¹ The major portion of the geological information was obtained from conversations with members of the faculty of the Geology Department of Indiana University.

Most of the area is of a clay soil type and of a general rolling nature, the result of thousands of years of erosion. The highest point in the Park is near the firetower and is approximately 750 feet above sea level and about 200 feet above the lowest point along the White River.

Large cone-shaped depressions or sinkholes, some of which are over 100 feet in diameter, are characteristic of the Park area and are evidence of an underground drainage system.

4. Flora

The rolling topography, river bottomlands and shaded canyons have provided the Park with such varied habitats as to give it an unusually rich flora.

a. Wildflowers. Over 350 species of wildflowers have been listed in the Park. The wooded area comprising 400 of the 1,235 acres in the Park is a virtual carpet of blooms in the spring. Shooting Star (Dodecatheon media), Spring Beauty (Claytonia virginica), Rue Anemone (Anemonella thalictroides), and Trillium (Trillium sp.) are among the more prominent and showy species. The reputation of the Park as a show place in the spring has spread so that interested groups come even from the northern part of the state to see the display. The pagaentry of wildflowers continues through the summer and into the fall, being climaxed by various species of goldenrod (Solidago sp.) and

¹ See Appendix, Map I, for a contour map of the Fark area.

. . A CONTINUE OF THE PROPERTY OF -

- other members of the sunflower family, also Blue Lobelia (Lobelia Siphilitica), and Pink Turtlehead (Chelone obliqua).
- b. Ferns. Over thirteen species of ferns occur in the Park, the "evergreen" Christmas Fern (Polystichum acrostichoides), Ebony Spleenwort (Asplenium platyneuron), Broad Beech Fern (Dryopteris hexagonoptera), and Bulb-bearing Fern (Cystopteris bulbifera) being among the common species. There are several patches of the delicate New York Fern (Dryopteris noveboracensis); and the Woodsia (Woodsia obtusa) and Adder's Tongue Fern (Ophioglossum vulgatum) are also found, though not common.
- c. Forest-types. The 400 acres of wooded area may be divided into three major forest types--oak-hickory, beech-maple and sycamore-cottonwood. The oak-hickory type may be found on the better-drained areas and steeper slopes interspersed with the beech-maple type on the gentler slopes and less well-drained areas. On the bottomlands near the White River the sycamore-cottonwood type is dominant, with American Elm replacing Cottonwood in the better-drained bottomland areas.
- d. Reforestation. Some reforestation was carried on in the Park by the Civilian Conservation Corps (C.C.C.) during the middle thirties when they had a camp in the area. This has resulted in several excellent stands of White and Red Pine, Jack Pine and Pitch Pine totalling approximately 35 acres.

See the Park map in the Appendix, Map I, for location of plantings.

- e. Mosses. Mosses are very abundant in the Park with many rocks appearing as if covered with a green carpet. The beautiful fern moss (Thuidium delicatulum) may be found in large patches along several of the trails. It has been estimated that there are over 60 species of moss in the Park, and this is considered a conservative estimate.
- f. Fungi. Many kinds of fungi are noticeable even to the more unobserving Park visitor. Some, such as the Jack-o-Lantern Fungus (Clitocybe illudens) which glows at night, are quite spectacular. The Boletus sp. and Lactarus sp. are two of the more common fungi of the middle and late summer, with the Russula sp. among the common earlier species.
- g. Algae. The lower plants are represented by the green alga (Cladophora sp.) which is very abundant in McCormick's Creek, virtually covering sections of the bottom. The less common red alga (Lemanea sp.) is found in the swifter sections of the creek.

5. Fauna

The animal population of the Park cannot be as readily described as the botanical composition, since many of the animals are quite secretive and active only at night.

a. Mammals. The mammals known to occur in the Park vary from the large White-tailed Deer to the tiny mouselike shrews.

Gray and Red Fox, raccoon, opossum and Deer Mice are common mammals but are seldom seen. The most frequently observed mammals are the chipmunk, common around the picnic grounds,

- and the Gray Squirrel, often seen in the wooded areas.
- b. <u>Birds.</u> Nearly 150 bird species have been recorded in the Park, with such rarer ones as the Parula Warbler, Prairie Warbler and Bachman's Sparrow nesting there. The common summer birds are the Catbird, Robin, Wood Pewee, Cardinal, Wood Thrush, Elue Jay, English Sparrow and Chipping Sparrow. Two interesting nesting records for the Park area are the Pileated Woodpecker, a large woodpecker nearly the size of a crow, and the Turkey Vulture. The Turkey Vulture's nest is of particular interest because it is usually quite well hidden and not often found.
- c. Snakes. Not many snakes are seen inside the Park, although there are over ten species present. The smallest, about the size of a large fishworm, is the Ringnecked Snake, and the largest is the Pilot Blacksnake which may be over five feet long. The most commonly seen are the Pilot Blacksnake in the wooded area, and the Common Water Snake along the Creek and at the old quarry. Copperheads are occasionally killed, averaging about one a year.
- d. <u>Turtles</u>. Painted Turtles can almost always be found sunning on logs at the quarry. Box Turtles are frequently found in the wooded sections.
- e. Amphibians. Many species of amphibians are distributed throughout the area, the most numerous being the Fowler's Toad whose tadpoles are found in large numbers in the quieter pools of the Creek in early summer. Along the

- edge of the Creek under flat rocks can be found the Twolined Salamander which is often mistaken for a small snake by many Park visitors. Green Frogs may be seen along some of the smaller creeks and at the old quarry.
- f. Insects. The more spectacular insects most commonly observed are the beautiful giant night moths, Luna and Cecropia, the large Dobson Flies along the Creek, and the Buzzing Cicada in late summer. Catalpa Worms that chew up the foliage of many of the Catalpa Trees in the Park in late summer are also quite conspicuous. Mosquitoes were not particularly troublesome during the summer of 1951. However, chiggers gave considerable trouble to hikers frequenting brushy areas.

D. Administrative Organization

The administrative organization of McCormick's Creek
State Park consisted primarily of the Park Superintendent and
his clerk. All state-employed members of the Park organization were responsible directly to the Superintendent, except
the lifeguards and bathhouse attendants who were under a waterfront director, who in turn was responsible to the Superintendent. The naturalists, like other state employees in
the Park, were responsible to the Superintendent. The Chief
Naturalist of the State Park System who had his headquarters
in the Park was responsible to the Supervisor of Recreation
of State Parks.

Employees of the hotel in the Park were not state em-

ployees, but were hired by the hotel manager and were responsible to him. The hotel manager operated the hotel as a private enterprise on a contract from the State which is renewed each year. The building and furnishings are state-owned property. The stables and concessions in the Park were also operated similarly to the hotel, on a contract basis.

A flow sheet on the following page gives a breakdown of the Park organization as it was operated during the summer months of 1951.

E. Park Facilities

McCormick's Creek had an excellent facility development for a park of its size. This was due in part to income from an entrance fee of 12¢ per person, the same as that charged in other Indiana State Parks.

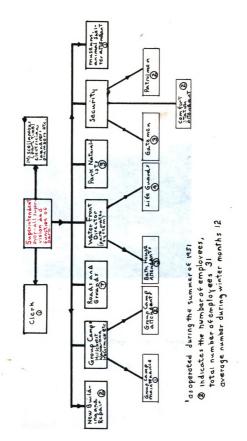
1. Roads and Trails

There were over five miles of black-topped roads connecting major points of interest, nearly twelve miles of bridle paths, and six improved hiking trails totaling about ten miles. (See Plate 4, p. 30). A fine bridge built by C.C.C. labor spans the Creek. (See Plate 8, p. 63.)

2. Living Accommodations

The apex of the facility development was a modern 63-room hotel, Canyon Inn (See Plate 6, p. 41), which was open the year around. Meals were served on the American plan, with meal tickets available at the hotel desk for those not staying at the hotel.

ORGANIZATION CHART M. CORMICK'S CREEK STATE PARK



F 19. 4



Swimming Pool at McCormick's Creek State Park

Plate 3

Popular among visitors with families were the eleven housekeeping cabins (See Plate 10, p. 82). These cabins, equipped with cooking facilities and utensils, running water, modern lavatories and bunk beds, could be rented at the Park Superintendent's office. Sleeping cabins with bunks and mattresses could also be rented.

Four group camps, Na-Wa-Kwa, McCormick, Friendly and Hillcrest, accommodating 150, 120, 80 and 28 campers respectively, were available for rent. Bunks, mattresses and complete kitchens were furnished. There was a well-equipped campground with showers, modern flush toilets, outdoor ovens and firewood provided by the Park. A small fee was charged for the use of the campground.

3. Picnic and General Recreational Facilities
Since a large percentage of Park visitors in the summer
were picnickers, there was an extensive development of picnic
facilities. There were three excellent picnic shelters of
rustic design with modern restrooms nearby, over 250 picnic
tables, and approximately 30 outdoor ovens. Provisions for
drinking water and garbage disposal were available near each
picnic site.

A popular spot in the Fark during the hot summer months was the large outdoor swimming pool, 45 by 135 feet, located near the hotel (See Plate 3, p. 27). Suits were available

Inventory, McCormick's Creek State Park, June 1, 1951. Available at the Park Superintendent's Office.

for rent, and a small entrance fee was charged for the use of the dressing rooms, a towel and the services of a full-time life guard.

There were two black-topped tennis courts, two softball diamonds, several horseshoe pits and a small playground for children with slides, swings, teeter-totters, etc.

Horses, bicycles and a mule-drawn hack could be rented at the stables in the Park. Magons for hay rides were also available.

Strategically located near the swimming pool, the hotel and the museum, was a well-stocked concession stand (See Plate 5, p. 32).

4. Hature Museum, Animal Shelter, and Outdoor Amphitheater One of the main attractions in the Park was the nature museum and the animal shelter behind it. (See Plate 11, p. 88). Open the year around, the museum contained many informative as well as interesting exhibits on the natural history of the area. The animal shelter had a collection of some of the common animals in the area, including snakes during the summer season (See Plate 7, p. 47).

Just off the road between the concession stand and Camp Ma-Wa-Qua was a bowl-like outdoor amphitheater. It was well lighted for evening programs, had a rustic-type stage and could seat over 500 (See Plate 9, p. 76).

5. Firetower and Water System
On a hill near the entrance of the Park there was a



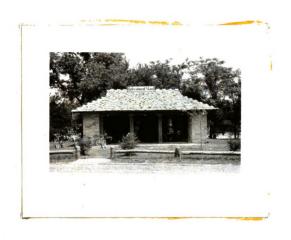
View on Trail 2 McCormick's Creek State Park

Plate 4

firetower approximately eighty feet high. It was manned by an employee of the State Division of Porestry during periods of high fire danger.

The excellent water system in the Fark was developed in 1933. 1 Water was obtained from a deep well near the White River, pumped to a reservoir near the swimming pool, and then piped throughout the Park. No chlorine was necessary to assure its purity.

Beam, Hayes, Ryman, Shaffer, Swendig and Wilson, An Analysis of Holoraich's Creek State Park. A project report for Recreation M.P.L.R. 551, Indiana University. Available at the Park Superintendent's Office.



Refreshment Stand, McCormick's Creek State Park

Plate 5

PART IV

THE NATURALIST PROGRAM

AT McCORMICK'S CREEK STATE PARK

AS CONDUCTED DURING THE SUMMER OF 1951

THE NATURALIST PROGRAM AT MCCORMICK'S CREEK STATE PARK AS CONDUCTED DURING THE SUMMER OF 1951

A. Aims of the Naturalist Program

In the "Description of Properties and Facilities Operated by the Indiana Department of Conservation, Division of State Parks, Lands and Waters" under "Purpose," are the following statements:

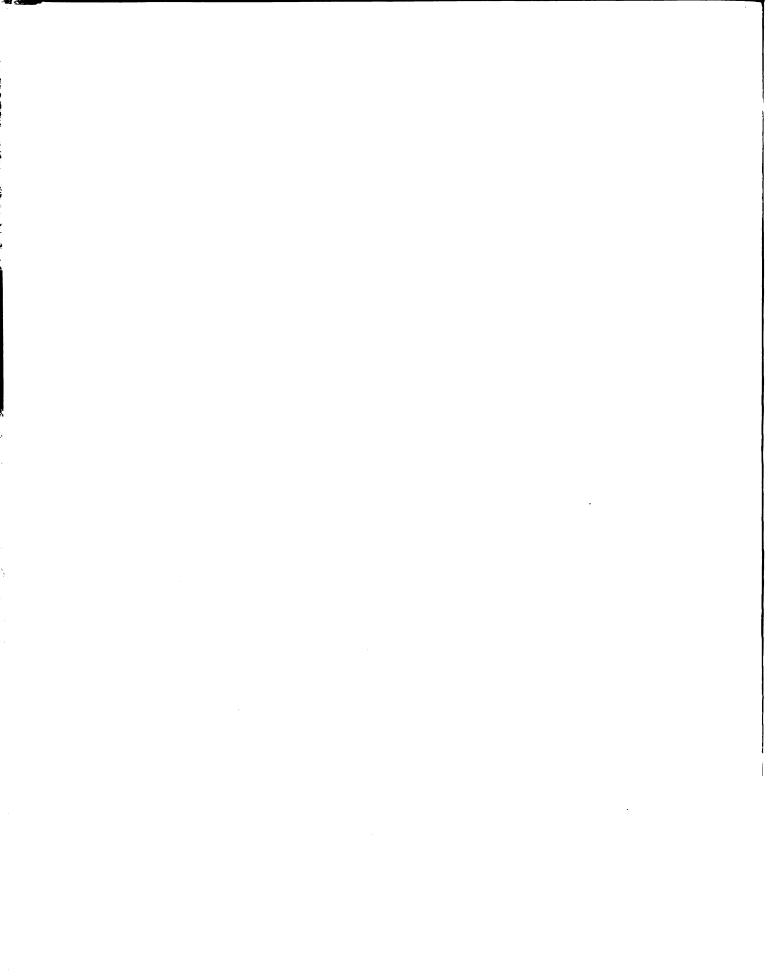
The chief function of this division is to conserve for all time to the people of Indiana certain areas of typical Hoosier scenery in its virgin state. Such areas of outstanding beauty, unusual formations, historical settings and places closely related to early Indiana development were thought worthy of preservation.

and referring to use of Park areas:

....provide access to them, provide means for their fullest and most complete enjoyment by the people, and also provide, without detracting from their natural appeal such outdoor recreations and facilities as were compatible with the surroundings.

In following the principles set forth in the purpose of the Division, the primary aims of the naturalist program at Mc-Cormick's Creek are to provide and promote outdoor recreation in the Park area, and in so doing, promote and help facilitate the continual preservation of the Park area in its natural state.

Description of Properties and Facilities Operated by the Indiana Department of Conservation, Division of State Parks, Lands and Waters. Indiana Department of Conservation, 1948.



B. Maturalist Qualifications

The Park naturalists who carry out the summer interpretive program in the Indiana State Parks are hired before the beginning of each summer season on recommendation of the Chief Park Naturalist. In reviewing the qualifications of an individual aspiring to be a Park naturalist, the Chief Naturalist may use many criteria. There are, however, three basic qualities which have proved essential to a successful Park naturalist in the Indiana State Park System. They are listed in the order of their considered importance:

- 1. The aspirant must be well adjusted socially--must like being around people and working with them.
- 2. He should have a real, deep-rooted enthusiasm for nature and the out-of-doors.
- 3. He should have adequate practical experience and/or training in the natural sciences.

