

NATURE GUIDING AT TURKEY RUN STATE PARK.

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Nature movements have been progressing in Indiana for a number of years. The Nature Study Club of Indiana, the State Audubon Society, various bird clubs and a number of local nature study clubs have been doing excellent work in fostering the study of natural history.

One of the most recent innovations in nature study in the state has been the work of nature guides and the organization of silent and test nature trails in state parks. For several years Miss Lucy Pitschler has been guiding visitors at McCormick's Creek State Park and pointing out various interesting objects of nature along the trails. During the past summer Miss Pitschler not only conducted nature trips at Clifty Falls State Park but also had a silent nature trail. The same kind of nature work was done at McCormick's Creek State Park last summer by Mr. Brandt Steele.

During the last year Dr. Earl Brooks laid out a silent nature trail in the city park of Noblesville and Dr. L. A. Test made a similar trail at Winona Lake.

Under the direction of Captain Charles Sauers of the Department of Conservation an experiment in nature study was conducted at Turkey Run State Park. This experiment was conducted by Mr. and Mrs. Sidney R. Esten of Pendleton, Indiana, Otto Behrens, Jr., of Anderson, and Frederick Test of Lafayette, who were at the park from June 20 to September 7, 1927. The underlying principles of the nature work as organized and conducted at Turkey Run were a combination from two other movements—one national and one state in origin—and other plans were formed as the need became apparent.

At the Yosemite National Park in 1920 a free nature guide service was offered, under the direction of Mr. Stephen T. Mather, Director of National Park Service. This service has become so popular that each year it has been enlarged until today there are nature guides in all the larger national parks. About the same year, 1920, nature guide service was introduced in the east at the Harriman State Park in the highlands of the Hudson River of New York. There, under the direction of Major W. A. Welch and the supervision of Miss Ruby M. Jolliffe in boys' and girls' camps, some systematic work was carried out under trained leaders. At the same park in 1925 Dr. Frank E. Lutz laid out the first silent and test trails where labels with information and others asking questions were used. This form of nature work proved to create such a great interest on the part of the general public that today there are about 200 silent trails in the United States, all modeled after the "Mother Trail" made by Dr. Lutz.

At Turkey Run it has been the aim to use both parts of the nature program, the guiding feature and the silent trail, and then to add other

features which are well adapted to Turkey Run. The program of the park consisted of seven main parts as follows:

1. A study of the flora and fauna of the park; 2. Nature hikes;
3. Bird hikes; 4. Silent trail; 5. Test trail; 6. Nature museum;
7. Lecture program.

The following is a more detailed account of the seven parts of the work with a list of the objects of nature studied.

1. Study of the flora and fauna of the park.—In studying the flora and fauna of the park during the two and one-half months many interesting plants and animals were listed. It was the task of the nature guides to make a compiled list, using the results of many specialists in their respective fields as well as the direct work of the guides themselves. The list follows:

Animals: 4 species of salamanders, 2 frogs, 2 toads, 11 snakes, 3 turtles, 1 lizard, 6 fish, 75 summer birds and 15 mammals.

Plants: 10 species of lichens, 55 mushrooms, 41 mosses, 8 liverworts, 19 ferns, 1 club moss, 2 horse tails, 200 flowering plants other than woody plants, and 100 species of woody plants.

The total number of animals.....	119
The total number of plants.....	496

The total number of forms of life.....	615
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2. Nature hikes.—Nature hikes for visitors left the hotel each day at 8:15 a. m. and 2:00 p. m. under the leadership of one of the guides. The object of these hikes was to introduce visitors of the park to the mushrooms, lichens, mosses, ferns, flowers, trees, birds, animals and other forms of life found in the park. A total of 117 regular trips were conducted with 2,322 people taking advantage of this method of nature study. During the summer 501 people, representing nature classes, convention groups and special parties, were taken on 30 special hikes.

3. Bird hikes.—Three times a week from 5 a. m. to 7 a. m. bird hikes were taken. A total of 21 hikes were taken for 194 visitors and the average number of birds seen each trip was 30.

