

G. WEST JACOBS

# THE PARK NATURALIST'S GUIDE

**Prepared for Discussion Purposes**

for the

**Joint National Park Service**

and

**Work Projects Administration**

**CONFERENCE**

**May 27-28-29, 1940**

**KING'S MOUNTAIN RECREATIONAL**

**DEMONSTRATION AREA**

**SOUTH CAROLINA**

By Elston R. Wagner



# THE PARK NATURALIST'S GUIDE

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## FOREWORD

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Significant of the demand and need for Park Naturalists and Recreation Leadership as an integral part of a well-balanced nature-recreation program in the national and state parks, is the overwhelming public and community participation in parks offering this type of service.

To meet this need, the Recreation Section of the Work Projects Administration has directed its efforts toward the establishment, in cooperation with State Conservation Commissions, of adequate nature-recreation programs in State Parks. Not only has the WPA Recreation Section compiled valuable data and reports concerning the park programs, it has directed and developed park activities and community programs, the establishment of community sponsoring committees, and has supplemented leadership.

"The Park Naturalist's Guide" is designed as a working manual for the Park Naturalist, and for recreation leaders whose efforts are expended in this direction, in aiding them to organize and plan well-balanced park activities and programs, to establish firm public-relations, organized interested sponsoring committees, and plan effective program and publicity materials.



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# THE PARK NATURALIST'S GUIDE

C. WEST JACO

## Chapter I

### WHAT IS NATURE TRAILING?

#### Nature Trailing:

All of us are more or less aware of the out-of-door surroundings in which we find ourselves, but the sensitivity or the depth of our awareness, is a real measure of our appreciation of beauty, our alertness, our keenness of observation and of the deep, rich flowering of our personalities. No man can spend time out-of-doors observing, learning, seeking beauty without being the better for it. To guide people to the secrets of nature, to bring to nature trail and park program participants a broader and deeper understanding of the out-door world about us, is the province of the Park Naturalist.

For purposes of clarification, a nature trail will be construed herein to mean a trail which is attended by the Park Naturalist whose duty it will be in this particular regard to change at frequent intervals labels and markers along the trail to conform to seasonal changes.


#### The Object of Nature Trailing:

The object of Nature Trailing is to arouse interest in the great out-of-doors and to instill into the public mind a realization of the place of the individual "as caretaker in the world of living things". Its primary object then is to develop an understanding and appreciation of the world about us. This not only includes knowing what trees and wild flowers, what birds and beasts and insects are to be found in our locality, but also knowing something about their value to man, their habits of life, the effects they have on each other. Then comes the question of the soils, the wild plants and cultivated crops that grow on them, the surface of the land and its scenic beauty, the history and development of the land surfaces of the earth, the forces that gave us our land and the destructive and beneficial effects of these forces today. Climate, weather, the stars of the heavens, all present problems of interest.

Above all, the "Trail of Nature" leads to the problem of the relation of all these things to man - not only how he can use and enjoy them, but how he can save the surplus of today for the needs of tomorrow; - in short, this trail leads straight to the problem of conservation.

#### Areas designated as state and national parks serve two purposes:

1. Base areas for a plan of conservation to preserve for posterity the natural plants and animals, and to safeguard historical landmarks.



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2. Such park areas to be developed as recreational centers.

The object of park programs is to acquaint the public with the recreational and educational resources in state and national parks. Further, the development of such programs must emphasize points 1 and 2 above without jeopardizing the value of either the one or the other. Such programs will increase the usefulness of the parks to the community and heighten and broaden the pleasures to be derived therefrom. According to Renold Carlson of the National Recreation Association, the following are the objectives for nature activities:

1. To create a genuine interest in nature and a love for the beautiful.
2. To teach close observation of natural phenomena.
3. To teach practical information about the functions of the world.
4. To preserve the wild life.
5. To assist in increasing the natural beauty of home and country.
6. To enrich the life of the individual.
7. Better understanding of the struggles for existence of wild animals and plants among themselves.

Nature Trailing and Science:

In times past all our formal courses in the various sciences in our schools were designed rather to produce trained scientists than to inspire a love of nature. To many, the word "science" is in itself a formidable word - sadly overworked and perhaps not thoroughly understood and appreciated. A science consists of an orderly arrangement of properly correlated facts, examples of which are Biology, a science of living things - animals and plants; Chemistry, the science of the structure and composition of the objects found in nature; Physics, the science of the forces of Nature, and so through the long list.

Five Approaches to the Out-of-Doors:

- |               |                |
|---------------|----------------|
| 1. Scientist  | 3. Folk-lorist |
| 2. Naturalist | 4. Craftsman   |
| 5. Layman     |                |

Naturally, those who will participate in our nature-recreation programs in the state and national park areas, are, for the most part, laymen, and it is his interests with which the Park Naturalist will be chiefly concerned. But we may draw upon all these approaches to reach a common ground of understanding and appreciation.

The scientist is busy with the classification, dissection, structure; the naturalist, in a more limited field, is given to a more general appreciation of out-of-door objects; the folk-lorist gives some of the interesting bits of human gossip relating to our surrounding



world and its habits; the craftsman gathers materials from the woods and fields for basketry, pottery, buttons, dyes, etc.; but the ordinary layman goes from one approach to another, having a nodding acquaintance with certain stones, plants, birds, an appreciation of the folk-lore's superstitions, and a delight in odors which will not let him miss a wild crab apple in bloom. For brief moments out-of-door life stands still to give us ecstatic glimpses of beauty which we can never forget.

## Chapter II

### THE PARK NATURALIST

The Park Naturalist himself is perhaps the most important factor in determining the success of the state or national park recreation program. He is the leader, the public-relations counsel, and advertising manager all in one.

#### Necessary Characteristics of the Park Naturalist:

First, interest and enthusiasm for the work at hand. While enthusiasts alone will carry one quite a ways in any field of leadership, it does not take the place of adequate training and a proper sense of proportion; that is, good judgment and common sense.

He must bring to his work a broad and thorough out-door knowledge of nature in all her aspects. This differs materially from a mere laboratory knowledge. The so-called "closet naturalist" may become hopelessly lost in the field.

The Park Naturalist should have a good fund of knowledge about his park including its area, its age, the recreational facilities, cost of cabins, park attendance, etc. Besides, he should be able to choose quickly which of several trips about the Park will best serve the interests of the group of the day. In all cases, such groups must get satisfying help to nature lore and at the same time have a good general idea of what the park has to offer.

He must have a sympathetic attitude toward the dissemination of popular scientific information. It is only by this means that the general public becomes acquainted with the store of knowledge accumulated by research scientists. Much of this knowledge, put in proper language, is highly interesting to the average person.

He must be ambitious, progressive, loyal and diplomatic. Tact and diplomacy are more valuable than genius. Tact is primarily a consideration of others. Training for diplomacy is essential. It is merely a realization that all people are human and we must learn to understand and cooperate with those with whom we work.

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He must be a good organizer of people - not a follower. He must be able to meet the public easily and to interest the park patrons in his program. To do this, he must be, as one park custodian has said, "a mingler, talking their language". In other words, he must adjust himself and his talks to his auditors.

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Plato said, "Curiosity is the mother of all knowledge". John Locke tells us, "Nature has provided curiosity in children to remove the ignorance with which they were born". And the Park Naturalist must help satisfy this trait in the follower.

The Park Naturalist must be able to formulate and put over a program that fits into his particular environment - and, he must be able to interest the community in the park program. To do this, he must make the necessary and proper contacts in the patronizing territory of the park. Through these local contacts he will arouse local interest in the park program and generate sufficient enthusiasms to insure support and patronage for this program.

The best results of any program are accomplished only by team work. The Park Custodian is the official administrative head of the park and is responsible to the State Conservation Commission for its proper care and maintenance. The Park Naturalist supplements the work of the custodian by giving to the state or national park a definite and distinctive program which is designed to emphasize the nature and conservation aspects of the park area. Each can be of great assistance to the other by the exchange of information and by mutual cooperation.

The Park Naturalist must be neat in his appearance. A distinctive uniform supplemented by a badge will assist materially in making contacts in the park.

Conduct shall be in keeping with the dignity of the position of State Park Naturalist.