Naturalists who have worked in Indiana State Parks often return year after year, so that the problem of selecting qualified naturalists is usually not acute.

C. Operation of the Program

The naturalist program at McCormick's Creek was carried on by three Park naturalists with help and advice from the Chief Naturalist of the Indiana State Parks who had his headquarters

Information supplied by Max Forsyth, Chief Park Naturalist, Indiana State Park System.

there. This program was in full operation during the summer of 1951, with all three naturalists participating from the middle of June until early in September. During the off seasons one naturalist visited the Park on weekends, conducting nature hikes and an evening program at the Park hotel. There were no year-round, full-time naturalist positions.

The naturalists worked a six-day week, deciding among themselves which day each would have off. There were no definite hours, though usually the day's activities began at 9:00 A. M. and lasted until the conclusion of the evening hotel program about 9:30 P. M.

The program was carried out on a very democratic basis, allowing for individual specialties, likes and dislikes. The three naturalists met at the beginning of each week and decided on the program for the week--who would give the nature talks, what hikes each would conduct, etc. The assignments were then posted on a bulletin board in the naturalist office-workshop at the nature museum. Since the naturalists ate their meals together at the hotel, it was a normal procedure to bring problems needing discussion to the dinner table.

A report of the number and general type of naturalist activities and attendance was turned in each week to the Park Superintendent. Each naturalist also kept a record by two-week periods of the type, number, and the attendance of the activities in which he participated, which was turned in to the Chief Park Naturalist.

The male naturalists were a uniform for the evening hotel programs and other somewhat formal occasions. It consisted of a light gray shirt with a dark green tie and dark gray trousers. Each naturalist had a badge with the words "Park Naturalist" on it, which was always worn when on duty.

D. A Description of the Naturalist Program Activities

1. Definition of Park Visitor Groups

In his description of the activities of the Park naturalist program and also in the analysis of these activities, the author has used various visitor group types as the basis of his discussion. He has grouped the park visitors into four types, each of which has a distinctive program approach—the hotel group, group campers, resident campers, and transient visitors. The following is a definition of each group:

Hotel Group - those Park visitors who stayed overnight at Canyon Inn, the hotel in the Park.

Group Campers - those Park visitors who stayed in the Park overnight at one of the group camps.

Resident Campers - all Park visitors who stayed in the Park overnight, exclusive of the hotel group and the group campers. This group included visitors who rented housekeeping and sleeping cabins, and those with house trailers and tents.

Transient Visitors - all Park visitors who did not stay in the Park overnight. The large majority were picnickers and sightseers.

2. Hotel Group

The naturalist program with the hotel group at Canyon Inn

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was an active one, with a nature hike each morning at 9:00

A. M., a conducted recreation program each evening except Sunday, and an early morning bird hike once a week.

A small chalk blackboard in the lobby of the hotel was used to keep guests posted on pertinent naturalist activities, destinations of hikes and other information dealing with the naturalist program.

a. Nature Hikes. (Average attendance 25) Conducted nature hikes left from in front of the hotel at 9:00 A. M. daily. The hikes were to prominent points of interest in the Park such as "Lower Canyon," "Upper Canyon," "Wolf Cave," and "Hidden Canyon," with the naturalist pointing out and discussing nature objects seen along the way. Usually they lasted about two hours and covered distances from half a mile to three miles. Attendance varied from nine to over fifty. When there were over thirty on a hike, the group was split, if an extra naturalist was available. The morning bird hike from 6:15 to 8:00 A. M. drew an average of about a dozen persons.

The conducted or social recreation program began on Saturday night for the hotel guests, as Saturday was checking-in time. This program for the week went as follows:

b. Social Dancing. (Average attendance 59) The Saturday evening program from 8:30 to 11:00 P. M. was held in the lobby of the hotel and consisted of social dancing to organ music.

Generally the naturalists promoted a broom dance, and about midway in the evening called a Virginia reel, as ice breakers. Many times late in the evening several of the hotel guests gathered around the organ and did some group singing. Occasionally one of the more talented guests sang for the entire group. The organist was hired by the hotel manager and also played dinner music on Sunday afternoon.

- c. Church Rides. An effort was made by the naturalists to find rides for hotel guests who desired to attend church on Sunday. A form was available at the hotel desk to be signed by those who wanted rides and by those who had extra room in their cars. A notice was placed on the bulletin board concerning this service, and occasionally announcements were made by the naturalists.
- d. Song Fest. (Average Attendance 110) The Monday evening song fest program from 8:30 to 9:30 P. M. took place in the hotel lounge. The chairs were arranged in a large semicircle around a piano and song books with words of well-known songs were passed out. A naturalist acted as song leader and master of ceremonies.
- e. Hayride and Square Dance. (Average Attendance 95) The Tuesday evening program began at 7:30 P. M. when two hay wagons, or sometimes three if enough people had signed up, picked up their passengers and took them to one of the pic-

¹ See Appendix, p. VII, for a typical program outline.

nic shelters where a square dance was held. During intermission a lunch of hot dogs and cold lemonade was served by the help from the hotel. After the dance the hay wagons went back to the hotel by a route that gave the guests about a forty-minute ride. Many who did not care to ride the wagons also attended the dance, driving over in their cars. 1

- f. Campfire Program. (Average attendance 322) On Wednesday evening from 8:00 to 9:30 P. M. a campfire program was conducted in the Park amphitheater. Though a large majority of those attending were group campers, a goodly representation from the hotel was usually present. The program consisted of group singing led by the naturalists, skits, stunts and camp songs by the group camps, and a nature talk with colored slides by one of the naturalists.²
- g. Game Night. (Average Attendance 60) On Thursday evening from 8:30 to 9:30 P. M. a game night was held in the recreation room in the basement of the hotel. Those participating were divided into three teams to give a competitive spirit to the games. Some of the games used were Twenty Questions, relays, and Up-and-down Jenkins. The younger hotel guests and children made up the largest portion of the participants, though there was usually an audience of older guests.

¹ See Appendix, p. IX, for a typical program outline.

²See Appendix, p. X, for a typical program outline.

See Appendix, p. XI, for a typical program outline.



Canyon Inn, McCormick's Creek State Park

Plate 6

- h. Movies. (Average attendance 101) A color sound movie on Indiana's state parks was shown on Friday evening, the show starting at 8:30 P. M. Following the movie, one of the naturalists gave a fifteen or twenty-minute talk with color slides on Indiana State Parks and Memorials not covered in the movie. An opportunity was provided at the end of the program for the guests to ask questions.
- i. <u>Unscheduled Activities</u>. Due to the close contact between the naturalists and hotel guests (two of the naturalists lived in the hotel and all of them ate their meals in the hotel dining room), much informal interpretive work was accomplished.
- j. A Closed Program. Park visitors outside the hotel were not invited to participate in the hotel evening programs due to lack of space. Many times it was difficult to find room for all the hotel guests. However, all Park visitors were invited to participate in the morning nature hikes which met at the hotel.

3. Group Campers

Within a short time after a new group arrived in one of the group camps they were contacted by one of the naturalists. He explained to the camp leaders what the Park had to offer—the naturalist services, nature museum, animal shelter—and invited the camp to participate in the campfire program held on Wednesday evenings at the Park amphitheater. A schedule of naturalist services which the camp desired, such as nature

hikes, bird hikes, star talks, etc., was worked out at this meeting, or as soon afterward as the camp leaders were able to find out which services their group wanted. With four group camp programs in operation the scheduling at times became quite complicated.

- a. Nature Nikes. The major naturalist activity with the group camps consisted of taking the campers on various kinds of nature hikes. Most of the hikes were of a general type--to the falls, the quarry or some other point in the Park. The naturalists often told stories and played games with the hikers, besides pointing out objects of interest. The approach used depended on the age and sex of the campers, the purpose, and tone of the camp--its discipline and morale. Specialized hikes such as bird and rock hikes were occasionally requested. However, when the Girl Scouts were using the camps most of the hikes and talks were of a specialized nature. The number of hikers in a group varied from six up to 135.
- b. Star Talks. An often-requested activity with group campers was a star talk usually given about 9:00 P. M. by one of the naturalists. The talk consisted of the identification of several common constellations (pointed out with a strong-beamed flashlight), two or three star legends, and a sprinkling of factual information on stars and the solar system.
- c. Campfire Program. As was mentioned previously, all group camps were invited to participate in the Wednesday evening

campfire program at the Park amphitheater. The program began at 8:00 P. M. and usually lasted until 9:30 P. M. It was opened with the lighting of the campfire and group singing led by one of the naturalists. This was followed by introduction of the groups present and more group singing. The group camps then put on their programs which generally consisted of camp songs, stunts or skits. A nature talk with color slides, given by one of the naturalists, completed the program. Occasionally when the group-camp part of the program was short and it was not yet dark enough for the slides, one of the naturalists told a few Indian legends. 1

4. Resident Campers

At the beginning of each week one of the naturalists visited the housekeeping and sleeping cabin areas. He made an effort to contact each cabin party to give them information concerning the naturalist program, the nature museum and animal shelter, and also to invite them to the morning nature hikes meeting at the hotel and the Wednesday evening campfire program. Besides answering any questions about the Fark, he encouraged them to contact the naturalists at their office-workshop in the nature museum if they had any further questions.

5. Transient Visitors

The naturalist program reached the transient or short-time visitors mainly through two avenues, the nature museum and the animal shelter.

¹ See Appendix, p. X, for a typical program outline

a. Nature Museum. The nature museum, open the year around from 7:30 A. M. to 8:30 P. M., consisted of a large exhibit room approximately 30 by 50 feet, with an office-workshop for the naturalists, and living quarters for the animal keeper in the rear (See Plate 11, p. 88, also Appendix p. II). A stove was set up in the museum in the fall to provide heat during the cooler months. Used gasoline station display cases provided excellent museum exhibit cases.

The museum exhibits displayed during the summer of 1951 could be divided into three classes—live exhibits, participating exhibits and general exhibits. Included in the exhibits featuring living material were six aquaria containing fish and turtles, two terraria featuring mosses, an immature Pilot Elacksnake, and a display of freshly cut wildflowers.

The exhibits in which the visitor had some active participation consisted of three nature games--"That is Your Eird I. Q." on bird identification, "It's Fun to Find Out!" on identification of common rocks, and "True or False?" on general misconceptions about nature. A bulb lit or a buzzer sounded when the correct answer was selected. The wildflower display was also a participating type of exhibit as it was necessary to push a button to illumine the label for each flower. Another display of this type was a peep-hole exhibit in which the visitor peered through a magnifying

¹See Appendix, pp. II-VI for a floor plan showing location of the museum exhibits and a description of each exhibit.

lens into a lighted box to see the object on display.

The rest of the exhibits were of a general and more passive type covering such areas as mammals, birds, geology, Indian tools and nature crafts. Exhibits featuring the identification of local natural material, particularly those on geology, were a strong point of the museum.

b. Animal Shelter. The animal shelter which was located just behind the nature museum was an open pavilion-type structure approximately 25 by 50 feet (See Plate 7, p. 47). The collection consisted of common animals of the Park such as chipmunk, raccoon and crows, and also Fox Squirrels, Gray and Red Fox, and a woodchuck. A Great-Horned Owl, a Barred Owl and several Flying Squirrels were among the more unusual animals exhibited. During the summer months a collection of snakes was maintained, and several times reptile demonstrations were given on Sunday afternoon.

The cages were washed down and cleaned each morning by the keeper except on holidays when they were cleaned twice to keep the odor down. The keeper usually fed the animals twice a day. Visitors also were permitted to feed the animals, with the exception of the snakes.

c. "Tree" Nature Trail. Toward the end of the summer season of 1951 a "tree" nature trail was constructed in back of the museum near the animal shelter. It made a quarter-mile loop and ended about twenty feet from where it began. The trail consisted of interesting information about trees seen along the way, popularly presented on strategically located la-



Animal Shelter, McCormick's Creek State Park

Plate 7

- bels. As it was not opened until the end of the season, it was traveled by relatively few visitors. 1
- d. <u>Pulletin Board</u>. A bulletin board was located near the animal shelter at the terminus of four of the Park trails on which was posted an artistic trail map showing points of interest on the Park trails.

¹ See Appendix, p. XII and XIII, for a map of the tree trail and sample labels.

PART V

AN ANALYSIS OF THE NATURALIST PROGRAM

AT MCCORMICK'S CREEK STATE PARK

AS CONDUCTED DURING THE SUMMER OF 1951

WITH SUGGESTIONS AND RECOMMENDATIONS

FOR THE PROGRAM

AN ANALYSIS

OF THE NATURALIST PROGRAM AT MCCORMICK'S CREEK STATE PARK

AS CONDUCTED DURING THE SUMMER OF 1951

WITH SUGGESTIONS AND RECOMMENDATIONS FOR THE PROGRAM

A. Aims of the Naturalist Program

An important test of the naturalist program is whether or not it achieved its aims. In other words, did the visitors enjoy their stay in the Park more because of the program? Did they gain some idea of the purpose and proper use of the Park area? To the first question the answer is definitely affirmative. The activities and facilities of the naturalist program reached many thousand Park visitors. Many began to "see" nature for the first time, and considerable enthusiasm was shown by the majority of the visitors participating in naturalist activities.

To the second question concerning the purpose and proper use of the Park area, the answer is not so definite. Some information on this subject was given by the naturalists on nature hikes and in nature talks. A trail map given free at the Park entrance contained some information, and a color movie on Indiana State Parks was shown to the hotel guests. Considering the vital importance of this aim, it appears that this phase of the program could be strengthened. As Mr. Garrett Eppley, formerly of the National Park Service and now a professor at Indiana University, has said, "those people who come

to the parks are more nature minded than those who remain away from the parks." They are therefore a nucleus with which the philosophy of the state park idea can be sown, and from whom it then may radiate.

B. Naturalist Qualifications

The three major criteria used in choosing Park naturalists for the Indiana State Parks--social mindedness, enthusiasm for nature, and subject knowledge--are standard in the selection of naturalists for interpretive work. Mr. Reynold Carlson, formerly Nature Consultant of the National Recreation Association and now at Indiana University, sums up the naturalist's qualifications in these words:

His main responsibility is in relation to people, to stimulate them in their enjoyment and understanding of their natural environments, a task which calls for certain personal qualifications which are difficult to measure. He must have enthusiasm for his work, he must himself enjoy nature, and he must be able to impart his knowledge and interest to those with whom he comes in contact.

C. Operation of the Program

The democratic method used in carrying out the naturalist program, in which the three naturalists worked together in the planning and operation, was highly successful and provided for individualization. The special talents of each naturalist were used to good advantage, and there was opportunity for development of new talents.

Hugo K. M. Vindal. Nature Guide Training Institute Report. Michigan Department of Conservation, 1940.

²Reynold E. Carlson. <u>Enjoying Nature</u>. National Recreation Association, 1946, p. 8.

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Eecause the Chief Naturalist had his headquarters there, the Park was frequently used for breaking in naturalists new to the Indiana State Park System. A short indoctrination course might therefore be appropriate. The course could be conducted by the Chief Naturalist and cover such subjects as the following: State Park philosophy, aims and purpose of the Indiana State Parks System, and the particular aims at McCormick's Creek State Park; a brief survey of the flora, fauna, and major points of interest in the Park; a discussion of the social position of the naturalist in the Park—his relation—ship with hotel guests and Park employees; personal experiences of the Chief Naturalist, and general principles concerning interpretive work.