4. Silent trail.—Trail 1 from the hotel along the river east to the swinging bridge, up the stairs to the roadway, and west along the road to the hotel was selected as the silent trail. On this trail, which was a mile in length, No. 5c Denison linen tags were used on objects of natural interest. Not only the common and scientific names of the trees, flowers, mosses, fungi and lichens were put on the tags which were attached to these objects along the trail but also interesting information relative to the plants was placed on the tags. The geological history of the park, Indian legends, general information and conservation lessons were also put on these tags. Three hundred twenty-six labeled tags were used along this trail and it was carefully estimated that about 30,000 people took advantage of these labels to get better acquainted with nature.

5. **The Test trail.**—A trail five-eighths of a mile in length was selected as the test trail. This trail started at the north side of the swinging bridge and followed Trail 4 up Rocky Hollow, then Trail 3 for a short distance west, south along the top of the bluff, through wooded areas to Trail 3 again and east along the creek to the swinging bridge. Upon this trail about 100 descriptive tags were placed on interesting objects of nature not found on the silent trail. Then 55 tags with questions were placed along the trail on objects previously labeled and described on the silent trail. Any one desiring to test his knowledge of nature could write out answers to the questions and bring them in for correction. A blue card giving membership in the Turkey Run State Park Nature Trail Club was issued to all who passed a grade of 75 per cent. Much interest was shown on this trail by adults but more interest was aroused in boy and girl scouts and nature students.

6. **Nature museum.**—The state cabin at Sunset Point which was built about 1841 and which contains huge tulip tree logs, was used as the museum. It also contains a number of relics of pioneer days. This cabin was open to the public every afternoon and also in the mornings on Sundays and holidays. The aim of this museum was to give visitors a knowledge of the plants and animals which could be found in the park. Pictures of many of the flowers and of the summer birds were exhibited. In co-operation with Mr. Frank B. Wade of Indianapolis, about 40 geological specimens of the park were collected and placed in the museum. A few specimens of fossils, fungi, mosses, lichens, shells, cocoons, liverworts, and galls were placed there. A bird nest collection of eight nests was started. A collection of about 150 insects was made as a beginning of a much larger collection next year. Several living specimens of salamanders, lizards, and snakes were put into the museum. Preserved specimens of snakes were assembled to show all the kinds found at the park. In all, during the summer about 300 pictures and objects of nature were placed in this museum. The collection was limited in size because of the lack of space and limitation of cases for specimens. It is hoped that next summer the museum will be better organized with more space and better facilities for exhibiting to visitors the interesting objects of nature found at Turkey Run. During the summer 19,919 people visited the museum.

7. **Lecture program.**—Illustrated lectures were given on four nights a week in the sun parlor of the hotel. These lectures—a series of ten in number with four on summer birds of Turkey Run, two on conservation, two on forestry, one on insects and one on flowers—were given to all visitors of the park who cared to attend. For the first weeks the attendance averaged 30 people to each lecture but during the later part of the summer the average was about 75. During the summer 43 lectures were given as follows:

Fred Test	6 lectures
Otto Behrens, Jr.	6 lectures
S. R. Esten.....	31 lectures

The total attendance for this series was 2,550 or an average of 59 to a lecture.

For the summer of 1928 nature guiding will probably be even more popular than last summer. The labeled trails laid out last summer were only temporary but the aim of the future is toward metal tags which will remain up winter and summer and will be of value to visitors of other seasons of the year than just a few weeks of the summer. The numbers of plants and animals listed will increase, for the lists to date are only partial. The next few years will see a perfecting and enlarging of nature trails and nature guiding, not only at Turkey Run and other state parks but also in connection with local and county parks, with schools and colleges, scout camps and other organizations.

COPPER NUGGET FOUND AT TURKEY RUN.

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On August 23, 1927, while gathering geological specimens with Mr. Frank B. Wade of Indianapolis, for the Turkey Run State Park Museum, we found this nugget of copper. It was found among the glacial drift about one-half mile up Boulder Canyon. It is irregular in shape, measuring two inches in length, one and one-half inches wide at one end, one inch wide at the other, five-eighths of an inch thru the thickest part and the weight is 105.2 grams.