#### Technique of Leadership:

No one can attain the highest success who does not enjoy and believe in his work. The Park Naturalist, then, must be a thorough nature lover and must enjoy working with groups who are seeking a greater store of nature knowledge and who takes pleasure in out-door nature, and he must have a sincere appreciation of the importance of such work. While each one will have his own personal methods of work, the universal objectives in all nature-recreation is to stimulate observation and an understanding of what has been observed.

At times, and with certain groups, the Park Naturalist must assume the role of guide. He wishes his group to note certain trees or flowers or animals, or other objects. He wishes to emphasize some point by calling their attention to these objects. He has a story to tell of wild life which will be of interest for group discussion. At all times, he must keep his group and the subject matter under control without destroying spontaneity.







An important phase in the technique of leadership, is to be able to adapt the program according to age groups and interests.

Practice the scientific method which represents a system of inquiry and of investigation, and is that skill in a specialized field which has been tried and tested and found to be of value and accepted as such.

Will Durant has said: "Each idea generates other ideas, each attempt generates other attempts, and each success generates success. Thus, so long as there is ingenuity and so long as there are incentives, opportunity is continuously increased. This is the secret of leadership expansion".

The Park Naturalist must be aware of certain broad underlying truths manifest in nature, and he must be able to translate these to park visitors and nature tour attendants. Among these are the strangest constancy in all nature, the struggle for existence, nature's growth and adaption, and life histories, which we shall consider briefly here:

Strange Constancy: There is but one thing in the natural world that is constant - change. No park, no forest, no field, not even our buildings of seemingly enduring wood and stone, or our lakes and streams are the same today that they were yesterday. They will inevitably be different tomorrow. The Park Naturalist must be able to impress this upon his group and to explain to them in some measure why this is true, and why it is an important factor in nature.

Struggle for Existence: All life is struggle. Even the sturdy oak has fought its way to supremacy in the forest. Yet there is law and order in all this struggle. Given a situation in nature, we can predict in a broad way its outcome. Rain and frost and sunshine affect the soil and rocks, trees, flowers and animals of the region. This influences the development of individuals as well as their numbers.

In all this, there is a unity in nature. We can study the trees or a tree; we can study the wild flowers, the birds, the squirrels, the insects of our park as individuals, but they all form a community. In this community there is struggle for existence, the relationship between individuals and the laws of nature taking an orderly course.

In the same manner, the nearby town or city represents among its citizenry, the same type of problems. The Park Naturalist must grasp these great principles and be able to interest his group in them.

Growth and Adaptation: Each animal and plant must be able to adapt itself to the varying environment or it will not survive. We do not expect the white oak and the willow intermingled in the forest any more than we expect to find the wood thrush on the prairie, or the meadow lark in the timber.



One example of growth in nature is the "climax of vegetation". In the plowed field we first have the weeds, followed by blue grass which kills out the weeds. Next the shrubs consume the area, and then in the final climatic cycle of growth, the forest trees take possession of the area.

Just as the individual as well as the community grows, develops, adjusts itself to its surroundings in an orderly way, so does a tree attain maturity and old age and dies a natural death only to be succeeded by others of its kind. This is the inevitable cycle of life.

#### Life Histories:

The study of life histories presents a fascinating field to the nature lover.

There is much here for the nature leader to relate, much that will interest his group. The canker worm is the young of the moth; the tadpole develops into a frog; the peculiar looking seedlings develop into the familiar trees of the forest.

#### The Park Naturalist and Conservation:

Conservation of natural resources is one of the most important problems of our day, and it is one of the corner-stones of our Park system. All of our state and national parks are game refuges and wild life preserves. They attempt to maintain bits of the surrounding country in its original state - not only the plants and animals, but the topography, et cetera. Our Park Naturalist must be deeply interested in all conservation phases and a consistent supporter of all constructive conservation programs.

#### JOB ANALYSIS:

The following outline sets up a Job Analysis for a Park Naturalist:

##### I. Title

A. Park Naturalist

##### II. Duties and Responsibilities

A. Operation

1. The state or national park nature trailing program is designed to provide leadership for the park areas:
  - a. Aid in carrying out a plan of conservation designed to preserve for posterity the natural plants and animals, and geological and scenic features of the park area; and
  - b. To develop the park areas as recreational centers
  - c. To develop and enlarge the sphere of interest in the park area and what it has to offer



2. The Park Naturalist is responsible to the Chief of the Lands and Waters Division of the State Conservation Commission for the formulation of policy and concepts in relation to state park programs.

#### B. Planning and Promotion

1. The Park Naturalist is responsible for the content and scope of program.
  - a. Programs to encourage better leadership and more vital and interest community participation; to encourage volunteer leadership where possible.
  - b. Act in capacity of a "Good Will Ambassador" to all contributing territory, and must contact individuals and groups in behalf of the park program.
  - c. Responsible for short and long term program planning.
2. Responsible for the establishment and maintenance of relationship with sponsoring committee:
  - a. Every state or national park recreation program to function along the lines of public desire, needs and well-being, must be sponsored and supported locally by a Sponsoring Committee of representative citizens
    - (1) Determining community needs
    - (2) Planning a program to fit needs
    - (3) Executing a program to fit needs
  - b. Encourage committee members to participate in program wherever possible; to act as volunteer leaders and assistants.
  - c. To supply committee members with information on state and national park program - locally and nationally.
  - d. Take committee members to visit other state park programs.
  - e. Place committee members in positions of local prominence; obtain official recognition of their status and accomplishments; arrange for them to talk at luncheons, dedications and other special events related to program; give committee members definite responsibilities for writing articles.
  - f. Make committee meetings interesting, pleasant and informal; provide charts, exhibits, reports, photographs and outside speakers to clarify points of discussion.
3. Establishment of relationship with private and public agencies interested in the field of nature-recreation and the state park program.
  - a. Colleges and Universities
  - b. City Recreation Commissions ✓



- c. Farm Bureau Groups
- d. Y.M.C.A. - Y.W.C.A. ✓
- e. Boy Scouts - Girl Scouts ✓
- f. Camp Fire Girls ✓
- g. 4-H Clubs ✓
- h. Women's Clubs ✓
- i. School groups
- j. Church groups ✓
- k. Social Clubs ✓

4. Writing, collecting and distributing effective program and public relations material.

- a. Program Aids
  - (1) Bulletins
- b. Public Relations Materials
  - (1) Use of newspapers
  - (2) Use of radio
  - (3) Bulletin Board
  - (4) Posters
  - (5) Speaking and discussions ✓
  - (6) Demonstrations

C. Supervision

- 1. The Park Naturalist shall be responsible for reports:
  - a. Reports to Chief Naturalist
  - b. Activity reports and seasonal reports of participation
  - c. Required to submit at the end of the park season program, a scrap-book type report of the summer's activities.
- 2. He will organize and conduct tours through the park, discussing with the groups the various natural features.
  - a. Selecting stations and speakers for stations
- 3. He must be thoroughly interested in his work and thoroughly acquainted with the recreation program in state and national parks
- 4. Within the park he will contact park patrons, and will acquaint them with the activities that are available to them.
- 5. He will find ways to interest those in cabins and camps, and will assist in organizing and conducting special park programs.
- 6. He will assist the organized groups where he can in directing a part of their program toward conservation and nature.





7. He will plan Self-Guiding Trails, and see that such trails are well-marked and up-to-date, are kept clean and free from debris.
8. The Park Naturalist will be responsible for trailside exhibits and displays, as well as exhibits and displays in the park lodge. He shall also be required to make collections upon request.

### Chapter III

#### PLANNING THE PARK PROGRAM

The State Park Nature-Recreation Program has several distinctive features. It is necessarily varied and flexible in content, extent and administration. It must possess popular appeal, yet be scientifically accurate. In developing the program for any given park, the Park Naturalist must bear constantly in mind the nature of his clientele as well as the peculiar "base of operations" from which he works.