Naturalists who had previously worked in the Park would add much to the course. Following this point still further, a state-wide meeting of all State park naturalists at the beginning of the season might bear much fruit in uniformity of purpose and in exchange of ideas.

D. Park Administration

The importance of good park administration for a State

Park and its interpretive program cannot be overemphasized. A

clean park, well kept lawns, good water supply, well designed

picnic sites, clean restroom facilities and well maintained

hiking trails add much to the comfort of park visitors, and

more important, they affect his attitude toward the park area

itself. A well maintained and organized park will promote good

park use. A sloppy park will promote sloppy use.

The general public seems little aware of the amount of work continually going on to keep the Park in good condition. The park naturalists could do much informally to make the public more aware of and more appreciative of behind-the-scenes activities. A technique that usually works well on group hikes is for the naturalist to pick up bits of paper he finds on the trail but without making any comment. Soon, especially if there are children along, he will probably find members of his group also picking up paper, and it isn't long before someone makes a remark such as "there ought to be a law against people throwing away paper on the park trails." This gives the naturalist an excellent opportunity to tell about park maintenance.

E. Park Employee-visitor Relations

In conjunction with park administration, good relations between park employees and park visitors are essential. Each member of the park organization is a representative and salesman for the park. In order to sell the park to others they must be sold on it themselves. Though most of the employees at McCormick's Creek were in sympathy with the State Park idea, efforts could be made to give them more information on the state parks and their programs and to promote their interest.

Talks by the Park Superintendent, Chief Naturalist or an official in the Division of State Parks might be one approach. Another could be the use of an employee's handbook which would

give information on the purpose and philosophy of the State
Parks and possibly information on the features and history of
the Park itself. Concerning the attitudes to be cultivated in
a park organization, there are these statements in <u>A Study of</u>
the Park and Recreation Problem of the United States made by
the National Park Service:

To a very large extent, good public relations are dependent upon a proper attitude on the part of any agency's employees toward those whom they serve.

Perhaps most important of all, it should see that its attitude is that of a real service organization, from the chief down to the rank and file of employees.²

F. An Active Year-round Program

The state park natural area is a possession of the people of the State that must be preserved near its original condition, but the area also has its recreational function (See Functions of the Division of State Farks, p. 6). The harmonious blending of these two functions, preservation and use, constitutes one of the more perplexing problems facing park administrators today. If the park is not used it serves no real purpose for the majority of the people--if it is overused its primitive aspect is destroyed. Mr. Richard Lieber, the founder of the Indiana State Park System, has this to say concerning use vs. preservation:

Parks are the show windows of all conservation. Therefore

la Study of the Park and Recreation Problem of the United States. National Park Service, U. S. Government Printing Office, Washington, 1941, p. 86.

²Ibid. p. 90.

we must know that to preserve these parks for time to come and to be of use to unborn generations we, in our time, must see to it that preservation takes precedence over use.1

With the vital aim of park area preservation in mind there are certain principles pertaining to the recreational use that should be considered. The following are principles formulated by the National Park Service at the Swift Creek Recreational Demonstration Area:

- 1. That the area would render its greatest service if its activities were thoroughly integrated into the life of the community surrounding it.
- 2. That the area and its leadership should render a service throughout the whole year.2

The first point is quite dependent on the second. It is difficult to integrate into a community a three-months natural, ist program that is running a full and tight schedule. With a year-round program, planning could be done well in advance and activities followed up, making the integration of the Park and its program into the community a genuine possibility.

With an active year-round program the Park would become a center of nature activities for the area. Community organizations interested in the out-of-doors, such as Audubon Societies, garden and conservation clubs, could look to the Park

Richard Lieber. "Mature's Balances in Parks and Elsewhere" 1940 Yearbook, Parks and Recreation Progress. National Park Service, U. S. Government Printing Office, Washington, 1940, p. 82.

²Ian Forbes. "The Program Demonstration at the Swift Creek Recreational Area. 1938 Yearbook, Parks and Recreation Progress, National Park Service, U. S. Government Frinting Office, Washington, 1938, p. 62.

for guidance and technical aid. The Park and its program would also serve to promote and unite these organizations. The Park naturalist would be a resource person. Nature talks, materials, mimeographed nature information (such as simple wildflower keys), general and specialized nature hikes, and the use of the nature museum for group meetings, are some of the services that could be offered.

Many services could also be offered to the schools of the community--activities such as talks and movies for assembly programs, guided field trips in the Park, and aid in helping teachers plan their own outdoor and conservation programs. Kits of nature materials could be sent to the schools on a loan basis, for example "The Rocks of McCormick's Creek," "Fossils," and possibly live material such as snakes, chipmunk and squirrels. It would also seem feasible that the group camps facilities in the Park might be used for a school camping program in the fall, spring, and even the winter months.

A folder or mimeographed sheet could be sent to each school and to each interested organization explaining the services provided by the Park naturalist program. Outstanding off-season events such as fall coloring, spring wildflowers, the blooming of the dogwood and redbud, could receive particular publicity. There is even a possibility of developing a special program for "Redbud Time at McCormick's Creek." Winter nature hikes, ending at the museum with hot coffee and doughnuts and a nature talk with color slides, could be offered to interested organizations. A National Audubon Society Christmas

bird census, with local organizations participating, might also be worked into the winter program. A nature leader training course could be given on week ends at the park or in one of the nearby cities.

Many group camp leaders need help in planning their camp programs before bringing their groups to the Park. A winter session of group camp leaders might therefore be arranged, or possibly mimeographed material with suggestions for group camp programs in the Park could be mailed out.

If the year-round program was established and active in the community, there would be a good possibility of a McCormick's Creek Nature Association being formed by persons interested in the Park and its program. Some parks in California and New York have received considerable backing and financial support through such organizations.²

A year-round program would also facilitate a greater spread of park attendance. As is stated in A Study of the Park and Recreation Problem of the United States,

An obvious opportunity exists for midweek and year around use of state parks. Contacts with groups and organizations to encourage such use should greatly expand the benefits of present areas.4

¹ See the Group Camper, Pre-camp Planning, p. 74.

²Examples of such organizations are The Palisades Nature Association at Palisades Interstate Park, New York and New Jersey, and the Yosemite Natural History Association, Yosemite National Park.

³See Fig. 6 and Fig. 7, p. 59.

⁴A Study of the Park and Recreation Problem of the United States. National Park Service, U. S. Government Printing Office, Washington, 1941, p. 78.

and also in the same publication, referring to a complete use of the park area,

Considering the millions invested in lands and facilities, the additional effort necessary to bring about a wider, more continuous and fruitful use of the park resources is sound business practice as well as good public service.

The philosophy of the year-round program would be to take the park to the people--to help them realize that the park belongs to them, and that its purpose is to serve them. The people come to the park in the summer--the park would go to the people in the winter and off seasons.

G. Naturalist Activities Ecology

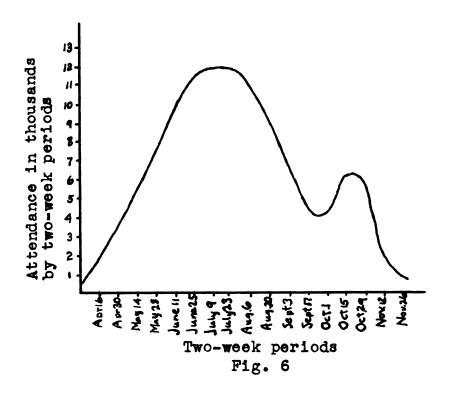
The use of the term "naturalist activities ecology" refers to the necessary interrelatedness of all the naturalist activities and the components of each activity. The park naturalists should be continually tying their activities together in their nature talks, hikes and other contacts with park visitors. For example, mention of particular exhibits in the museum could be made during a nature talk. The exhibits in the museum would be related to points of interest on the park trails. Exhibits and naturalist activities should not stand by themselves.

II. An Emphasis on Leisure-time Activities

With the increased amount of leisure time now available

la Study of the Park and Recreation Problem of the United States. National Park Service, U. S. Government Printing Office, Washington, 1941, p. 81.

TOTAL PARK ATTENDANCE, 1950



PERCENTAGE OF PARK ATTENDANCE BY DAYS OF THE WEEK, 1950

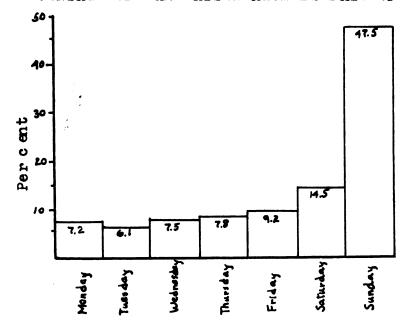


Fig. 7

to most Americans, there is a definite need to promote worth-while leisure-time activities. This could be accomplished through the naturalist program by the provision of more "self activities," by "take-home" material, by an exhibit in the nature museum, and by the naturalists promoting such activities in their nature talks and hikes.

Each visitor in the Park should have the opportunity to become his own naturalist if he desires. Mimeographed materials that would help him could be available at the museum. These might include self-conducted nature hikes for each trail which would locate and give a short description of the points of interest; check lists of common birds, wildflowers and trees of the Park; a camera tour pointing out the better scenic views, and possibly some simple plant and tree keys.

The provision of more "take-home" material would also aid considerably in the carry-over and recreational value of the Park program. Check lists might be worked out for the naturalist-conducted hikes which would have places to check and add material seen on the hike. For example, a sheet on the Pern Prail, Trail 4, would have a place to check the Fern species seen, a description of Sunken Cave, and possibly information on the firetower and forest plantation nearby. Popularly written sheets could be mimeographed and made available on such subjects as "The Founder of the Indiana State Parks," "A Story in Rocks" (geology), "Animals of Mc-Cormick's Creek," "Wildflowers of McCormick's Creek," "John McCormick, Sr.," and "The Story of the McCormick's Creek Area."

I. Miscellaneous Suggestions and Recommendations

1. Conservation of Natural Resources

The preservation of the Park and its features is a conservation problem. The providing of leisure-time activities for the Park visitors is also a conservation problem--conservation of human resources. These are major aims of the naturalist program, but it is also appropriate that the interpretive program in the Park aid in promoting the conservation idea in general. The Park naturalists usually did this unconsciously during their nature talks and on their hikes. The "true or false" nature game at the museum pointed out several conservation ideas. In addition, these ideas might be worked into the museum exhibits on forestry and wildflowers, and into the "tree" nature trail. The usefulness of predators and snakes is another area of conservation that could receive emphasis.

2. Maming of Trails and Points of Interest

The giving of names to the Park trails in addition to numbers, and the naming and publicizing of points of interest would do much to increase human interest in the Park offerings. Some of the names that were used back in the 1800's would still be applicable, such as "goat trail" for parts of Trail 2, and "hell's half-acre" for an area of tumbled rocks along the creek. The appeal of such names as "Fern Trail,"

Indianapolis News, Vol. XLVII, No. 179, July 1, 1916,
p. 15.

"Lower Canyon Trail," "Upper Canyon Trail" and "Midden Canyon Trail," compared with Trails 4, 3, 1 and 7, is apparent. Unusual formations like "Turtle Rock," "Elephant's Foot," "Elephant Rock," "Fat Man's Misery," all add interest and legend to the Park. The location of the place where a mad sheep dog ran a flock of sheep over one of the cliffs, the location of the old village, the old schoolhouse, old railroad bridge, grave of Oscar Megashire, age 9, and the sites of the old Indian campgrounds would excite the imagination of Fark visitors.

3. Park Collaborators

In the National Park Service there is a provision for specialists in various fields of natural history to be invited to work in a park area with no salary, but with their board and room furnished. Something similar might be worked out in those Indiana State Parks having hotels. This would provide a reliable yet inexpensive method by which technical data on the natural history of the Indiana State Parks could be obtained.

4. Mature Article in "Outdoor Indiana"

A continuing nature article written by the Park naturalists, with simple line drawings and pictures, for "Outdoor Indiana," the publication of the Indiana Department of Conservation, might be well received by the public. It would give the naturalists a very good opportunity to present and publicize their program and services.

lindianapolis News, Vol. XLVII, No. 179, July 1, 1916, p. 15.



The Stone Bridge, McCormick's Creek State Park.
The arch is constructed on the principle
used by the Romans, each stone being hand fitted
supporting the arch without other bracing.

Plate 8

J. Program Activities

1. Hotel Group

- a. The Group Itself. The majority of the hotel guests were from the better income area with many professional people. They were on the whole middle-aged and usually came as couples. A good number had been coming to the hotel at McCormick's Creek for many years. The large percentage stayed at the hotel for a week. As might be inferred from its composition, the group as a whole was quite receptive to the naturalist program. The contact between the naturalists and Park visitors reached its highest level with this group. This can be attributed to the active naturalist program carried on at the hotel and also to informal personal contact between the naturalists and hotel guests. It is hardly necessary to emphasize the importance of informal contacts in putting across the naturalist program. They gave the naturalists an exceptional opportunity to disseminate some of their inherent enthusiasm for the outof-doors and conservation.
- b. The Naturalist-Notel Manager Relationship. In the Indiana State Parks with hotels there was an agreement between the park naturalists and the hotel managers. The naturalists received their board and room free, for which they carried on the evening recreation program for the hotel guests. This arrangement enabled the State to hire more park naturalists for a given amount of money, but it had the effect

HOTEL GUEST NIGHTS, 19501

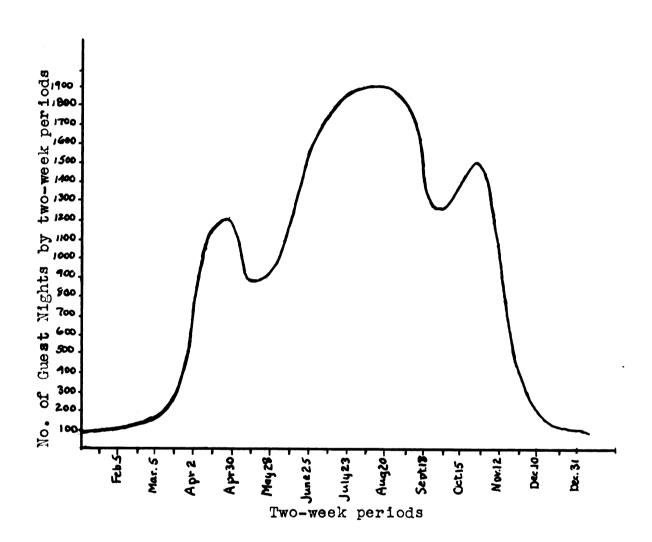


Fig. 5

¹ A guest night is one hotel guest for one night.

- of centering the naturalist program at the hotels.
- c. Hature Hikes. The conducted morning nature hikes from the hotel were the core of the naturalist hotel program. was on these hikes that the naturalists had the opportunity not only to talk about Mature, but to actually help the visitors to see, feel and hear lature for themselves. The hiking schedule to points of interest in the Park was well organized and flexible. The hikes were short at the beginning of the week and got longer as the week progressed. case of weather which made particular trails slippery, a change in the order of the hikes was made. Much can be said about the proper conducting of nature hikes, but the important point is that the hikers enjoy their contact with the out-of-doors. Concerning the hotel hiking program, more enthusiastic publicity for the nature hikes could be given by the naturalists at other hotel activities. Check lists for the nature hikes, and particularly for the bird hikes, would be very desirable. If arrangements could be made, the serving of hot coffee and doughnuts to the early morning bird hikers would increase the popularity of the activity considerably.
- d. Social Dancing. The Saturday night dance was a flexible activity with dancing mixers, some group singing, and music for those who did not care to dance. The naturalists should be careful not to push the program—the hotel guests should be allowed to participate entirely of their own volition.
- e. Song Fest. The song fest on Monday evening was one of the

more popular naturalist-conducted activities. It was one in which all ages could participate and contribute. The use of songs calling for action on the part of the audience gave the programs considerable life and helped generate an informal atmosphere. One part of the program called for volunteers from the audience to contribute talent such as singing, or telling stories or jokes. Since most of the guests were just getting acquainted, this part of the program usually did not bring much response. A genuine talent night might be tried in conjunction with game night on Thursday evening. This would give the naturalists a week to solicit talent, and if there appeared to be little talent available, more games could be substituted. Talent night has proved to be quite popular in some of the California State Parks.

If enough song books were available, there is a very good possibility that they might find a ready market among the hotel guests. Many would like them for souvenirs, besides wanting to learn the words to some of the songs.

f. <u>Mayride and Square Dance</u>. The square dance as conducted in the Park deserves particular attention, not only because it was one of the more successful recreational activities, but for the way it was handled. A large majority of those who attended the dance had never square-danced before. Also

¹ See Appendix, p. VII, for a typical program outline.

the ages of the dancers ranged from seven to over sixty. It was therefore necessary not only to teach the beginners and set a pace which they and the older dancers could follow, but also, at the same time, to maintain the interest of the younger and experienced dancers. This was accomplished by beginning with a large circle dance in which fundamentals were taught, and then dividing the circle into groups of eight and forming the individual squares. Calls were used without fancy trimmings, keeping to variations of the fundamentals taught in the large circle dance. Many hotel guests performed dances that they would never have considered possible at the beginning of the program.1

- g. Camp Fire Program. The Wednesday night camp fire program held in the outdoor amphitheater in the Park was carried on primarily by the group camps, though all Park visitors were invited. Many hotel guests did attend.²
- h. Game Night. Game night, or fun night as it was sometimes called, was a popular activity with the younger hotel guests and children. Dividing the group into teams developed group spirit. As was mentioned previously under the discussion of the song fests, a talent night might be tried in conjunction with game night. This would provide a program with wider appeal for guests of all ages.

¹See Appendix, p. IX, for a typical program outline.

²For further information see Campfire Program, p. 74,
and Appendix, p. X, for a typical program outline.

³See Appendix, p. XI, for a typical program outline.

- i. Movies. The excellent color movie on Indiana State Parks and the accompanying slide talk by the naturalist made this probably the most important evening recreation activity of the week in accomplishing the purpose of the naturalist program. It was the only direct contact that many of the hotel guests had with the purpose and aims of the state parks. Siving the slide talk before the movie would release one of the naturalists for other evening activities.
- J. Implications of the Evening Social Recreation Program.

 The social recreation program helped considerably in promoting an informal and friendly atmosphere at the hotel.

 It helped to give the hotel guests the feeling of a group vacation if they did not want to be by themselves. Probably most important of all, it introduced the naturalist to the guests, and provided an opportunity for the naturalist not only to sell himself, but also to sell other activities of the naturalist program. The prestige of the naturalist among the hotel guests was considerable, and much of it was a result of this program. The naturalists were often asked to pose for snapshots, invited to play cards, offered tips, and asked for personal advice.

At times there was some comment that the naturalists kept things too active and didn't allow the hotel guests a chance to relax. However, the only programs which were not voluntary were the State Parks movie and song fest. It was necessary to impose on some of the guests

- in the hotel lounge by turning off the lights for the movie, and rearranging the chairs for both programs.
- k. <u>Maturalist Activities Ecology</u>. There is a definite need for more emphasis on the week end program for transient visitors (See Fig. 7, p. 59). Certain changes in the hotel program activities might be made to help meet this need. The Saturday and Sunday morning nature hikes from the hotel, which were usually poorly attended due to checking-out time on Saturday and church services and the Sunday paper on Sunday, could be changed to afternoon hikes. They would meet at the hotel, proceed to the nature museum to pick up transient visitors, and then continue out on the trail. Publicity would be necessary to inform the transient visitors of the hikes.

Due to the demands of other naturalist activities, particularly the evening programs of the group camps, it would seem that the hotel evening program should not use the services of all the naturalists. At least one naturalist should be free every evening for other activities.

1. New Activities and Suggestions. The incorporation of new activities into the hotel program will be dependent upon how much time the naturalists have available. Possible new activities which could be scheduled are star talks and evening nature strolls. both of these activities might be very popular. An evening nature stroll with a wood thrush caroling in the distance, or the far-away

hooting of an owl, would be a never forgotten experience for many of the hotel guests. These two activities might be worked in conjunction with each other, the evening nature stroll ending in a star talk.

An easily accessible bulletin board should be available in the hotel lobby to post information of continuing importance pertaining to the naturalist program. It could also be used for poster-type exhibits. A table for a small nature exhibit which would refer the hotel guests to the museum might also be used (See Naturalist Activities Ecology, p. 78).

Mimeographed sheets on subjects such as "The Story of McCormick's Creek," "A Story in Rocks" (the geological story), and "Tildflowers of McCormick's Creek," would probably go over very well with this group, as a good number come back to the Park many times. The sheets would be available at the hotel desk for a small charge to cover printing.

2. Group Campers

The provision or opportunity for nature study is a <u>Must</u> in all state parks. Adults can best be served by the use of Mature Museums and a competent "always in the public eye" Maturalist service. Young people can also be reached by the Mature Study and Maturalist service, but the greater number can be reached most effectively through "Youth Group Camps," either period or overnight or day camp groups. (From the Report of the Committee on State Park Facilities and Services, American Planning and Civic Annual, 1948-1949, p. 38.)

a. The Group Itself. The make-up of the various groups using the group camps varied considerably. There were religious organizations, sororities, 4-M groups, welfare groups and Girl Scouts, each of which had a particular purpose for coming to camp. Some wanted just to get out-of-doors; others had definite planned objectives. The ages of the campers ranged from around eight up to seventeen years. Most of the camps had both boys and girls. The majority of the groups had used the camping facilities at McCormick's Creek before, though particular campers may not have been with them previously.

The enthusiasm and receptivity of the campers at naturalist activities was quite dependent on their camp programs. The morale of those camps which did not keep their campers active was generally low, and they were often difficult for the naturalists to work with. A successful active camp usually meant successful naturalist activities with the campers.

b. Indoctrination Talk. Many of the camp groups were not fully aware of Park regulations concerning the picking of wildflowers and the killing of animals such as snakes. A short indoctrination talk by a naturalist in which he would green the new campers and tell them about the Park and its program, would be helpful. Also a reptile demonstration by a naturalist could be recommended for each camp program.

- c. Mature Mikes. The nature hiking program which was the major naturalist activity with the group camps was on the whole quite satisfactory. As was mentioned previously, the success of the hikes as a canper activity depended considerably on the rest of the camp program. They were more successful when they were one of several interesting activities in which the campers participated. When they made up the major portion of the camp program, they were not always successful. It was also important that the camp leaders be sold on nature hikes as an interesting and worthwhile activity. The tone of a group was many times set by the camp leaders before the naturalist arrived, some groups being very enthusiastic, others absolutely cold. If more preparation could be given to the nature hikes, they would be more meaningful. A fifteen-minute slide talk the evening before a hike, on animals and wildflowers that would be seen, might help considerably. The use of check lists in which the campers could check off things they had seen, could be tried. If the campers went on several hikes, they might be able to work up a field notebook of check lists and notes as a camp project.
- d. Star Talks. Star talks were probably the favorite naturalist activity with the group campers. The beauty and mystery of the night sky appeared to have a natural attraction for them. The interpretive method used, mixing

factual information with star legends and the identification of common star constellations, was also an
important factor to the success of the talks--information, action and drama.

e. Campfire Programs. The Wednesday evening campfire program was another activity that was generally well liked by the campers. It provided them with an opportunity to display some of their talents, and also gave them a chance to share program ideas. The campers particularly enjoyed campfire songs that called for some type of action on their part, or that pitted sections of the audience against each other vocally.

The building of the campfire for the program could be a camper activity. Also the clean-up of the amphitheater area before the program might be another camp project. More publicity could be given for the campfire program.

f. Pre-camp Planning. As is evident in the foregoing discussion concerning the group camp programs, there is a definite need for better pre-camp planning on the part of some of the camp leaders (See a. and c.). Their camp programs should be well established before they come to the Park. A naturalist should be available before the camping season to go over their programs with them and make suggestions, if they desire it. If such

- a meeting could not be arranged, possibly mimeographed material on nature activities appropriate to the Park, and other program hints, could be mailed to the camp leaders. Each camp leader would also be encouraged to contact the Park naturalists on questions or problems concerning his camp program.
- g. In-camp Planning. In order to aid the camp leaders with their programs while they were in camp, and to facilitate closer coordination between the naturalist services and the camp programs, a naturalist could be assigned to each group when they arrived. The camp and its program would be his particular responsibility while the group was in the Park. Some groups would probably require a great deal of the naturalist's time--others very little.
- h. New Activities and Program Suggestions. An explansion of the type of nature activities provided for the group campers by the naturalist program would seem desirable. Nature hikes are probably the important activity of the naturalist program with the camps, but they should not be the whole program. Such activities as nature crafts, nature hobbies and nature games could be encouraged. Mimeographed informational material on nature crafts and hobbies could be made available at the museum. Nature games involving the displays in the museum and animal shelter could be worked out and promoted by the naturalists. An exhibit at the museum on nature hobbies, in



Stage of the Park Amphitheater, McCormick's Creek State Park

Plate 9

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conjunction with the present exhibit on nature crafts would be helpful. Also a demonstration exhibit on nature crafts and hobbies might be loaned to the camps.

Nature projects would go over well with the older campers. The Park Superintendent could be asked to supply a list of projects which would be feasible for them, such as building erosion dams, brushing fire trails, and improving wildlife habitats. Cookouts and overnight campouts could also be promoted. Arrangements might be made to show the color movie on Indiana State Parks at the Park amphitheater, accompanied by a short introductory talk by one of the naturalists on the purpose and aims of the State Parks. Other Park visitors could also be invited. This would not be in place of the showing at the hotel, but in supplement of it.

i. <u>Promotion of Self-activity.</u> The camp leaders and campers should be encouraged to carry on as much of their own nature program as possible. As L. E. Sharp, Director of Mational Camps, Inc., says, "No matter how well planned the activity, unless every camper participating has a hand in the launching of it, the activity will not be as complete or meaningful an experience as possible." Many

L. B. Sharp. "Fasic Considerations in Outdoor and Camping Education." The Eulletin of the National Association of Secondary School Principles. Vol. 31, No. 147, May, 1947.

of the activities already mentioned could be carried on by the campers with some direction from the Park naturalist. If sheets with well-written information on Eunken Cave and Wolf Cave were available, the camp leaders could conduct these hikin; activities themselves. Selfconducted nature hikes might provide a challenge for the campers. Carefully selected color slides on a nature subject, with a projector and written talk, might be made available to the camp leaders. Identification kits on "The Rocks of McCormick's Creek" could be loaned from the museum. A mimeographed information map of each group camp area, which would identify prominent natural features such as trees in the camp ground, could be furnished the campers. With such a program the campers could not only participate in nature activities when a Park naturalist was available, but their whole camp program could be based on nature, their crafts, games and hikes.

j. Naturalist Activities Toology. With an active nature program in operation in the group camps, it might be possible to sponsor a contest for the best nature exhibit of the week constructed by a camp or camper. The first place exhibit would be displayed at the nature museum as "The exhibit of the week." The second place exhibit could be displayed in the hotel lobby.

3. Resident Campers

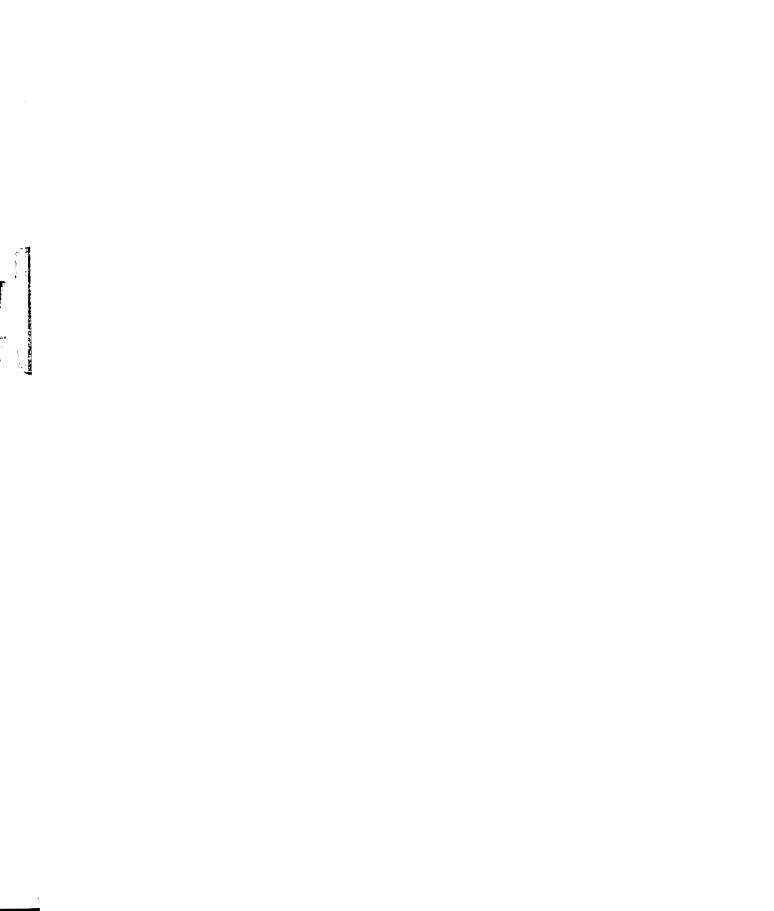
- a. The Group Itself. Of all the four visitor groups in the Park, this group seemed to be the best oriented and most independent. Many of them had previous emperience living in state parks or similar areas and had a very good idea of what they wanted to do while in the Park. They also appeared to be generally informed about the purpose and use of state park areas. The naturalists' personal calls at the first of the week to inform this group of naturalist activities in the Park were greatly appreciated and promoted public relations.
- b. New Activities and Program Suggestions. Eulletin Hoards could be placed in the housekeeping cabin area and the camp ground area to remind the resident campers of the naturalist activities, encourage them to use the trails, and inform them of Park facilities. If a suitable spot could be found, a small informal evening campfire program might be given to help them become better acquainted. An evening music program of phonograph records at the Fark amphitheater--mimeographed outlines for self-conducted hikes, and sheets giving information on the trees and other natural points of interest in their immediate camp areas--are other possibilities.
- c. <u>Maturalist Activities Ecology</u>. It was suggested previously that the color movie on Indiana State Parks, and

possibly a short introductory talk by one of the naturalists, be given at the Park amphitheater for the group campers. The resident campers and all other Park visitors could also be encouraged to attend. The music program mentioned might be given for a half hour preceding the movie—this type of program is used with good effect by the National Park Service at Mosemite National Park. Hany of the suggestions made for the other group programs, such as star hikes, evening nature strolls, etc., could be applied to this group and would be available to them. In this discussion only those activities pertaining to resident campers in particular are mentioned.