The program must:

1. Center in the State Park
2. Interest the Community and increase their interest in their State Park
3. Adapt itself to the individual park and to the local community
4. Remain strictly a park activity which does not lose its identity while cooperating with the local community

The chief interest and value of this program will be derived from the careful presentation of:

The Natural History of the region;

The forest problems of the park and their relation to the timberland of the vicinity;

The unforested park areas and their problems, and the correlation of these with local field conditions;

The relation of nature and of the State Park activities to conservation in the broadest sense; and



Stressing such items of historical and geological interest as are connected with the park.

It is easy to allow some phase of this program to lose its proper balance, thus weakening its effectiveness as a part of the administration of our State Park system. To avoid this, it must be borne in mind at all times that intimately as they may be associated, there is a distinct difference between a community program as such and a park program as such. Each may, and probably will, overlap the other at some points. Yet it is the duty of the Park Naturalist to confine his efforts primarily to the latter, however valuable the former may be or how much he might be able to contribute to it.

#### ORGANIZATION OF A TYPICAL MAJOR PARK TOUR:

The primary objective of activities of this type is to advertize the park as a recreation center, and to emphasize the fact that it is a place where those who are interested can study nature under exceptionally favorable conditions. This is one of the more spectacular features of the park program, and will require the maximum effort expended for its preparation and execution. Like every other activity of the park program, its frequency and its scope will depend to a certain extent on local conditions.

If the park is one which has a large attendance, and is easily accessible, then such a program can be put on more frequently. Other local conditions must be taken into consideration in planning a park tour.

#### PLANNING THE PARK TOUR

Nature Park Tours should be planned for the entire season with a program which will attract a large attendance each time. To do this, it is necessary to vary the program in every possible way, for repetition quickly deadens interest. However, the resources of the park should be completely covered during the season. Each program should have some outstanding feature.

##### Route of Tour and Stations:

The route of the tour and the location of the stations for the speakers should be definitely located before the program begins, and the guides made familiar with the route. This insures a smooth running program, and prevents unseemly public discussion of which trail, and whether a speaker will await a group under a certain spreading oak tree or merely "over yonder at a convenient spot".

The route of the tour should be compact, yet show as many of the park features as possible. If there is a choice of trails the one selected will be determined by the day's program.

The stations must be selected with care. They must be well



spaced along the trail, so as to avoid undue congestion, there must be ample room provided for the spectators to gather within easy sight and hearing of the speaker. Above all, they must provide illustration material for the talk to be given there. For example, a man talking on soil erosion naturally prefers the brow of a hill from which an eroded and gullied area can be seen to the attractive shade of a deep forest. Whatever the subject, it must have proper surroundings for its best presentation and reception.

Another point of importance in choosing the route and station is to avoid those points in the park which might distract too much from the efficiency of the program. A refreshment stand may be many times more attractive than the long hike ahead, especially if the last speaker did not register well with his hearers.

Among the subjects discussed at the various stations may be some or all of the following:

|                                   |                            |
|-----------------------------------|----------------------------|
| The park and wild life            | Nature photography         |
| Forest regeneration               | Bird life of our parks     |
| Acquatic Life                     | Conservation and the State |
| Trees and their growth            | Park                       |
| Historical setting of<br>the park | Our wild flowers           |

Speaking Personnel: The speaking personnel, a faculty of members who will present discussions at specific stations of interest, should be carefully selected. It is generally possible to secure some time during the season some outstanding speaker who will draw a large attendance. The staffs of various State Departments, colleges, universities, and institutions can always be drawn upon. There are in every community public-spirited and interested persons, who can be depended upon for help in these programs. The number of individuals used on any one program will vary and be determined somewhat by the scope and frequency of the programs.

It is absolutely necessary to give the public something they will consider worth while. There must be a sufficient number of speakers to make a well-balanced program, yet not enough to make the program top-heavy - probably an average of half a dozen individuals is better than a much larger or smaller number. Most important of all, the personality and language of the speakers must be such that their message reaches their hearers - not only audibly but in language they can understand and appreciate, and that will stimulate a desire to come again.

Master of Ceremonies: The President of the Sponsoring Committee, or the sponsoring organization, the Park Custodian, the Park Naturalist, are all eligible for the position of Master of Ceremonies at the Lodge. Choice will be made to correspond with the sponsorship. In the event the National Park Service or some other agency puts on the tour it would naturally furnish the Master of Ceremonies.









#### STATION I

The Lodge, designated as the central meeting place, is on a hilltop overlooking the lake. Behind the building is an excellent place for a speaker. "The Lake and Wild Life" will be an excellent subject, as he can call attention to the shore line of the lake and point out bird roosts, and tell of the vegetation, waterfowl and fish of the lake. These talks should take 15 to 20 minutes. They should be illustrated by pictures and charts if the speaker so desires, but should always deal with material easily seen or imagined by the audience.

#### STATION II

The Boy Scout guides will conduct the first group to Station 2 on the North Trail near the picnic grounds. During the first talk the other speakers have probably found their stations, or if they choose, may accompany the group and drop out when they arrive at their own place.

Station 2 has to the right, "coppice" and to the left, sizeable second growth trees. This is an ideal location for the discussion of "Forest Regeneration", "The Effect of Forests on Rainfall and Runoff", and similar topics.

#### STATION III

Continuing down the trail several interesting trees are passed and a foot bridge reached; "Station 3". This is an interesting station and one we have used to discuss "Park Animals". The woodchuck holes in the bank are suggestive, the thicket down the ravine is the nesting place of many birds. Just back of us is a wonderful clump of iron wood (*Ostrya*) trees and ahead is a sizeable Ohio Buckeye (*Aesculus Glabra*).

The trail passes much that is of interest, and if the guide is himself nature-minded, he may be of value in directing the attention of this group and in answering questions. Several large trees remain in this section of the park. One of them is estimated to be 400 years old. This is a White Oak (*Quercus Alba*) but stands well off the trail and down the ravine.

#### STATION IV

Station 4 is among those large trees and in sight of one of the natural spots of the prairie which are included in the park. This spot has been used as a point from which to discuss "Trees and Their Growth".

#### STATION V

Station 5 is on a footbridge. The ravine dips rapidly to the lake, becomes broader to the right. To the left is a narrower glade and the bluffs are relatively high. This is an excellent station from which to talk about "Park Topography" or the forces that produce the present park surface. Lake Ahquabi Park has no good point for discussing geology, but physiography (present day land surface) is well illustrated. In many areas will be found which will be excellent for a discussion of geology.

#### STATION VI

The trail leads past one of the cabins to a point at the end of the driveway. This overlooks the forest, field and lake and gives a good setting for a talk on "Photography". Because of the location, incidental mention should be made of facilities of the camp.



This completes our tour. The guides will direct members of the party how to reach (1) the Shelter, (2) the Bath House and (3) The Lodge, accompanying them past the Bath House and Lodge.

Groups should leave the Lodge or Central Meeting Place, every 20 minutes until all have made the trip.

### SELF GUIDING NATURE TRAIL:

The Self Guiding Nature Trail is sometimes called by other aliases - Trailside Museum, Unguided Nature Trail, Marked Nature Trail, Nature Trail.

In establishing a self-guiding trail, one of the park trails which is especially adapted to Nature Study is selected. Markers are provided to call attention to the trees, shrubs, wild flowers, smaller plants, topography, geology and other features of interest. These, of course, must be changed periodically to keep the trail up-to-date. Such a trail will have continued appeal to the "repeater" who returns to the park, as well as to the visitor who comes but once during the summer.

"If this wood had labels" said John Burroughs, "it would make the most interesting museum of natural history in the world". A companion hiker listened and nature trails were born. Since that day they have sprung up in many camps and in city, state and national parks.

We commonly think of a museum as a repository or collection more or less artificially and systematically arranged and displayed, usually behind glass, the entire collection being housed in a suitable building. But such is not the nature of a Trailside Museum. While we do have, along many of our park trails, a varied collection of interesting materials, it is in its natural surroundings it takes its truest form, where objects may be labeled, studied and enjoyed, yet left to perform its life functions if it be animate, or form a part of the rocks, soil, water, etc., if it be inanimate. To prevent our swinging carelessly to the other extreme, we should avoid associating the term of Trailside Museum or Nature Trails with a mere unlabeled path or even one where a few trees only are permanently labeled.

Perhaps the differentiation is somewhat a matter of degree, yet we are apt to do much less harm to the status of Nature Trailing, if we avoid commonly using the term so carelessly that any trail, path, stream-bed, or roadside may be spoken of as a Nature Trail. A carefully marked Nature Trail does as much to interest and educate the public regarding the possibilities of the park as does the guided tour. We must, therefore, endeavor to keep such a trail up-to-date, changing the markers frequently to discourage undue trampling of low growing plants, present something new to the occasional "repeater" and keep pace with the procession of the season. As a result of these Self Guided Nature Trails, many people are encouraged to contact the Naturalist, presenting their individual problems and in many cases asking for hikes of a specialized nature.

### Six Types of Markers:

In Nature Trailing as well as in any other line of work, variety adds spice. The Naturalist has therefore tried to make the markers and labels so intriguing that the passer-by is compelled to stop and look.



Book Type                      This type of marker received more favorable and varied comment than did all other types combined. It lends itself to a variety of uses.

From a piece of fir plywood  $3/4 \times 4 \times 6$ ", a base is made. This is securely wired to a tree if the legend refers to a tree, or to a post if reference is made to small plants, birds, geology, etc. Fastened to this with leather hinges, is a plywood cover  $3/8 \times 4 \times 6$ ". The leather hinges serve somewhat as springs closing the "book" when left open by reader. In use, a question or sketch, or interesting statement, or a combination of these is placed on a  $3 \times 5$ " card and tacked to the cover. To learn the complete story, name, etc., it is necessary to lift the cover and read another card tacked to the base.

Pull String Marker:                      This is a swinging reversible marker well adapted to the question and answer type of legend.

This type of marker is constructed of  $3/8 \times 4 \times 6$ " fir plywood and supported on a tight wire which was stretched between the two prongs of a Y-shaped post. This type of marker proved popular, is easily made and stimulates thought as does the "book" type marker.

Clothes Line Marker:                      This style marker has been used with much success in many national parks. It is especially valuable in placing labels where several trees, mosses, flowers, ferns, or other objects may be contrasted or compared. It may be constructed by stringing small ropes between trees or tall stakes. A more permanent form is one made by supporting a pole on two Y-shaped stakes.

The clothes line marker may bear typewritten cards which explain how one might identify four trees having similar leaves which grow near so that strings might be run from the stout pole bearing the legends to branches of the trees.

Steel Commercial Plant Markers:                      These may be of various sizes and designs. This is a steel marker fastened to an iron rod for driving into the ground. By their very nature, they lend themselves especially to the marking of flowering plants, ferns and mosses, as well as to cite the presence in that vicinity of certain birds and animals with an accompanying sketch or colored picture.

Nature leaders too often overlook the opportunity of brightening their trail makers by the use of free hand sketches, tracings, or better yet, colored pictures which catch the eye and help tell the story.

One thing with which the Park Naturalist will have to be concerned in the matter of this type of marker, is vandalism.



Elaborate signs should be set out only during the daylight hours. Such signs might be sought as souvenirs and are in constant danger.

Card Markers: The legend was typed on 4"x6" cards. Holes are punched near the four corners and the card tied to a tree by means of two strings which pass entirely around the tree.

Cards should never be fastened to trees with nails or tacks.

Metal Tree Labels: Galvanized tin may be treated with a vinegar solution. Then painted with two coats of white enamel and lettered in black. These are then shellacked. The labels are fastened around trees with #9 wire, coiling the wire. This allows expansion without injury to the tree. The labels should be easily read and placed about five feet from the ground.

```

|||||
"
"      WHITE OAK (Quercus Alba)      "
"
"  The commonest tree of the park.  Note the "
"  light color and regular flaking of the "
"  bark, the even lobing of the blunt pointed "
"  leaves and the medium acorn cups and "
"  longish across. "
"
|||||

```

#### Permanency of Cards for Markers:

Cards for Nature Trail labeling may be prepared in the following ways:

Untreated: Type or hand-print cards using mechanical drawing ink. These untreated cards have proven quite satisfactory and will easily remain in readable condition for three months. The chief advantage of this type of card is that it is easily replaced when mutilated or destroyed. The disadvantage is that after some weeks they look old and faded, and they respond too readily to moisture conditions.

Waxed: Cards thus treated are submerged in hot paraffin after the card has been typed or hand-printed. This method provides ample protection against atmospheric changes, but possesses no other advantage, as far as experiment has proved. The disadvantages are that the card immediately takes on an oily appearance rendering it less readable; dust adheres to the surface giving it a grimy appearance; the youngsters find it an inviting surface into which they carve their initials with a match, stick, or fingernail, or otherwise mutilate the surface.





Shellacked: After typing and hand-printing, or sketching, card is coated on both sides with white shellac. The use of a small artists brush leaves a desirable mottled effect.

The chief advantage of this method is its comparative immunity against people who like to leave their names in public places. It is almost impossible to write upon a shellacked surface with a pencil. Other advantages are that it is quite water-proof, does not collect dust and does not age rapidly.

The only disadvantage ascertained thus far in the shellacked card is the amount of time required for drying. Two precautions are necessary in its use: Beware of old shellac for it will remain sticky after weeks of drying. Use only fresh, dated shellac. One other disadvantage may be its use over surfaces which may be affected by the alcohol in the solution. Mechanical drawing ink, although waterproof is not alcohol-proof, and much brushing may cause the lines to blur. We have used it repeatedly, however, over the mechanical drawing ink and know it will not blur if it is applied quickly with little brushing.

Celluloid Covered  
Markers:

To provide protection to rather fragile material on marker cards, a sheet of celluloid may be fastened over the card. This makes a neat sign and provides ideal protection against everything except the occasional visitor who has a mania for destruction or wants to collect celluloid.

Celluloid has a wide range of uses in this work. Vandalism is its chief limiting factor. This protective covering can be used on steel markers, book type markers, and on cards tied to trees.

Glass Covered  
Markers:

Glass coverings used in the steel type markers would be quite ideal if only serious-minded adults visited our parks, but one would indeed be optimistic who would expect that such covering would not be used as targets for various missiles.

In concluding the discussion on Self Guiding Trails, we must repeat that "variety adds spice". We should, therefore, change the majority of our markers frequently and tax our ingenuity to the limit to try to develop new types of markers and make new uses of those with which we are familiar.

BULLETIN BOARDS:

There should be available in every State Park having the Park Naturalist Service one or more places where the Park Naturalist can post notices



concerning his work. A space may be available on the Park Bulletin Board. If difficulty is experienced in keeping exhibit material, booklet displays, or notices, on the bulletin boards due to persons who are interested in the material knowing an overwhelming desire, notices similar to the one at the right may be exceedingly helpful.

Smaller bulletin boards may be used at strategic places about the park. Such locations would include the lodge, shelter house, picnic area, bath house, and perhaps a spot near the park entrance. Care must be exercised not to produce a "bill-board" effect in the park.

|   |                               |   |
|---|-------------------------------|---|
| " | PLEASE do not remove          | " |
| " | these bulletins.              | " |
| " | Other copies will be supplied | " |
| " | free. See the Park Naturalist | " |
| " | or Custodian                  | " |

|   |                    |   |
|---|--------------------|---|
| " |                    | " |
| " | PARK NATURALIST    | " |
| " | GUIDE SERVICE      | " |
| " | FREE               | " |
| " | Ask Park Custodian | " |
| " |                    | " |

Notices on the Bulletin Boards should include:

A general statement of the Park Naturalist Service

A current schedule of hikes and programs

An invitation to all park visitors to arrange special hikes and programs at their convenience

A map of the park showing points of interest

(When it becomes necessary for the Park Naturalist to leave the park area and premises, notice of when he will return, or where he can be reached, should be posted on the bulletin board.)

#### Chapter IV

#### THE USE OF SPONSORING COMMITTEES IN DEVELOPING A STATE PARK RECREATION PROGRAM

The successful development of a State Park Recreation Program is, to a large extent, dependent upon the correct organization and proper use of a local Advisory Council or Sponsoring Committee group. The interest of the members in the project, and their ability to develop the program and correctly interpret it to the community will go far in determining its efficiency. The nature and personnel of this group will be largely determined by local conditions. However, there are some fundamental rules to be followed in establishing a sponsoring committee group, and outlining its duties and responsibilities.