4. Transient Visitors

a. The Group Itself. The transient visitors might also be called short-time visitors, as a large percentage were picnickers and general sightseers. They were mostly week end visitors interested in seeing a few prominent features in the Park such as the falls, the nature museum and animal shelter, and during the summer months using the swimming pool. They liked to lounge around on the grass and visit the concession stand. Many brought portable radios, softball equipment or cards to entertain

¹See Fig. 7, p. 59.



themselves. A relatively small number got cut on the trails. Over fifty per cent were from cities with populations of ever 50,000. Due to their concentrated attendance and their general attitude toward Nature, they were best approached by indirect interpretive methods such as the nature museum, animal shelter and "Tree" Nature Trail.

- b. Transient Visitor Use of the Nature Museum. The nature museum was the most important of the interpretive tools for reaching the transient visitor. In 1950 over thirtynine per cent of all the visitors in the Park signed the register at the museum. This figure is quite conservative, since many visitors failed to sign the register on crowded days.
- c. Museum Objectives During the Summer of 1951. During the summer of 1951 the major portion of the naturalists' efforts relating to the museum were directed toward improveing the displays already present. This included new labeling, greater use of color background, and regrouping of exhibits. A new exhibit on the identification of star constellations was planned and work begun. Considerable time was also spent completing a large topographical model of the Park area.

^{1&}lt;sub>See Fig. 9, p. 84.</sub>

²See Fig, 8, p. 84.



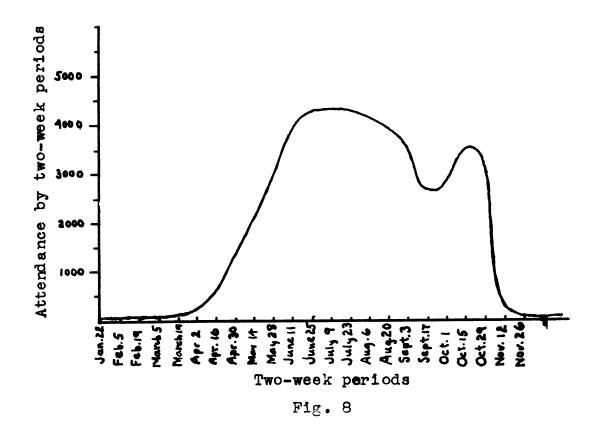
A Housekeeping Cabin at McCormick's Creek State Park

Plate 10

- d. Visitor Reaction to Museum Exhibits. Of the many exhibits in the museum, those that particularly attracted the average visitor were the three nature games, the aquaria, the live blacksnake, the peephole exhibit and a tree cross-section labeled "180 years old." (The naturalist office-workshop was situated so that most conversations in the museum could be heard, and these exhibits exacted the most comment.) Of the nature games, the most popular was the true-and-false game in which a bulb lit for the correct answer. Many times a lively argument occurred between visitors over one of the questions. It is interesting to note that the participating and moving type of exhibit attracted the most attention.
- e. Museum Exhibit Ecology. There appears to be a definite need to tie the exhibits together and also to relate them to natural points of interest on the Park trails. For example, an exhibit case on birds consisted of one shelf on four "Tufted Firds of Indiana," another on bird nests, and on the floor of the case a mount of a Ringnecked Pheasant. The exhibit could be tied together more completely by using the four tufted birds, their particular nests as examples of types of bird nests, and possibly the food habits of these same four birds in place of the Ringnecked Pheasant.

¹See Appendix, pp. II-VI.

NATURE MUSEUM ATTEMDANCE, 1950



PERCENTAGE OF PARK VISITORS FROM VARIOUS SIZE CITIES, 1950

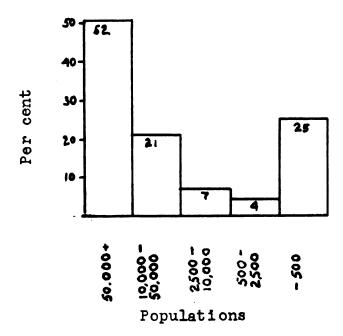


Fig. 9

Exhibits should also emphasize the common animals seen in the Park. As Ir. William Carr, formerly director of the Trailside Museum at Palisades Interstate Park, New York, has said, "The average public is interested, not so much in the extraordinary, but rather in the everyday commonplace events in natural history." The present mammal display of the less commonly seen Red and Fox Squirrels might therefore be more meaningful if it displayed the commonly-seen Chipmunk and Gray Squirrel.

Many of the exhibits could be connected to points of interest seen along the Park trails. A fossil might refer to the fine bed of fossil sea coral to be seen above the falls—the "Limestone Castle," a water—worn piece of limestone, to the water—worn curves and shapes in Wolf Cave. Photographs of related natural features in the Park could accompany an exhibit. A small note might be added to each label in the wildflower display which would enable the visitor to go out and locate the flower for himself. The nature hiking program, the nature talks, the campfire program, the animal shelter and the tree trail should have some tie—in at the museum. The museum exhibits should not be islands "entire of themselves," but should be used to relate and tie the whole Park pro-

lwilliam Carr. "Trailside Museums and Nature Trails in Farks." 1940 Yearbook, Park and Recreation Progress, National Park Service, U. S. Government Printing Office, 1940, p. 79.

gram together.

f. Recommendations and Suggestions for Museum Exhibits. There are several areas at the museum which could receive more stress, such as conservation, State Park purpose and use, the history of McCormick's Creek State Park, and leisure time nature activities. A good possibility for a conservation exhibit would be "Our Useful Hawks and Owls." The materials for such an exhibit, a stuffed Great Horned Owl and a Red-shouldered Hawk, were available at the museum. The two live owls in the animal shelter might also be worked in. Conservation could also be given stress in a forestry exhibit. The firetower, fire lanes and forest plantations in the Fark would provide fine relative material.

The "nature craft" exhibit might be changed to "nature hobbies," in which the crafts would be included as a hobby. Nature photography, bird study, rock collections, and plaster-of-paris track collections are a few of the nature hobbies that could be presented. This exhibit would be valuable for activity inspiration for the group campers. It is important that there be carry-over value to the naturalist program—the Park visitor must not go away from the Park with the feeling that nature exists only in state parks and similar more or less wild areas, but that it is something he may continue to study and enjoy through nature hobbies and activities even in a large



city.

Since the transient visitor had very little opportunity to become acquainted with the purpose and use of the State Parks except through the trail map, which he may or may not have obtained at the Park entrance, an attractive display on this subject at the museum would be a valuable contact. Photographs or material from other State Parks might be used.

An exhibit on the founding and story of McCormick's Creek State Park, the <u>first of the Indiana State Parks</u>, is a <u>must</u> for the museum. Materials and information for such an exhibit will have to be gathered soon, for many of the old-timers who are familiar with the personal history have passed on, and the materials relating to the Park have become lost.

Some use might be made of a question or suggestion box near the registration table. At times specialists in various fields visit the museum and have some very good suggestions or corrections to make. General visitors also make comments that prove quite helpful.

g. Museum Library. It would be most desirable to have a standard textbook in the museum on each of the major areas of nature study. Most naturalists bring some of their own books, but few have a complete library, or if they do, can bring it with them. Possibly a loaning system could also be arranged to make the books available to the group camps



Nature Museum showing the Animal Shelter behind it, McCormick's Creek State Park

Plate 11

or other particularly interested parties. The following books are suggested as a nucleus for the library:

- 1. Comstock, Anna B. Handbook of Hature Study, Comstock Publishing Co., Inc.
- 2. Deam, Charles C. Flora of Indiana. Indiana Department of Conservation.
- 3. Dean, Charles C. Shrubs of Indiana. Indiana Department of Conservation.
- 4. Marlow, William L. Trees of Eastern United States and Canada, Their Woodcraft and Wildlife Uses.
- 5. Jaerer, Ellsworth. Wildwood Wisdon. New York, MacMillian.
- 6. Mephart, Morace. <u>Camping and Woodcraft</u>.

 MacMillan Co.
- 7. Loomis, Frederic E. Field Fook of Common Rocks and Minerals. G. P. Putnam's Sons, New York and London.
- 8. Lutz, Frank E. Field Nook of Insects. G. P. Putnam's Sons, New York.
- 9. Mathews, F. Schuyler. Field Book of American Wild Flowers. G. P. Putnam's Sons, New York and London.
- 10. Morgan, Ann H. Field Eook of Ponds and Streams.

 b. P. Putnam's Sons, New York and London.
- 11. Peterson, Roger Troy. A Field Guide to the Eirds. New York, Houghton-Mifflin.
- 12. Fettit, T. <u>Book of Nature Hobbies</u>. New York, Didier Publishers.
- 13. Pope, Clifford H. Amphibians and Reptiles of the Chicago Area. Chicago Natural History Museum.
- 14. Vinal, William G. <u>Nature Recreation</u>. New York, McGraw-Hill.
- 15. West, James E. and Hillcourt, W. Scout Field Book. Boy Scouts of America.

- 16. Williams, Lou. A Dipper Full of Stars.
- 17. Lander, Carl E. and Klusmam, Wes. H. Camp Songs

 'N' Things. 1940 Addison Street, Berkeley 4,
 California.
- h. Museum Records. Records are an indispensable part of any museum. An interesting and valuable object can become nearly worthless to those working in the museum who do not know its background. A file of records on the natural history of the Park is also an important phase of museum activities. It is most disheartening, considering the number of highly skilled naturalists who have been stationed at McCormick's Creek, to find so little information available on the natural history of the Park.
- i. Museum Duty. It would promote public relations if there were certain hours each day when a Park visitor would know definitely that a naturalist was available at the museum. Even it if was just for an hour, the visitor would be able to depend on it. Duty hours could be posted in the museum and on all Park bulletin boards.

Due to the location of the naturalist's office-work-shop in the museum, and the necessity of having the naturalist available, yet keeping curious visitors out of the office, a half-door arrangement might be used in place of the present door. The upper half would remain open during dity hours, or at other times when the naturalists were in the museum.

- j. Trailside Exhibits. On-the-spot or trailside exhibits would be very useful to supplement the museum exhibits. An attractive bulletin-board type of display near an object or area of particular interest would probably be irresistible to the average curious visitor. Park areas and points of interest where such exhibits might be used to good effect are Wolf Cave, Sunken Cave, The Stone Bridge, Beech Grove, the Quarry, the Falls, the Firetower, and possibly the sinkhole area of trail five. A very strategic location for a bulletin board on naturalist activities in the Park would be at the refreshment stand.
- k. Animal Shelter. The animal shelter was one of the more popular attractions in the Park, especially with children. They particularly enjoyed feeding the animals. The exhibit on snakes maintained during the summer months received considerable attention. Definite efforts should continue to be made by the naturalists to explode the "snake myth" and to help prevent the present general slaughter of harmless and beneficial snakes. An expansion of the Sunday afternoon reptile demonstration idea to include the group camps and the hotel guests, would be a genuine step in this direction.

The relations between the animal keeper and the ani-

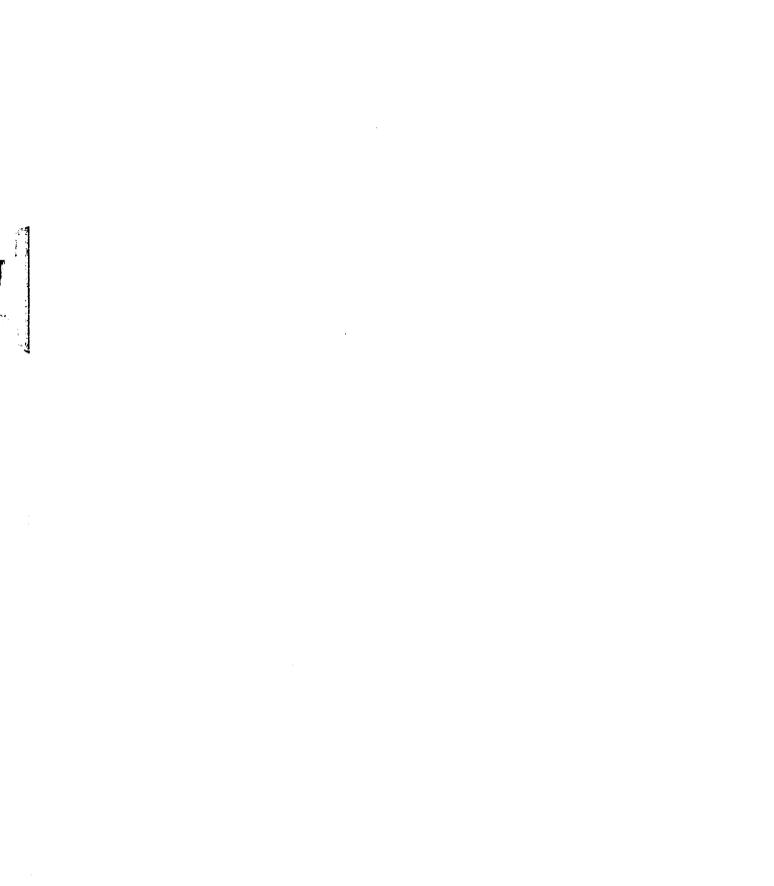
¹ The snakes were released at the end of the summer.

mals was very good--a point which is most important to successful wild animal confinement. More information concerning the diet of each species in captivity should be obtained and the present diets reviewed. If a definite feeding time for the animals could be established, it might be an attraction for the Park visitors. A file card of information on each individual animal in captivity would be very worthwhile, especially for a new keeper. Over the years, a valuable stockpile of information could be built up.

Some of the cage labels need to be replaced. It is suggested that more information on the individual animal be incorporated into each new label. An animal should not be just "A Farred Owl," but "Rocky, a Farred Owl, who was taken from a nest near spencer and given to the Park in 1947. He likes to be scratched behind the ears and enjoys a fresh mouse." The visitor will be more apt to remember the animals as individuals rather than as a species, and will develop a more genuine interest in them. Some mention might also be made on the labels of the predator-prey relationship among animals. Few of the visitors appear to realize that predators may be beneficial.

Many visitors who have been in the Park in previous years still ask about and remember "Chucky-Lou," a wood-

¹Dr. H. Hediger. Wild Animals in Captivity. Butter-worths Scientific Publication, London, 1950, p. 162.



chuck trained by one of the naturalists. They also remember a live Screech Owl that used to perch on the mantle above the fireplace in the museum. Though these animals are now gone, the lasting impression they made on the Park visitors is significant. This might be a lead to new kinds of activities to be worked out in conjunction with the animal shelter. Several animals might be trained or tamed for use in talks to schools or other groups during the off seasons, and for Sunday afternoon shows in the amphitheater during the summer.