It is essential, of course, that the committee be kept within working size, and yet it should be large enough to be representative of the community so as to give prestige and authority to the project, and to utilize every possible opportunity to develop the program. Its number and personnel will vary considerably from time to time. It is also essential that this committee work in cooperation with park authority and administrative personnel in all matters pertaining to park policies and procedure.

It is highly desirable that the committee represent all groups in the community that are on record as being active and interested in conservation and park activities. These individuals must be willing and able to give time and thought to the program, and, if necessary, act as volunteer leaders.

Organizations that should be represented are conservation associations, garden and nature clubs of all kinds, schools - both private and public - farm bureaus, extension organizations, such as Boy Scouts, Girl Scouts, 4-H Clubs, etc. Organizations that should be considered for representation should include conservation organizations, nature clubs, schools, colleges, youth agencies, recreation departments, service clubs, civic groups, etc. Probably all of these organizations will not exist in every community, while some communities will have other groups which should be included. The committee should not be limited to the representatives of any one town, but all communities surrounding state park areas should be represented.

The ideal committee is one whose members have a broad outlook, can do park activity planning, and are able to develop a program that is adapted to the particular needs of their community. In addition, they should be willing to assume the responsibility of contacting all available public and private institutions, all state planning and administrative agencies, boards of education, councils of social agencies, lay leaders,; likewise talent, and civic organizations of every kind in the interest of developing the best possible program.

As a general rule most sponsoring Committee groups will be too large to work as a unit on any particular problem of activity. In addition, most of the members will have too many other responsibilities and duties to permit them to be concerned with each of the many phases of park program development. For this reason it is essential that the group be divided into sub-committees. These sub-committees should each be headed by a chairman. He will be responsible to the Sponsoring Committee as a whole for the work of his sub-committee. The general chairman of the Sponsoring Committee group will act as an ex-officio member of each sub-committee. The Park Naturalist and Park Custodian will serve as ex-officio members of the Sponsoring Committee.

Suggested sub-committees and their duties and responsibilities are as follows:

1. The Executive and Finance Committee

This committee will be comprised of the regular officers of the Sponsoring Committee group; i.e., president, vice-president, secretary, treasurer, or finance chairman. It will be the responsibility of this group to take care of all organization details of the whole committee, to keep



accurate record of the achievements of the Sponsoring Committee, to arrange for financial backing, and to approve all expenditures. Plans for the permanency of the work will also be formulated by this group.

2. Committee on Properties and Care of Park: This Committee should work closely with the State Park authority, and the local park custodian. It is their responsibility to cooperate with the park authority and custodian in seeing that the following facilities and properties are available to the public.
  - a. Well situated picnic grounds should be available at all times to the general public.
  - b. Park areas should be established.
  - c. Park bulletin boards are essential. These located in places where the park visitors pass in the greatest numbers. Here maps are displayed, showing all trails, roads, buildings, and points of interest. Also announcement of park activities, locations of park leaders, etc.
  - d. Trail markers should be sufficiently numérable to enable park visitors to find their way around intelligently, and to locate all points of interest.
  - e. Self guiding nature trails established in cooperation with nature authorities.
3. Nature Faculty Committee: This group may or may not be a part of the Sponsoring Committee. In the latter case, this sub-committee should cooperate closely with it. This group is comprised of individuals who possess a thorough knowledge of nature subjects, and who will be able to reach and hold the interest of park patrons. The local community will doubtlessly provide several such persons. Invitations should be extended to persons outstanding in this work to participate in park activities. Men connected with conservation or other organizations and members of the park administration and of the extension staff of our state schools are also available.
4. Special Events Committee: This committee will work out a program of special activities which will be presented at intervals throughout the season.
  - a. Pageants - historical, etc.
  - b. Water activities and contests.
  - c. Community social events, such as college sing, Camp Fire services, etc.





d. School activities in connection with conservation and nature clubs.

e. Winter sports.

f. Any number of special events can be promoted by this committee.

5. Conservation Committee: Conservation, is of course, one of the main features of programs. This committee will work in cooperation with the state and local departments of conservation in promoting conservation education, and in preserving the natural resources and beauty of the park area.

6. Park Tours Committee: The work of this committee is closely allied with that of the Committee on Nature Faculty and Special Events. However, since this part of the program is one of its most spectacular and outstanding features, it requires a maximum amount of effort and preparation. A special committee should be established to carry out the work. Tours should be planned for the entire season with a program that will attract a large attendance each time.

Preparation for such tours will tax the ability of the committee members to their utmost. Guides must be provided and arrangements made to conduct parties around the parks where members of the faculty will point out and discuss objects and points of interest.

7. Publicity and Promotion Committee: In order to make a park activity program a success, it is necessary that these activities be adequately advertised so as to attract the greatest number of persons.

Duties of this committee are:

- a. See that notices of all park activities are sent to newspapers in neighboring communities.
- b. Secure time on local radio programs.
- c. Provide speakers for civic clubs and organizations.
- d. Assist in making arrangements for all special events and major park tours, such as transportation, etc.

An Advisory or Sponsoring Committee for state park recreation activities, if properly organized and efficiently managed, will be one of the key factors on which the success of the program depends. The Committee must work harmoniously, and must have as its primary interest the increasing of the recreational value of our state parks to the general public, by placing at its disposal all possible information, supervision and guidance relating to park activity.



## Chapter V

### SPECIAL PARK GROUPS

Contacts made within the park are of great importance as the individuals and groups are already there. The Park Naturalist's problem is to interest them in his program. Of course, close cooperation with the Park Custodian will materially facilitate this work. These contacts fall naturally into four chief groups, yet they overlap to some extent.

#### I. The Group Camp

Under this heading are placed all organized groups that come to the park for a longer period than one day or simply one evening. They may occupy cabins or tents. In the first instance, at least, they have made reservations in advance of the date of their arrival. They come with a definite object and for a stated length of time. The Park Custodian will gladly furnish a list of these reservations to the Park Naturalist, as well as mention the Naturalist service to the persons making the reservations. The Custodian will likewise keep the Park Naturalist informed of the arrival of groups at the camp grounds.

The leaders of all these groups should be contacted as early in the season as possible and a place secured on their program. This may be a talk, either long or short, before the entire group upon their arrival. The Park Naturalist should avail himself of the opportunity to tell of his program and to offer his services to the group as individuals and as a group. The leaders may arrange for one or more tours - attendance being voluntary or compulsory according to the group and its leaders. In some instances, the Park Naturalist may become a member of the regular "staff" of the group and carry a regular place in their program throughout their stay in the park.

During the groups sojourn in the park, he should become acquainted with as many members individually as he can. He will gladly render any service that he can especially in the way of supplying information about the park. He will carefully avoid forcing himself on leaders or participants at inopportune times as some groups maintain a very strict discipline and have a full program.

Among other duties, the Park Naturalist will probably be called upon frequently for "first aid" assistance.

#### II. The Cabin Renters

These are the family groups that occupy the cabins for varying periods during the summer. Frequently the Custodian can supply valuable information about these people, many of whom are "nature-minded". Individual contacts will repay the efforts of the Park



Naturalist. A few of these groups are self-contained but most people under such conditions are inclined to be sociable and approachable.

Camp areas of the park will supply a similar group, although they usually remain for shorter periods than do many of the cabin renters.

### III. Single-Day Group Visitors:

Under this heading are included a great diversity of groups that visit the Park for a single day. Some are really "Nature Groups" while others are simply "picnickers". An Audubon Club may visit the Park for a "Bird Hike" followed by a supper and evening program. A club of science teachers may hold a meeting at the Lodge some evening. The Garden Clubs may have their District Convention at the park. The Postal Clerks and Letter Carriers of a nearby city may arrange for a Sunday picnic. Numerous family reunions come to every park. Some of these are definitely interest in the Park Naturalist and his work, while others are "sufficient unto themselves", having brought a full program of their own with them. Others come for a day's outing in the woods with no definite program.

Contacts with these groups and their leaders often prove of mutual interest and profit. Often the invitation to talk to a group, a nature tour, or at least valuable individual contacts develop from interviews with this class of park visitors.

Various children's groups visit some of the parks during the summer. These should not be neglected. The Park Naturalist can also render valuable services to the community by interesting the leaders of such groups, of women's clubs, and similar organizations in visits to the park. In such cases, arrangements could be made beforehand for participation by the Park Naturalist in their program while in the park.

### IV. Incidental Park Visitors:

Under this head are included those park visitors who come as individuals. They are a diverse group - the tourist who never fails to visit every State Park on his route, picnickers, fishermen, and all the others who make short visits to the park either as families or individuals.

The Park Naturalist cannot contact all these visitors, but he can talk with a number of them each day. Many of them are already interested in the park program while others will become interested. It is a good rule for the Park Naturalist to set for himself a quota of new contacts for each day in the park. Whether this number be two or twenty, the Park Naturalist is building for himself a potential clientele. The bits of information about the Park and things in it which he passes out in the course of these conversations, frequently create a greater interest than would at first be suspected. The greater the number of contacts, the greater



the interested stimulated in the park program in all its phases. There is an art in approaching a stranger, but in such areas, there is a natural comradeship that needs but little aid in striking up acquaintances.

## Chapter VI

### PUBLICITY

The Park Naturalist is also a publicity man. He must place his program before the public in every way available and arouse general interest in it and enthusiasms for it. There are numerous avenues open to him - newspaper, radio, speaking before organized civic groups, announcements to groups, and park booklets.

Whatever the avenue of publicity it is necessary to plan ahead so that the release of announcements will be properly timed.

The publications of the State Conservation Commission are, of course, the official statements concerning all State Park activities. These publications carry from time to time announcements of the program as well as material relating to nature work in the State Parks, and reach primarily those who are already interested in State Parks and their developments.

The State Conservation Commissions also have the opportunity to issue material through the state and local newspapers and the news syndicates serving them. This provides for a wide distribution of information concerning the Park Naturalist Service. Of course, any material issued is given most attention by the newspapers in the vicinity of the parks concerned.

It also seems desirable to have such organizations as 4-H Clubs, Boy Scouts, Girl Scouts, Camp Fire Girls, Garden Clubs, and others notified early in the season where the Park Naturalists will be placed. Each of these organizations has its own means of disseminating the information among its own members. A general notice to these organizations, sent out by the Conservation Commissions as early as possible would enable these groups to plan their work so that they might make the best use of the Park Naturalist's service.

Newspaper Publicity: We have suggested that the State Conservation Commissions will make available to state and local papers announcements of the park programs. However, each park has a number of local newspapers in its vicinity. The Editors are usually willing and anxious to co-operate with the Park Naturalist and to give space to his news, feature notes and activities.





The type of material to be supplied to the newspapers is determined in part by the facilities of the papers to use illustrations and by the personal bent of the individual Editor. In the main, usable news items are always welcomed by the country newspapers. The Park Naturalist has a large field here in which to exercise his ingenuity. He must keep in mind, however, that newspapers should be given same articles and stories only if the papers are far enough apart that they do not compete directly, or if the material is long enough that it may be cut and revised to suit the individual needs and style of the paper.

At the beginning of the season an announcement should be given to each paper concerning the service. Items will, of course, continue throughout the season so that the public will be continually reminded the service is available to them.

The Park Naturalist may also act as "publicity man" for all the groups whom he contacts in the park. Such reports will include names of members of the group, type of program, speakers, special events and activities, and photographs taken in the park if possible.

The Publicity Sub-committee of the Sponsoring Committee of the park program will, of course, be in charge of publicity.

Radio: Where available radio time should be sought to carry spot announcements, nature skits, interviews with the Park Naturalist about the program in the park. Radio announcements as a part of an established local program, such as the Farm Bureau Hour will obtain excellent results.

The Park Booklet: One of the best publicity mediums is "The Park Booklet" usually compiled and written by the Park Naturalist. The following sets forth the technique in the preparation of such a booklet:

#### TECHNIQUE IN THE PREPARATION OF A PARK BOOKLET

By - M. L. Jones

In the preparation of a park booklet, several fundamentals must be considered. The object of this paper will be to discuss briefly a few of the factors which the writer has endeavored to set up as criteria on the preparation of the "Ledges Nature Notes".

The guests of our state parks come primarily for relaxation. They certainly do not visit the park to be educated in the various phases of natural history. Only a small minority will actually be seeking information. If any appreciable number of our guests, then, are to receive any benefit from a park booklet, it must not be too apparent that its contents have any other function than that of entertainment.



In this decade of high-pressure advertising we are quite accustomed to discount any report or description which obviously over-rates the importance of the subject of discussion. Advertisers have attempted to startle us with the tremendous importance of their goods. Newspaper items frequently misconstrue the facts in order to make a story which is actually of little or no importance, appear to us as being quite significant. The radio listener, too, must tolerate advertising propaganda, which so often over-rates many commodities, that we might wonder how we have lived without them, were we to be gullible enough to place any confidence in their claims.

The writer of a park booklet cannot hope to compete with this type of overemphasis, even if it seemed desirable. He cannot expect that his readers will be as enthusiastic as was the writer over the finding of a moccasin flower, an edible mushroom which nearly everyone else considered poisonous, the nidification of some unusual song bird, or the interesting antics of the chipmunk. He must, of course, attempt to capture the interest of the readers and try to get them to share his enthusiasm; but he must not assume that they will share in his opinion if he says that the moccasin flower is the most wonderful and beautiful flower in existence, or that one has an oddly perverted mind if he cannot derive more pleasure from watching the lovable little chipmunk than from being a spectator at a local ball game.

Conservation has enjoyed a period of popularity which can be utilized to advantage. Many people realize the practical value, and actual necessity, of a wise use of our natural resources. Some will tolerate, or even thrive upon, the sentimental aspects of conservation, but the vast majority are primarily interested in a sane, practical application and look upon the sentimentalist as undeserving of any consideration. If this practical type of person is to be reached, it will be necessary for us to keep our feet on the ground and not write in an affected style as one in a dream.

It would therefore, seem desirable to write in a conversational manner, religiously avoiding the use of words and phrases not readily grasped by the average twelve-year old, for we all speak along a level higher than that attained by an average twelve year old child in those vocations or avocations in which we have had no special training. On the other hand such publications will be subjects to the critical and trained eyes of educators who may rightfully expect a product of some scientific value, and certainly not one in which the scientific data has been carelessly misconstrued.

If considerable information is to be contained in such a booklet, it would seem necessary to supply that information in brief notes. The booklet will, in many instances, contain no more than six pages of written material (each page being five by seven inches). With such limited space available it would hardly seem justifiable to have many full page articles. If it is necessary to deal with the subject at greater length, a sub-title should be introduced, or one or more illustrative sketches employed.

The state parks contain such an abundance of interesting things that it seems unpardonable to fill any single issue with heavy reading



material, or to limit the contents to any one branch of natural history. It seems advisable to enumerate the resources available and refer to them frequently when preparing such a booklet. Such a list would include animals, birds, insects, lichens, mosses, ferns, herbaceous plants, shrubs, trees, geology, park history, Indian mound s, Indian Lore, and various other things of interest.

The likes and dislikes of the people differ so greatly that it might be well to include a generous assortment of notes and articles in each issue in an attempt to contact everyone at some point of interest.

The general public of today is so well supplied with reading material that it would seem highly desirable to strive for a booklet which would be read in its entirety by the park guest before leaving the park. If one or more pages give the appearance of being heavy reading, the tendency will be to pass over it at the time with the idea in mind of reading it later. Should the booklet be of sufficient interest to be re-read at home and filed away among reference notes, a double purpose shall have been accomplished. The writer has felt somewhat complimented by the fact that very few copies of the Ledges Nature Notes have been carelessly thrown aside in the park. Requests for complete sets have been received.

Everyone likes to look at pictures. Our newspapers, magazines, and books are freely embellished with sketches, cartoons, and pictures. Not only do they break the monotony of the printed page, but they may serve to tell a story or capture the interest, or both. An old Chinese proverb states, "One picture speaks louder than ten thousand words". Ordinarily it will not be practicable for us to use pictures which will compare favorably with those found in books, newspapers, or magazines, but it is possible to obtain quite creditable sketches and cartoons with our modern duplicators. It is the conviction of the writer that these should be used freely in the preparation of our park booklets.