1. "Tree" Nature Trail. As the "tree" nature trail was not ready for use until the end of the 1951 season, little comment seems justified until visitor reactions can be observed. The idea is excellent, and the trail appears to be well organized and laid out. The labels, however, have weathered considerably since being put up. A most important part of the trail yet to be constructed is a satisfactory entrance. Once a visitor starts on the trail, it is very likely he will continue—the problem is to get him to start. This sign appears at the entrance of the nature trail at Bear Mountain, Palisades Park in New York to help accomplish this purpose:

How many of us are able to read unaided the signs of nature? Let the guiding labels take the place of a naturalist friend who has an interesting

See Appendix, pp. XII and XIII for map and sample labels of tree trail.

story to tell you as you follow the trail.1

m. <u>Nature Nikes</u>. Though most of the emphasis of the naturalist program pertaining to the transient visitor is of an indirect type, an opportunity should be available to them to participate in more direct naturalist activities. As was mentioned under the discussion of the hotel group program, the Saturday and Sunday morning hikes from the hotel could be given in the afternoon, stopping at the museum to pick up any transient visitors who cared to go. The main problem would be to inform the transient visitors of the hikes. Fulletin boards, and notices at the museum, could be used, and possibly some means of informing them at the Park entrance.

¹⁰rth, J. C. The Trailside Museum and Nature Trails at Bear Mountain, Palisades Interstate Park, New York. From a report presented to 44th Annual Meeting of the American Association of Museums, May, 1949, p. 4.

PART VI

SULMARY

SULMIARY

Though the naturalist program was described and analyzed by using visitor type groups, it is imperative that the reader does not gain the impression that the program was made up of, or should be made up of, four distinct naturalist programs, one for each group. Though certain activities were aimed at a particular group, the program was operated as a whole, the hotel guests using the museum and other facilities discussed under transient visitors, the resident campers attending the nature hikes from the hotel, and so on throughout the program. A particular activity was discussed under the group it most vitally concerned.

The following is a summary of the major points brought out in the analysis.

SUMMARY

General Program

- 1. The recreational aim of the naturalist program was adequately met. However, there is need for more emphasis on park use and preservation.
- 2. The essential qualifications for an Indiana State Park

 Maturalist, in the order of their importance, are: social
 mindedness, enthusiasm for Nature, and subject knowledge.
- 3. The democratic operation of the naturalist program promoted a harmonious working relationship among the naturalists and a quite smoothly operated program. Also it provided for individualization concerning naturalist activities.
- 4. Park employee-visitor relations could be promoted through the use of a Park employee handbook and/or lectures for the employees by members of the Division of State Parks.
- 5. An active year-round naturalist program is recommended as rendering the greatest service to the community surrounding the Park, and as providing the greatest return on the Park investment.
- 6. A continuing effort is necessary on the part of the naturalists to relate the activities and facilities of the

- program -- "Maturalist Activities Ecology."
- 7. With the increased amount of leisure time available to most Americans, there is a definite need to promote worth-while leisure-time activities. The naturalist program should promote leisure-time nature activities and hobbies.
- 8. Public interest in the Park could be increased by the giving and publicizing of names to many of the naturel features in the Park.
- 9. Park Collaborators, working with no salary, but with board and room free, are suggested as a means of obtaining technical information on the natural history of state park areas where park hotels are located.
- 10. A continuing nature article in "Cutdoor Indiana" by the Park naturalists is suggested as a means of presenting and publicizing naturalist activities in the State Parks.

Hotel Group

1. The naturalist-hotel manager relationship, by which the naturalists received board and room free and in return conducted a recreation program for the hotel guests, made it possible for more state park naturalists to be hired for a given amount of money; but it tended to center the naturalist program at the hotel.

- 2. The evening social recreation program helped considerably in promoting a friendly informal atmosphere at the hotel, and in selling the naturalists and the rest of the naturalist program to the hotel guests.
- 3. It is suggested that the Saturday and Sunday morning nature hikes from the hotel be changed to Saturday and Sunday afternoon for the benefit of the weekend transient visitors.
- 4. Scheduled star talks and evening nature strolls are possible new hotel activities.

Group Campers

- 1. The success of the naturalist program with a group camp was considerably dependent upon the success of the camp itself.
- 2. More pre-hike preparation is suggested as a means of making the nature hikes more successful.
- 3. More pre-camp planning is recommended as a means of improving camp programs.
- 4. The assignment of a naturalist to a group when it arrives in the Park is suggested as another means of aiding camp leaders with their programs.

- 5. An expansion of the types of naturalist activities offered to the group camps is recommended to supplement the present program in which nature hikes predominate.
- 6. In order to make the nature program more meaningful to the campers, it is recommended that the program be carried on as much as possible by the camp leaders and campers themselves.

Resident Campers

- The personal contact information service offered to the resident campers at the first of each week promoted public relations.
- 2. Bulletin boards, a small informal evening campfire program, an evening music program, self-guiding nature activities, and the State Parks movie, are new activities suggested for this group.

Transient Visitors

- 1. The most practical way to reach the transient visitor is through indirect interpretive methods—the nature museum, animal shelter, "tree" nature trail, and trailside exhibits.
- 2. The most important interpretive tool for reaching the transient visitor was the nature museum.

- 3. The moving and participating types of exhibits attracted the most attention from museum visitors.
- 4. There is a need to relate the various museum exhibits with points of interest on the Park trails, and with the naturalist activities.
- 5. Areas recommended for more emphasis in the nature museum are conservation, State Park purpose and use, history of McCormick's Creek State Park, and leisure-time activities.
- 6. A museum library of standard textbooks on the various major areas of nature study is recommended.
- 7. It is recommended that records be kept on museum accessions and Park natural history.
- 8. In order to promote public relations, it is suggested that there be definite hours when a naturalist is available at the museum.
- 9. Trailside exhibits are recommended as a supplement to the nature museum.
- 10. New and more complete labels, possible animal diet improvements, a trained or tamed animal show, continuing "snake education," and file cards for each animal, are suggestions for the animal shelter.
- 11. The construction of an enticing entrance to the "tree"

nature trail will be a decisive factor in its use.

* * * * *

It is not necessarily attendance at the naturalist activities that will indicate the value and effect of the naturalist program, but the last inspiration and carry-over value of the various activities.

APPENDIX

TABLE I

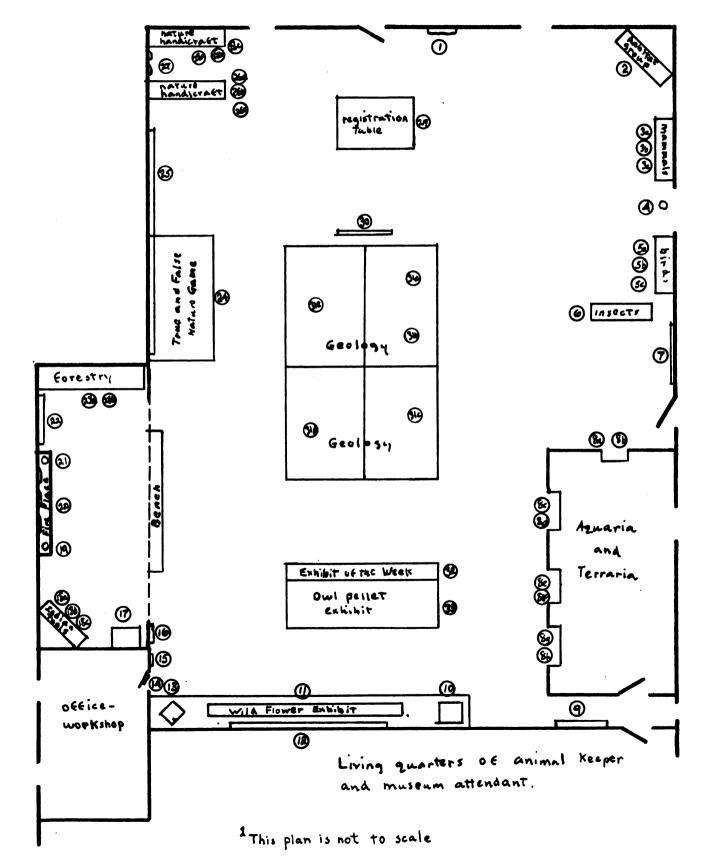
CLIMATIC RECORDS FOR THE McCORMICK'S CREEK AREAL

Month	Average Precipitation	Average Temperature	Average Snowfall				
January	3.79 (inches)	29.8°F.	7.8 (inches)				
February	3.04	31.2	6.4				
March	4.76	42.8	3.5				
April	3.74	52.2	0.5				
May	4.12	63.4	trace				
June	3.96	71.8					
July	3.95	76.2					
August	3.85	74.5					
September	3.22	68.2					
October	3.23	56.4	0.1				
Movember	3.15	43.7	0.6				
December	3.49	32.6	4.7				
Totals	44.35	56.3	23.6				

lsummary of Climatological Data (to 1930). Eulletin W., Third Edition, Vol. II, Sections 34-71, U.S. Department of Agriculture, Weather Division.

APPENDIX

General Layout Plan of Exhibits at the Nature Museum,
McCormick's Creek State Park, Summer, 1951



General Layout Plan of Exhibits at the Nature Museum, McCormick's Creek State Park, Summer, 1951

- (1) "Development of a Hog-nosed Snake": Preserved specimen 6, 5, 4, 3, 2 and 1 weeks before birth and at birth.
- (2) "Campground Visitors": A habitat group which included a baby Skunk, a Chipmunk and a Deer Mouse.
- (3a) "Food Habits of Mammals": Several types of skulls to point out teeth adaptations for eating.
- (3b) "The Bat Our Only Flying Mammal": Mounted skeleton of a bat and two stuffed bats.
- (3c) Lifelike mounts of a Red and a Fox Squirrel.
- (4) Lifelike mount of a Golden Eagle perched on a stump.
- (5a) "Tufted Birds of Indiana": Cardinal, Titmouse, Eluejay and Cedar Waxwing.
- (5b) "Bird Builders": Examples of various types of bird nests.
- (5c) Lifelike mount of a Ring-necked Pheasant.
- (6) "Butterfly Botanist": Several species of butterflies mounted lifelike on a background of their preferred food plant.
- (7) "Tree of Plant Life": A treelike flat wall display showing the evolutionary relationship of the major plant groups.
- (8a) Moss terrarium.
- (8b) Moss terrarium.
- (8c) Aquarium, "Turtle Eggs."
- (8d) Aquarium, "Darters!"
- (8e) Aquarium, "Catfish."
- (8f) Aquarium, "Minnows."

- (8g) Aquarium, "Box Turtles."
- (Sh) Aquarium, "Musk Turtle" and "Painted Turtle"
- (9) "What is Your Bird I. Q.?": Nature game on the common birds of the Park, which sounded a buzzer when the correct name of a bird was matched with its picture.
- (10) Cage containing a live immature Pilot Blacksnake.
- (11) "Do You Know These Plants?": Wildflower exhibit in which fourteen fresh cut flowers were placed in mounted bottles. It was necessary to push a button to illuminate the label of each flower.
- (12) Plank cut from Tulip Tree that was nine feet in diameter.
- (13) Peephole exhibit with a Eird Nest Fungus on display.
- (14) Bulletin board on door of office-workshop with a map of the Park and a scratch pad to leave notes for the naturalists.
- (15) Cross-section of a giant grapevine stem.
- (16) Cross-section of a Basswood log labeled "180 years old."
- (17) Arrowheads, spear points and other Indian tools.
- (18a) Indian Bannerstone, Eird Points.
- (18b) "Indian Tools": Awl, scraper, knife, mortar and pestle.
- (18c) Display on how an Indian tomahawk was made.
- (19) A vase of "weed" stems which were coated with various colors of paint.
- (20) Three picture-frame mounts hung above the fireplace: a Prairie Chicken, a Common Black Duck and a Ruffed Grouse.
- (21) Half of a large goode with a light bulb mounted in it.
- (22) A painted woodland scene that features mushrooms.

- (23a) An exhibit on the major parts of a twig: lenticles, terminal bud, lateral bud, bud scales, etc.
- (23b) "Now a Tree Grows": Showing growth rings, spring and summer wood.
- (24) "True or False?" Nature Game: A bulb lit when the correct "true" or "false" button was pushed. The following were the statements used, True or False?:
 - 1. Poison Ivy has three leaflets.
 - 2. Milk Snakes milk cows.
 - 3. The Blue Racer is a poisonous snake.
 - 4. The Water Snake found in Indiana is the poisonous Water Moccasin or Cotton Mouth.
 - 5. Cowbirds lay their eggs in the nests of other birds.
 - 6. Sunfish build nests and the males guard the eggs.
 - 7. Owls can see during the day.
 - 8. Handling toads will cause warts.
 - 9. You can be poisoned by touching a poisonous mush-room.
 - 10. A horse hair placed in water will turn into a Horse Hair Snake.
 - 11. Most hawks are destructive around a farm.
 - 12. A modern farmer who wants wildlife on his farm will have clean-cut fence rows.
 - 13. A snake smells with his tongue.
 - 14. Orchi ds grow wild in Indiana woodlands.
 - 15. The "Milky Way" is composed of millions of stars.
 - 16. Indiana was once covered by an ocean.
- (25) A large bulletin board: Posters mounted were "Smoky says, Use it, Crush it, Ereak it, Drown it," and "What We Get From Trees."
- (26a) "Mother-of-Pearl Euttons": Now Mother-of-Pearl buttons are obtained from mussel shells.
- (26b) How to make leaf prints, splatter prints, roller oil prints and ozalid prints.
- (26c) "Outdoor Aids": An exhibit on the pamphlets for sale at the museum, "Birds of Indiana" and "Fifty Common Trees."
- (27) Wall plaques in which cones and needles of several species of "evergreens" had been mounted in plaster-of-paris: Canadian Hemlock, Pitch Pine, Red Pine, etc.

- (28a) Nature crafts: Now to make animals and figures out of natural materials, "Woodland Pixies."
- (28b) Camp craft materials: Use of walnut shells and whittling.
- (28c) How to weave a basket.
- (29) Registration Desk: "Please Register. Help us Keep a Record of Daily Attendance. Thanks."
- (30) "Rocks of McCormick's Creek," displayed on an easeltype mount: Fossils, chert, limestone.
- (31) "A Story In Rocks."
- (31a) I. The Ocean Age: Fossils of Brachiopods and Sea Coral.
- (31b) II. Coal Forming Age: Fossils of Fern Tree, Calamite and Club Moss.
 - (Displays of the Mississippian, Silurian and Ordovician ages were used as a background for 31a and 31b.)
- (31c) III. Age of Mammals: Mastodon tusk, Musk Ox skull.
- (31d) Concretions, geodes, "Limestone Castle" (a water-worn piece of limestone of unusual shape).
- (31e) "It's Fun to Find Out," nature game on rocks. A buzzer sounded when the correct answer and rock were matched.
- (32) "Exhibit of the Week."
- (33) An exhibit showing the contents of some owl pellets, and a mounted Screech Owl.

A Typical Program for a Song Fest As Conducted by the Naturalists at McCormick's Creek State Park During the Summer of 1951

Monday evening, 8:30 P. M. to approximately 9:30 P. M., held in the hotel lounge. Songbooks with words only were passed out and chairs arranged in a semicircle around a piano. A naturalist acted as master of ceremonies and song leader.

Greeting

Songs:

"Smiles"

"When You Wore a Tulip"

"I Want a Girl"

Announcements:

Announcements were made pertaining to other hotel and naturalist activities.