Scientific and technical terminology, while indispensable in certain lines of work, has little or no place in a park booklet. If the reader is an advanced amateur or an expert, he will be capable of finding the scientific name if he desires it. If he is not especially interested, he will react very unfavorably to scientific names.

To summarize the factors to be considered in the preparation of a park booklet, let us then: avoid the school-room method of presenting uninteresting facts; assist in making the park a recreational center for the mind as well as the body; show enthusiasm in writing about the park lore but avoid a poetic or affected style; write so that the layman can understand what is intended; keep all articles based on facts taken from careful observation, or other reliable sources; draw freely from the expert, but word the information in terms familiar to the amateur; use brief, concise articles and keep the booklet small and readable; lighten heavier articles with drawings which will in themselves tell a story or convey a bit of humor; scientific names and technical terminology should be used only when one is unable properly to convey the idea in the vernacular of the people, as it will often be interpreted as "showing off" on the part of the author; deal with a balanced variety of subject matter - nearly everyone will be interested in some phase of natural history, but comparatively few will appreciate a booklet dealing exclusively with trees, birds, fish or any other single aspect; strive to include some information in each issue which some will wish to keep for future reference.



Chapter VII

THE FIVE RECREATIONAL ROADS  
TO NATURE TRAILING

With the approach of Spring a group of Recreation Leaders, who had little background in the traditional scientific approach to nature study began to explore the possibilities of introducing children, young people and adults to nature, through activities which are based on the Five Point Recreational Program:

- I. Physical Activities
- II. Art-Craft Programs
- III. Instrumental and Vocal Music
- IV. Drama and Pageantry
- V. Social Recreation

This approach was based on the type of exploration, discovery, pioneering, adventure, inventiveness and creativeness which is basic to the most effective recreation. The result of this group research indicated how nature trailing could be included in the activities of any city playground program, as well as in special feature of interest and value.

With this list organized, certain members of the group enlisted the assistance of the local library for program detail. The available material for program building in the field of Nature Trailing proved a big surprise.

I. Physical Activities and Nature

Programs in this phase of the program are characterized by the more strenuous activities of running, climbing, competition, etc. We will limit ourselves to such physical activity programs as have possibilities for Nature trailing.

A. Roughing it.

This can include camping in tents, learn to, as well as do out-of-door cooking.

L. Camping and Woodcraft - Horace Kephart,  
MacMillan, 1921.

B. Hunting and Fishing.

The possibilities for building a group program around this activity has many ramifications, including competition and Walton League activities. It may start with seining for minnows to be used for bait.

1. A Sportsman's Scrapbook - John Charles Phillips, Houghton, Mifflin, 1928.
2. Sportsmen's Guide - Ackerman's.
3. Lets Go Afield - Emerson Hough, Appleton, 1916.
4. Fishing Kits and Equipment - Samuel Granger.
5. Angling Success - Mortimer Norton, MacMillan, 1935.







C. Casting at Targets

Many playgrounds and parks find this a popular activity.

1. Casting Tackle and Methods - Onnie Warren Smith, Stewart & Kidd, 1920.

D. Hiking, Tracking and Trailing.

This feature of the program should include Prairie Ramblers Clubs, Nature Trails, etc.

1. Tracks and Tracking - Josef Brunner, Outing Publishing Co. 1909.
2. Hiker's Guide - Ben Solomon, Leisure League, 1934.
3. Nature Rambles - Oliver Perry Medsger, Warre, 1931.
4. Blazing Nature Trails, and other materials as Ten Years of Nature Trailing, Education Series Nos. 2, 3, 4, 5, 7, 8, 10, 11. American Museum of Natural History, N. Y. C.

E. Gardening.

F. Active Nature Games

The general approach to this type of program should be to arrange running activities based on a pattern of some standard game.

A relay race can be promoted by choosing sides, requiring each person on the team to secure a leaf from a different type of tree. The first runner may select a white oak, the second a hard maple. In time the problem involves remembering what tree leaves have been secured and figuring out a new leaf to secure. In its simple form, the runner would not be required to identify the leaf.

Other games which can be worked out by the group might follow the pattern of:

1. Hare and Hound
2. Treasure Hunt, etc.
3. Others which are suggested in books of games.

II. Nature in the Art-Craft Field.

This is one of the most fruitful fields for a wide appeal to the various age-groups in the program.

A. Art in the Out-of-Doors.

1. Drawing and Sketching.

Very little material and equipment is necessary for this activity. The results may be mediocre, if additional volunteer leadership is not secured, or if library articles are not used for basic idea.



- (a) Sketching as a Hobby - Arthur L. Guptill Harper, 1936.
- (b) Why Nature Drawing - School Arts Magazine, 35:515 May 1936.
- (c) Children's Joy in Spring Drawing - School Arts Magazine, 35:438, March 1936.

## 2. Design.

Nature affords endless possibilities for materials in design. This particular emphasis will aid in developing drawing and sketching, too.

- (a) Hunting Designs with a Microscope - School Arts Magazine, 35:222, Dec. 1935.
- (b) Insect Motif in Art - Science Monthly, 44:77 Jan. 1937.
- (c) Trees in Design - School Arts Magazine, 35:248, Dec. 1935.

## 3. Out Door Painting.

Landscape painting has always been popular. It can easily be developed if brushes, paints and materials are available.

## 4. Clay Modeling and Pottery.

- (a) Ceramic sculpture. The preparation of Clay - American Magazine Art. 28:500, Aug, 1935.
- (b) Transparent plastic used to preserve Insects, Science News Letter, 33:51, Jan. 22, 1938.
- (c) Making Pottery - Walter A. De Sager, Studio Public, N.Y.C. 1934.
- (d) The Art of Pottery - Irma M. Gall, Bruce Pub. Co., 1930.
- (e) Pottery in the Making - Lunn Manual Arts Press, Peoria, Ill 1931.
- (f) Creation in Clay - Recreation 30:17, April 1936.
- (g) Clay in Your Hands - Woman's Home Companion, 64:17, Feb. 1937.

## 5. Impress of Animal foot prints or leaves.

## 6. Spatter work or blue printing with ferns, leaves, etc.

- (a) Spatter-work Fern Print - American Home, 18:41, 120; Oct. 1937.
- (b) Blue Prints your Child can Make - Canadian Magazine, 88:39, July 1937.



7. Photography of Nature.

- (a) No closed season - Bird Lore 37:181, May 1935
- (b) Some hints in bird photography - American Photo. 30:458, July 1936.
- (c) Mousetrap Photography - Popular Science 127:70 Oct. 1935.
- (d) Outdoor Photography - Julian Anthony Dimmock, Outing Publishing Co., 1912.
- (e) How to hunt with a Camera - William Nesbit, Dutton 1926.
- (f) Jungles Underfoot - Popular Science 132:46, April 1928.

8. Carving from Nature Materials

- (a) Baskets, Buttons, etc.

9. Map Making

This activity has been highly developed as a method for introducing boys and girls to the stars, and Scouting has used it in area map making.

- (a) Sky Journey - Maps - Science News Letter 32:138, August 28, 1937
- (b) Map Making - Education, 58:271, Jan. 1938

B. Crafts in the Out-of-Doors.

Program activities in this field should involve the actual use of nature materials and patterns, rather than just finding a pleasant spot in the woods for making celluloid rings.

1. Indian Craft.

- (a) Birch-bark baskets - Industrial Arts and Vocational Education, 26:354, October 1937.
- (b) Bows that Bend Properly - Popular Science, 130:117, Feb. 1937.
- (c) Making of Arrows - Industrial Arts and Vocational Education, 24:238, Aug. 1937.
- (d) Making Moccasins that Really Fit - Popular Science, 131:91, Aug. 1937.



- (e) Indian Bead Work - Clark Wissler, American Museum of Natural History, N. Y. C.

## 2. Basketry

- (a) Art of Basket Weaving - Travel, 65:41, July 1935.
- (b) Fine Willow Basketry - A. G. Knock, Manual Arts Press, Peoria, 1929.
- (c) Rush Work Weaving - Mabel Robbery, Pitman, London, 1933.
- (d) Basket Pioneering - Oama Palmer Couch, Judd Publishing Co., N. Y. C. 1933.

## 3. Rustic Crafts

- (a) Slab Furniture - Industrial Arts and Vocational Education, 25:220, 251, July and August 1936.
- (b) Rescating in Cane - One Hundred Things for the Handyman to do, pp. 44-49, Arthur C. North, Lipincott, 1937.
- (c) Bird Houses and How to Build Them - Ned Dearborn, Washington Printing Office, Washington, D. C.
- (d) Canes, rings, picture frames.
- (e) Butterfly Trays.
- (f) Clam shell Ash Trays.

## 4. Nature Jewelry

- (a) Use of Job's Trar grass seed for bead necklaces.
- (b) Jewelry Making Simplified for Beginners - Popular Science, 129:76, October 1936.

## 5. Flower Making

- (a) How to Make Handmade Flowers - Ada Jones Smith, Ada Jones Smith Honos Publishing Co., New York, 1922.
- (b) Plants of Wax - Laurence U. Coleman, American Museum of Natural History, N.Y.C.

## C. Out Door Sports and Activities.

- 1. Fishing rods, flies, and tackle.





(a) Amateur Rod Making - Perry D. Frazor, Outdoor Publishing Company, 1914.

(b) Streamcraft - George P. Holden, Stewart and Kidd, 1919.

2. Traps for Animals, fish bait, etc.

(a) How boys and Girls can Earn Money - Colvin, Bowsfield, Forbes, Chicago, 1916.

3. Nature Gardens

(a) Wild Flower Gardens - Nature Magazine, 30:212, Oct. 1937.

(b) Grow Your Own Wild Flowers - House and Gardens, 72:54, Oct. 1937.

(c) Garden Craft Work - Popular Science, 132:86, April 1938.

4. Growing and Using Gourds.

(a) Gourds as Quaint Gifts - American Home, 19:90, Dec. 1937.

(b) Grow Your Own Bird Houses - Nature Magazine, 30:298, November 1937.

D. Museums and Exhibits.

1. Starting a Museum

(a) Museums in Miniature - Christian Science Monitor, P. 12, Aug. 18, 1937.

(b) Your Museum - Recreation, 31:667, Feb. 1938.

(c) Our Children Have Their Own Museum - American Home, 18:66, Dec. 1936.

(d) Rivers in Exact Miniature - Scientific American, 157:310, Oct. 1937.

(e) Out of Door Museums - Paul Blakeslee Mann,

2. Collecting and Mounting

(a) Useful Methods for Mounting Insects - Science, 87:146, Feb. 11, 1938.

(b) How to collect and preserve insects - Frank E. Lutz, American Museum of Natural History, N. Y. C.



- (c) The Collector of Minerals \* Herbert P. Whitlock,  
American Museum of Natural History, N. Y. C.

3. Taxidermy

- (a) Taxidermy and collecting - W. T. Hornaday, Scribners,  
1935
- (b) Taxidermy and Museum Exhibition - John Rowley, Appleton,  
1925.

4. Aquariums

5. Rocks and Fossils

- (a) The Story of the Minerals - Herbert P. Whitlock  
American Museum of Natural History, N. Y. C.

III. Music in the Out of Doors.

A. Making of Musical Instruments:

- 1. Rhythm Sticks, 2. Drums and Sticks, 3. Baton, 4. Wood Blocks,  
5. Sand Blocks, 6. Shepherd Pipes, 7. Rattles, 8. Bird  
Whistles, 9. Marimba.

- 1. Creative Music for Children - Saltis N. Coleman, Chap. IV  
Putmans, 1922

- 2. Children's Percussion Bands, Louie E. deRusette, E. P.  
Dutton & Co., 1930

- 3. Music in Rural Education - Silver - Burdette, N. Y. C.

- 4. Simple Directions for Making Rhythm Band Instruments -  
U. S. Work Projects Administration, N. Y. C.

B. Songs

- 1. Songs are plentiful on almost every subject in nature -  
especially in songs for children.

- (a) The Music Hour in Kindergarten & First Grade-Silver-  
Burdette, N. Y. C.

- (b) Songs and Games for Little Ones - Walker & Jenks,  
O. Ditson Co.

- (c) Twice Fifty-five Series - C.C. Birchard, 221 Columbus  
Ave., Boston, Mass.

- (d) Songs of the Roaming Ranger - Joe Davis, Inc., 1619  
Broadway

- 2. Indian Songs.



(a) Indian Action Songs - Frances Densmore, C. C. Birchard Co., 25¢

(b) Indian Games and Dances with Nature Songs - Alice Flecher, C. C. Birchard - \$2.00.

3. Nature Song Scrapbook.

Collection of songs about nature selected by members of the group. Each person decorates his page in the book with a design and explains reasons for choosing the song.

4. Song Discovery or Exploration

Group singing conducted by one person who takes the group on a nature trip by means of songs. The entire group could contribute material.

C. Nature Music.

Listening to Nature music played by a pianist or on victrola. Such selections as "The Flight of the Bumblebee", McDowell's "To the Sea", are well known examples.

1. Nature Music, National Recreation Assn., 315 Fourth Ave., N.Y.C.

D. Operettas.

1. "Enchanted Summer" - M. C. Blomquist  
12 characters and Chorus Group. - Primary Education 33:410  
June 1925.

E. Nature Stories and Music.

1. "Come Let us Plant a Garden" Beatrice Perham - Neil A. Kjos Music Co., Chicago, 25¢. For primary age. Suggested dramatizations. Music and stories are integrated.

2. "Wonderlands in Nature" - Josie D. Curtiss - Brethron Publishing Company, Elgin, Ill. 1925  
(Poor Music)

F. Bird Choir.

Go out as a group in the early morning, sit down and listen to the bird choir.

G. Creative Nature Music Projects.

Composition of tunes and verses about nature.

1. "Projects for All The Holidays". - F.M. Rich & E. D. Burchill  
A. Planagan Co., Chicago, Illinois, 1925.

IV. Drama and Pageantry.

A. Stories.

1. Tales of Rod and Gun, Harry McGuire - MacMillan Co., 1931



2. Everyday Doings of Insects, Evelyn Cheesman.
3. Plants Useful to Man - W.W. Robbins, Blakeston, 1933.
4. Thrills of a Naturalist's Quest - R. L. Ditmans, MacMillan Co., 1932.
5. Bird Biographies - R. E. Ball - Dodd, Mead, 1923.

B. Charades, Pantomimos, etc.

C. One Act Nature Plays.

1. Nature's thrifty workers - L.K. Dolan, Eldridge Entertainment House.
2. Why! It's Spring - A. Norris, Lewis Normal Institute. 34:74, April 25.
3. Where Are the Flowers and Birds - O. U. Roe, Flaurier, Noel, Dayton, 1930.
4. Mother Natures Carnival - M. O. Honors, Womans Press.
5. Heart of Oak - School Arts Magazine, 27:587-593, June 1938.

V. Social Recreation and Nature.

It seems natural for young people or family groups to turn to the out-of-doors for good times, not only in the form of picnics, swimming, etc., but special nature activities can be included such as:

A. Parties.

Nature themes; seasonal parties, games, costuming, decorations and refreshments relating to nature can be used effectively:

1. "Jungle Parties for Boys" - "Parties", Hazel Carter Maxon, E. P. Dutton & Co. N. Y., 1937  
This party includes such activities as making a map of the region; jungle scavenger hunt, fagot game, etc.
2. Through the Seasons "A Book of Original Parties" - Ethel Owen, Abingdon Press, N.Y.  
The entire party is woven around the seasons.
  - (a) May Frolic or May Day Breakfast.
  - (b) Back Yard Party.
  - (c) Garden Party.
  - (d) Birds Easter Party "World's Best Book of Games and Parties" - Lear and Mishler, Penn Publ. Co., Philadelphia.

B. Picnics.

Picnics furnish the ideal setting for nature lore, but the games, songs, stunts, etc., must point up the nature angle.

1. Quiet game after refreshments: Drawing pictures or sketches of the picnic grounds; weaving daisy chains, etc.