Introductions:

The hotel manager, piano player and the other naturalists were introduced to the hotel guests. This was followed by having the hotel guests stand up by their home states and each give his name and home town. After a group from a particular state finished giving their names, a song was dedicated to that state:

Kentucky - "My Old Kentucky Home"

Chio - "Eeautiful Ohio"

Illinois - University of Illinois Fight Song Missouri - "Missouri Waltz" Indiana - "Back Home Again in Indiana"

Songs:

Usually these were songs that required physical action on the part of the audience, and a round or two, to loosen them up for the following activities.

"My Bonnie Lies Over the Ocean"

"Bow, Row, Row Your Boat"

"Sweetly Sings the Donkey"

Song Fest, Cont'd

Talent:

Members of the audience were asked for contributions of talent to the program, such as singing, leading songs, telling jokes or stories, etc. If no one volunteered, one of the naturalists took the children out into the hotel lobby and taught them a simple song such as "Eentsy Weentsy Spider" which they gave for the group. In the meantime one of the other naturalists led the rest of the group in one or two songs.

Songs:

"There is a Tavern in the Town"
"Then It's Springtime in the Rockies"
"On Top of Old Smoky"
"Reuben and Rachel"
"Casey"
"Let Me Call You Sweetheart"
"Evening by the Moonlight"

Hokey-Kokey:

The program was ended with a reminder of the other naturalist activities, and by having all the people in the audience push their chairs toward the center of the room, join hands and form a large circle around the outside of the room. A singing action song called the "Hokey-Kokey" similar to a round dance, then closed the program.

A Typical Program for a Square Dance as Conducted by the Naturalists at McCormick's Creek State Park During the Summer of 1951

Tuesday evening, 8:15 P. M. to approximately 9:45 P. M. Most of the guests arrived on hay wagons. The dance was held at Redbud Picnic Shelter.

Greeting

Circle Dance:

A large circle was formed by all those who cared to dance. Fundamentals such as the swing and promenade were taught. This was followed by a simple circle dance--"Gents to the center and Ladies all cheer, swing that lady on your left, promenade." The circle was then divided into groups of eight and the individual squares formed.

Square Dances:

"Right Hand Star and How Do You Do"
"Lady Around Lady and Gent Around Gent"
"You Swing Your Gal and I'll Swing Mine"

Short Intermission:

Waltzes, Polkas or Schottishes were played.

Square Dances:

"Around That Couple and Take a Little Peek"
"Forward Six and Fall Lack Six"
"Eirdie in the Cage and Six Mands 'Round

Intermission:

Refreshments of lemonade and hotdogs were served by the help from the hotel. Usually one of the naturalists led the small children in a very simple round dance, "Bluebird, Bluebird on My Shoulder."

Circle Lance:

"Skip to My Lou."

A Typical Campfire Program
As Conducted by the Maturalists at McCormick's Creek
State Park During the Summer of 1951

Wednesday evening, 8:00 P. M. to approximately 9:30 P. M. Held at the Park outdoor amphitheater.

Greeting and lighting of campfire

Songs:

"The More We Get Together "When You Wore a Tulip"
"Push the Damper In"

Introductions:

Introduction of the other naturalists, the camp groups and their leaders, and other groups such as hotel guests and resident campers.

Songs:

"Do Your Ears Hang Low"
"Thite Coral Bells," a round
"On Top of Old Smoky"
"Wolf Munt" (a story told by a naturalist which called
for action on the part of the audience)

The Group-camp Programs:

Camp Ma-Wa-Qua sang camp songs
Camp McCormick put on an old-fashioned melodrama
Camp Friendly put on a little skit, "The Devil in
Church," and three of the talented campers played
musical instruments

Indian Legend (optional)

If it was not dark enough to show slides, one of the naturalists told an Indian Legend.

Mature talk with color slides

A Typical Program for Game Night
As Conducted by the Maturalists at McCormick's Creek
State Park During the Summer of 1951

Thursday evening, 8:30 P. M. to approximately 9:30 P. M., held in the recreation room of the hotel.

Up-and-down Jenkins:

A game played with a coin around a ping pong table, in which one side tried to guess which member of the opposing team had the coin. A newcomer could enter the game immediately on arriving in the recreation room.

Form Teams:

Usually everyone was given the name of either "cow," "pig" or "sheep," while playing Up-and-down Jenkins, and after the ping pong tables were pushed out of the way, they were told find their kind. This resulted in a bedlam of "mooing," "basing" and "oinking."

Relays:

Pass the Lifesaver Eack to Eack Cracker-whistle

Alphabet Game:

Mach player on a team had a card, or possibly two, with a large letter of the alphabet on it. A word was announced by the naturalist, and the first team to line up their players to form the word won.

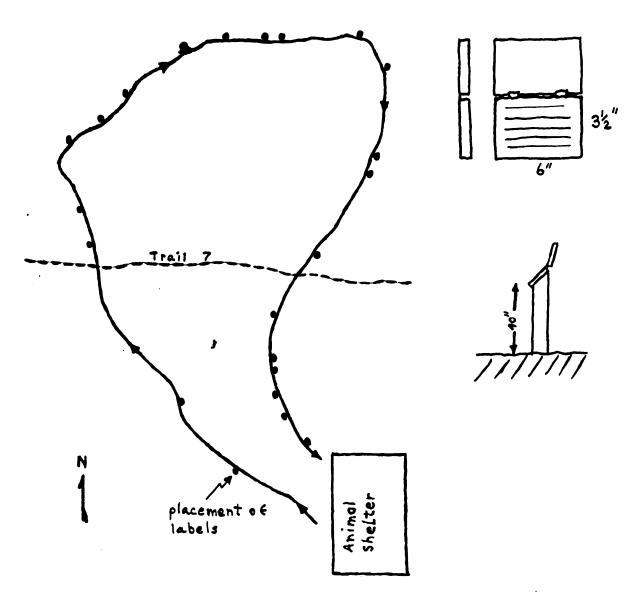
Artist Tear-out:

Each team selected an artist and a judge to represent them. The judges were sent out of the room and the artists were asked to tear the shape of a giraffe out of a newspaper behind their backs. Members of the team could give verbal instructions but no physical aid. A time limit was set and the judges then called in to choose the winners.

Twenty Questions:

Each team sent a member to the naturalist who whispered to them the name of a person, place or thing. They then went back to their groups, but could only answer "yes" or "no" to the questions the group asked. The first team to arrive at the correct answer won.

"Tree" Nature Trail McCormick's Creek State Park



Length, approximately 1700 feet

APPEMDIX

Typical Labels From the "Tree" Nature Trail, McCormick's Creek State Park

Basswood

The Indians called this tree the string tree because its bark is strong and used in making rope. The wood is a favorite among wood carvers. Watch for its heart-shaped lopsided leaves.

Shagbark Hickory

My bark is untidy,
It twists and it bends.
Though its middle stays fastened
It's loose at both ends.

Sycamore

The smooth, light bark which peels, revealing white patches, and the broad maple-like leaves are characteristics by which you can tell this tree.

Elack Walnut

My leaves are long,
My leaflets small.
Elack is my bark,
I'm furrowed and tall.
Squirrels eat my nuts,
People do too:
My wood is in fine furniture
Both old and new.

Look for a crooked White Ash on the left. This one has a shelf fungi growing on the trunk--a sign that the tree is probably hollow.

Tap on the trunk--does it sound hollow?

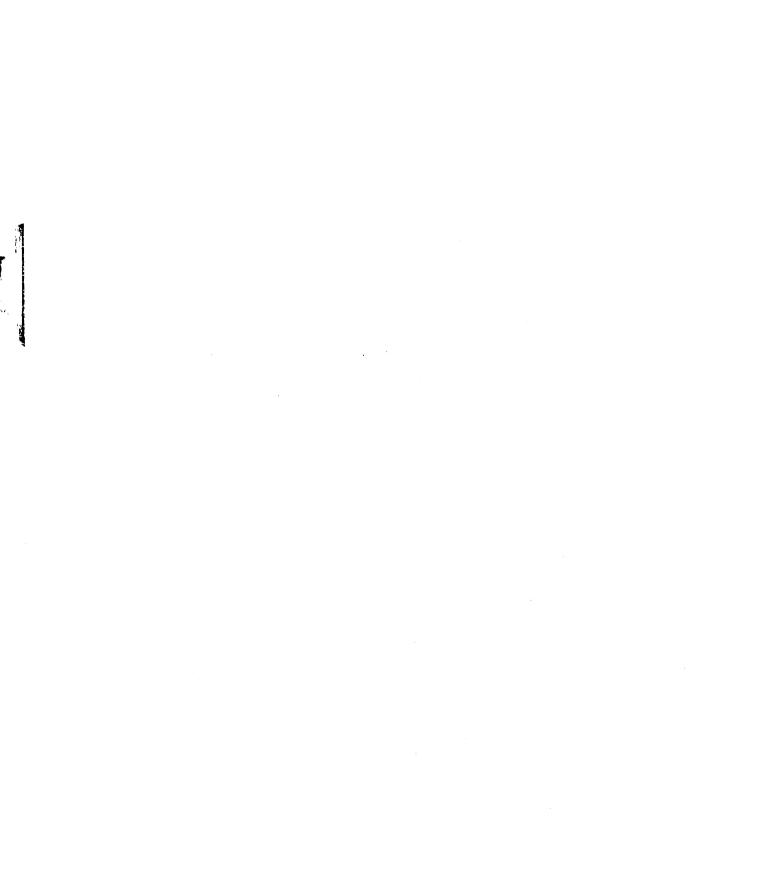
Mou can tell from its leaves that this tree is a maple. The sap from this kind of maple is used in syrup for your pancakes. Can you guess that this is a S _ _ R M _ _ _ ?

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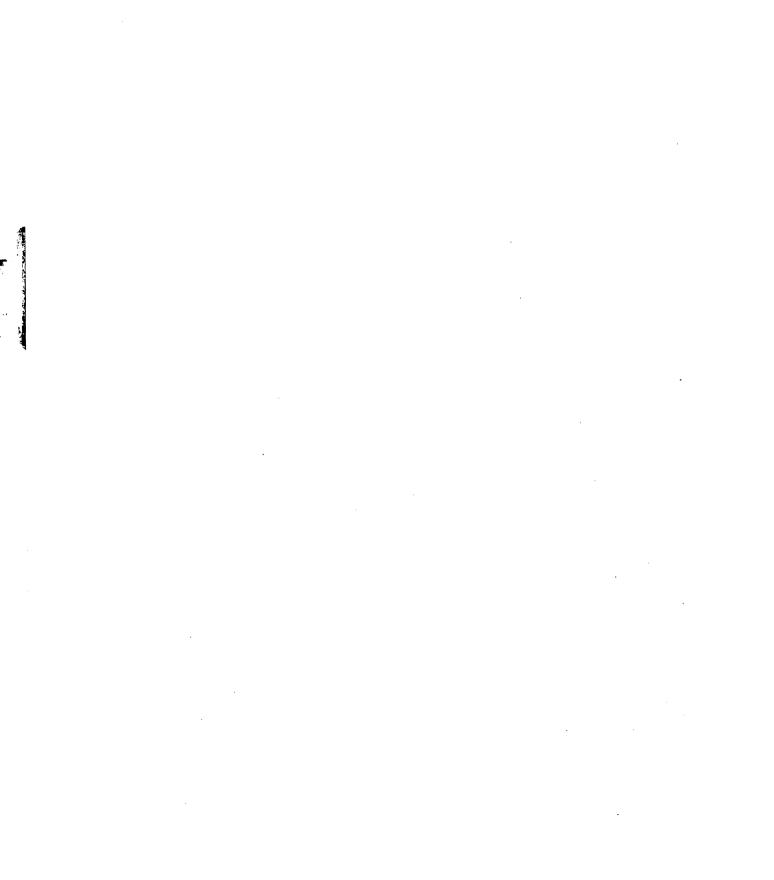


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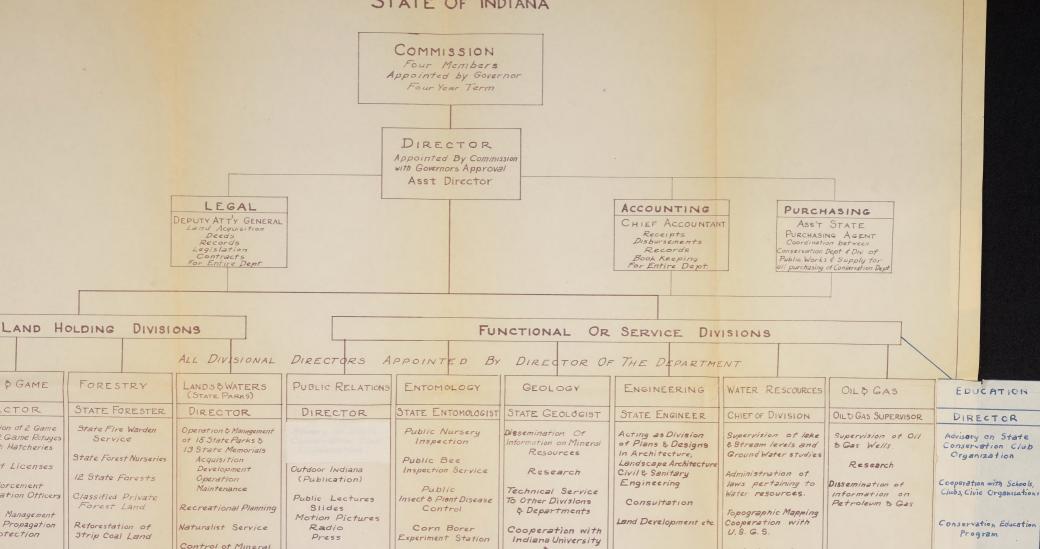
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ORGANIZATION CHART OF THE DEPARTMENT OF CONSERVATION STATE OF INDIANA



U. S. Geological Survey

DIVISIONS ON AN INTEGRAL AND MUTUAL COOPERATING BASIS TO FORWARD ALL CONSERVATION INTERESTS. ALL

Cooperation with

U.S. Department

of Agriculture

FISH & GAME

DIRECTOR

Operation of 2 Game

& 13 Fish Hatcheries

Sale of Licenses

Enforcement

Conservation Officers

Game Management

Natural Propagation

Protection

Food & Cover Plantings

Production

Distribution

Cooperation with

U.S. Fish & Wildlife

Service

Lake & Stream Survey

Fish & Game

Farms, 2 Game Refuges

FORESTRY

Service

Forest Land.

Reforestation of

Strip Coal Land

Cooperation with

Cooperation with

Purdue Extension

Cooperation with

National Forest Service

District Foresters

soil Conservation Service

Resources Under

Navigable Streams

Cooperation with

State & National Park & Recreational

Operation of

State Museum

Organizations

Promotion of

Publications for all

Divisions

General Information

Assimilation &

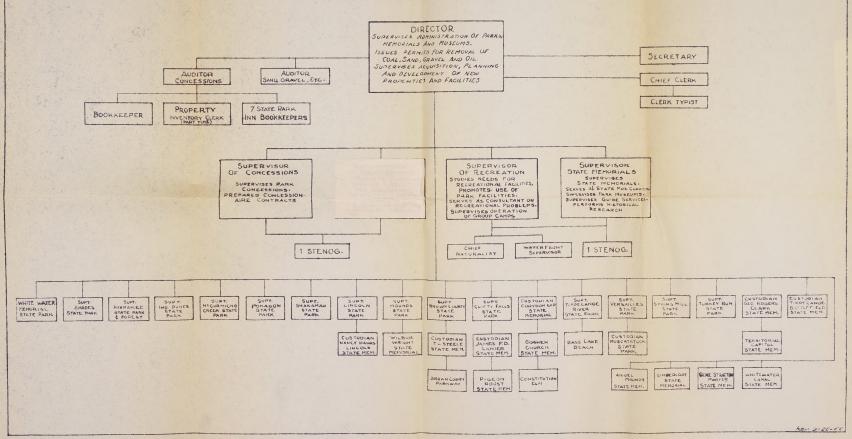
and lake gauging

records.

publication of stream

INDIANA DEPARTMENT OF CONSERVATION DIVISION OF STATE PARKS, LANDS & WATERS

ORGANIZATION CHART



McCORMICK'S CREEK STATE PARK

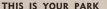
Area, 1055 Acres

Located on Road 46, near Spencer

This park, located in the White River valley in Owen County, has within its boundary some of the most majestic scenery to be found in the state. It is at the edge of the stone belt and is noted for the quarry from which some of the foundation stone of Indiana's state capitol was taken. Ravines, sink holes, and wooded slopes with the falls of McCormick's Creek are among the attractions.

Four organized group camps make this park popular for youth groups during all seasons of the year. Each camp is provided with dining lodge, kitchen, sleeping quarters and other buildings. A natural history museum displays the characteristic flora and fauna of the park and many of the birds and small mammals of the area are exhibited adjacent to the museum.

A modern out-door swimming pool and bathhouse is another of the attractions of the park. Experienced lifeguards are on duty at all times and the water in the pool meets every requirement for health



All visitors are expected to observe the following rules which are designed to fulfill the purpose for which state parks were established, namely, to preserve a primitive landscape in its natural condition for the use and enjoyment of the people.

- 1. Do not injure or damage any structure, rock, tree, flower, bird or wild animal within the park.
- 2. Firearms are prohibited at all times.
- 3. Dogs must be kept on leash while in the park.
- 4. There shall be no vending or advertising without permission of the Department of Conservation.
- 5. Camping areas are provided at a fee of twenty-five cents per car or tent for each 24 hours or fraction
- 6. Fires shall be built only in places provided. Visitors must put waste in receptacles provided for that
- 7. Motorists will observe speed limits as posted in the park and park in designated areas.
- 8. Bathing is limited to such places and times as designated by the Department of Conservation.
- 9. Drinking water should be taken only from pumps, hydrants or fountains provided for that purpose. This water supply is tested regularly for purity.

CONSIDER THE RESULTS IF OTHER VISITORS USE THE PARK AS YOU DO

HELP PREVENT FOREST FIRES

Build fires only in designated places.

Be sure that cigars or cigarettes are extinguished before they are thrown away

Break your match before you drop it.

Report any violation of fire regulations to park officials

Fire Is the Greatest Threat to Our Parks and Forests

INDIANA DEPARTMENT OF CONSERVATION Division of State Parks, Lands and Waters



THE INTELLIGENT USE OF LEISURE TIME

This trail map is given to you with the compliments of the State of Indiana through its Department of Conservation in the hope that it will direct your attention to the primary purpose for which the state park system has been

These recreational areas are parts of "original America," preserving for posterity typical primitive landscapes of scenic grandeur and rugged beauty

Along the quiet trails through these reservations, it is to be expected that the average citizen will find release from the tension of his overcrowded daily existence; that the contact with nature will re-focus with a clearer lens his perspective on life's values and that he may here take counsel with himself to the end that his strength and confidence are renewed.

Division of STATE PARKS, LANDS AND WATERS

WICHGAN STATE UNIVERSITY EAST LANSING, MICH. 48824-1946



CANYON INN McCORMICK'S CREEK STATE PARK Open All Year

Canyon Inn offers the park guest overnight and vacation accommodations at all seasons of the year. It provides modern accommodations and excellent dining room service with characteristic Hoosier hospitality. In harmony with the natural surroundings the Inn affords a quiet atmosphere for those who choose to spend a few days or a week in one of Indiana's most popular state parks.

Arrangements can be made in advance for accommodating group meetings and banquets, particularly during the Fall, Winter and Spring months.

As in all Indiana State Park Inns, the rates have purposely been kept low to encourage use by family groups. Reservation and rate information requests should be addressed to the "Reservation Clerk," Canyon Inn, McCormick's Creek State Park, Spencer, Indiana.

EACH INDIANA STATE PARK is fully equipped with all facilities for picnic parties or campers. The water is tested regularly throughout the season by the State Board of Health. Shelter houses and refreshment stands provide rest and comfort. Hotel reservations should be made by mail direct to the In-

TURKEY RUN STATE PARK in Parke County includes the finest of that interesting landscape for which Sugar Creek is famous. Here are the most spectac gorges of the midwest, cut in sandstone by the action of glacial streams. Here also is an area of two hundred and eighty-five acres of virgin timber, including wonderful specimens of tulip, poplar, walnut, oak, cherry, hemlock, sycamore

The heavy timber growth and the cool canyons decorated with lace-like ferns, moss and vines, provide a never ending thrill to nature lover and hiker,

Turkey Run Inn-provides modern hotel q refreshment stands are located in the picnic area

CLIFTY FALLS STATE PARK comprises a portion of the rugged, majestic landscape of historic Jefferson County near Madison, where the beautiful Ohio Valley is finest. The outstanding feature of this park is the water-worn gorge where Clifty Creek drops seventy feet from a stone ledge. Trails wind through the great hollow and along the sides of precipitous vine and fern-covered cliffs, giving access to wooded ravines and lesser waterfalls,

Cliffy Inn is on the crest of a steen slope four hundred feet shows the Ohio River. The sweeping curves of the river, Kentucky hills far distant, and the panorama of Madison are unsurpassed when viewed from the Inn veranda. The Inn

SPRING MILL STATE PARK of thirteen hundred and eighty-four acres in Lawrence County, is perhaps the most unique of the state parks. Here in a beautiful little valley among heavily forested hills is the restored pioneer village of Spring Mill with its massive stone grist mill operated by a flume and overshot water wheel. The post office, general store, apothecary, nursery, distillery, saw mill and numerous residences all furnished completely in the period of our forefathers provide a never ending delight to park guests.

Caves and subterranean streams are added natural attractions.

VERSAILLES STATE PARK on U. S. 50 near Versailles, is the second area given to Indiana by the federal government and boasts the same facilities as Tippe River State Park. The park includes more than 5,000 acres. The Laughery Creek area, so typical of southeastern Indiana, is considered by experts one of the finest locations in the middle west for field trials,

INDIANA DUNES STATE PARK comprises twenty-two hundred acres of primitive, beautiful, historical and amazingly unique Hoosier landscape. It lies in Porter County and includes three miles of Lake Michigan's south shore, all of which provides a magnificent beach capable of accommodating many thousands of bathers A three-story pavilion on the beach provides shelter, bath houses, and locker

room, and houses cafeteria, complete restaurant and dining room service. The Dunes Hotel, overlooking the lake, contains fifty sleeping rooms. Limited American plan service is available at Duneside Inn, the park's second hotel.

SHADES STATE PARK was acquired in 1948 as the result of a state wide p in campaign. Located ten miles east of Turkey Run State Park, Its 1,952

acres of rugged Sugar Creek terrain have long been famous for its appeal to the hiker who seeks to explore the deep sandstone gorges and quiet trails through virgin timber. Shades Inn offers the state park visitor overnight vacation accommortations from late Spring to early Fall

SHAKAMAK STATE PARK lies in a triangle of Clay, Greene and Sullivan Counties, offering the recreational features of rugged and wooded country. Outstanding features of the park are two beautiful, meandering lakes totalling eighty-five acres, affording boating and supervised swimming. Shakamak is equipped with bunk houses and mess halls to accommodate organized camping groups.

MUSCATATUCK STATE PARK in Jennings County, embraces the finest scenery, gorges and timbered slopes of the beautiful Muscatatuck River. This section

ennings County long has been known for fine hunting and excellent fishing.

Muscatatuck Inn, with its cottages, provides delightful lodging and wholes food for those seeking quiet and restful surroundings, and enjoys a wide reputation among motorists as a stop-over point.

TIPPECANOE RIVER STATE PARK embraces more than six thousand acres near Winamac, including eight miles of the river itself. This is one of two "Recreational Demonstration Areas" purchased by the federal government in the thirties, and ten years later turned over to the Indiana Department of Conservati Located on U. S. Highway 35 and state road 29, the park offers group camp buildings, roads, trails, picnic areas and camp grounds,

LINCOLN STATE PARK helps express the love which every Hoosier has for the emory of Abraham Lincoln. Adjacent is the beautiful Nancy Hanks Linco Memorial, which with Lincoln State Park comprises over 1500 acres. The park is found on road 162, just off road 45, near Lincoln City

POKAGON STATE PARK comprises one thousand and forty acres of the lovely peactful rolling landscape in Steuben County, two miles of which front on Lake James. There are four hundred acres of deep woods. The big lake is a fisherman's paradise. Buffalo, elk and deer in their native habitat, but within strong corrals, represent the larger species of wild life once native to the widwest. Excellent boating and swimming facilities, and tennis courts, offer wholesome recrea tion. Saddle horses are also available. This park is noted for its winter sports.

Potawatomi Inn's dining room seats three hundred persons. Excellent cooking and modern hotel and cabin guest rooms make this an unusually popular lake park.

BROWN COUNTY STATE PARK in the heart of the mountainous hills of Brown County, has that spectacular topography of dense woods and wide, sweeping valleys, all readily accessible over modern, all-weather roads.

The Kin Hubbard Ridge development consists of a group of delightful and fully equipped cottages serviced by fhe Abe Martin Lodge. This community group nestles in the forest fringe atop a promontory and commands an unsurpassed view of the area. All meals are served at the Lodge. The cottages may be rented by the day or week upon application to the Lodge.

MOUNDS STATE PARK in Madison County, on the bluffs of White River, is set aside for outdoor recreation, and the preservation of a group of earthwork monuents constructed by that vanished prehistoric race known as Mound Builders. These mounds represent one of the largest and best preserved groups in Inc. and are of great interest to laymen as well as archaeologists. Excellent picnic facilities are available and refreshments can be obtained in the pavilion



THIS IS YOUR MAP OF THE

TRAILS

McCormick's Creek State Park

(NEAR SPENCER)

WE HOPE THAT YOU MAY WISH TO KEEP THIS FOLDER AS A REMINDER OF PLEASANT HOURS SPENT IN ONE OF INDIANA'S STATE PARKS

> INDIANA DEPARTMENT OF CONSERVATION

Division of State Parks, Lands and Waters



Map I

Accommodations and Activities Available at State Parks

	Hotel Accommodations	Inn Operated Cabinses	Family House- keeping Cabins	Swimming	Fishing	Hiking	Archery	Horseback	Naturalist Service	Boating	Camping	Group Camping	Wildlife Exhibit	Cycling
BASS LAKE				X	X						X			_
BROWN COUNTY	X	X		x	x	X	X	X	X		X		x	
CLIFTY FALLS	xx					X		X	X		X			X
DUNES	X	X		X	X	X			X		X	X		X
LINCOLN				X	X	x				X	x			
McCORMICK'S CREEK	xx		x	x		X		X	X		X	X	X	X
MOUNDS					X	X	X	X			X			
MUSCATATUCK	XX	X			X	X					X			
POKAGON	xx	X		x	X	X	X	X	X	X	X	X	X	X
SHADES	x				X	X			X		X			X
SHAKAMAK			X	X	X	X		X		X	X	X	X	X
SPRING MILL	XX	x		x	X	x			x	X	x			
TIPPECANOE RIVER				0	x	x					x	x		-
TURKEY RUN	xx	x			x	X		x	X		X			x
/ERSAILLES				0	X	X		X			x	X		

* Pool for group camp use only. XX Inn accommodations year 'round

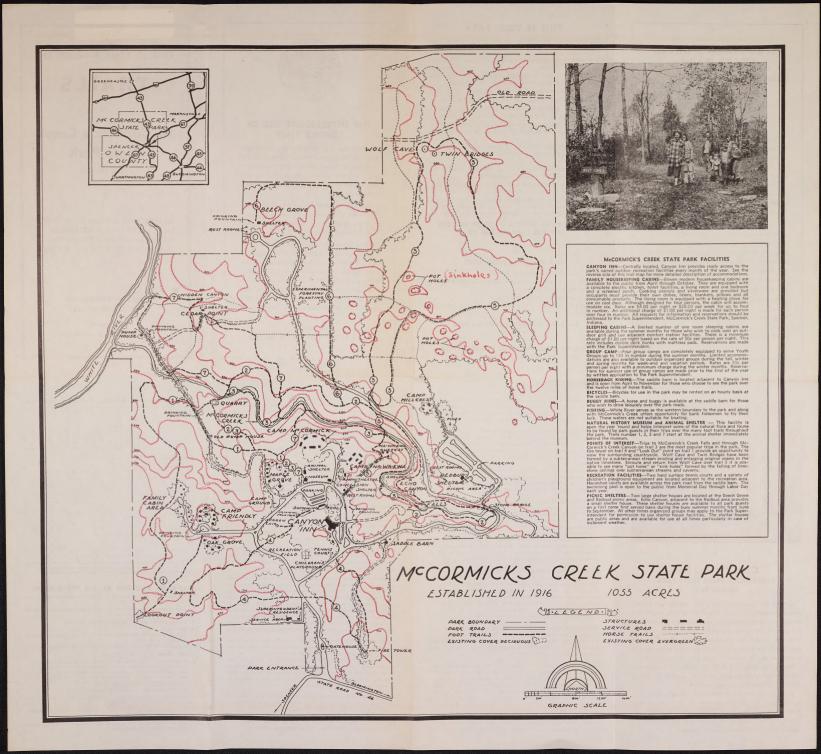
CHARGES AND FEES AT THE STATE PARKS

- Gate Admission—10c per person plus 2c Federal tax; no charge under 8 years. 10c per automobile in addition.
- Camp Ground—25c per camp site per day. Includes water, tables, laundry, toilets and wood (when available).
- 3. Trailers-25c per camp site per day; with electricity, 50c.
- Swimming

 In pools—15c per person on week days; 25c on Saturday afternoons, Sundays and holidays.

 b. Beaches-no charge for swimming: 15c and 25c for bath house privileges.
- 5. Saddle Horses-\$1.00 to \$1.50 per hour.
- 6. Group Camps—25c to 35c per day per person. Accommodations consist of a dining room, kitchen with all equipment, table service and cooking utensits; a toilet and shower building, and bunk houses. Make reservations with Park Superintendent. Rates for the Shakamak family cabins are \$21.00 to \$35.00 per week. Make reservations with Park Superintendent.
- 7. Cave Trips, Spring Mill-10c and 15c per person
- 8. Hotel Rates—\$4.75 to \$5.35 per day, including meals. Reservations made with
- 9. Boat Rental—week days, 25c per hour, \$1.50 per day. Sundays and holidays, 35c per hour, \$2.00 per day

Receipts from admission and service charges are used to defray the operation and maintenance costs of the parks.



Pocket hus: 2 Charts & I Map Chart I THIS



II TAD



