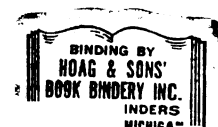
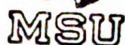


A COMPARATIVE STUDY OF FOUR  
STATE NATURAL AREAS SYSTEMS WITH  
RECOMMENDATIONS FOR MICHIGAN

Thesis for the Degree of M. S.  
MICHIGAN STATE UNIVERSITY  
JOHN WILLIAM HUMKE  
1970

THESIS





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## ABSTRACT

### A COMPARATIVE STUDY OF FOUR STATE NATURAL AREAS SYSTEMS WITH RECOMMENDATIONS FOR MICHIGAN

By

John William Humke

Natural areas have been recognized as scarce, irreplaceable natural resources requiring special attention and protection by government and private conservationists. Michigan has a private organization, the Michigan Natural Areas Council, that is dedicated to protecting natural areas in the state. Several other states have created public councils, commissions or divisions to establish systems of protected natural areas. Three Great Lake States, Wisconsin, Illinois and Indiana, having public programs, were selected to be contrasted to the Michigan program to identify concepts and procedures that might be adopted to improve natural areas protection in Michigan.

The origin, organization, programs and accomplishments of the four state natural areas programs were described. The Michigan Natural Areas Council was found to have a very thorough procedure for selecting and justifying natural areas to be dedicated. Wisconsin's Scientific Areas Preservation Board excelled in their methodical approach to establishing



a complete scientific areas system. Legislation in Illinois and Indiana gives strong legal protection to dedicated nature preserves. The Illinois Natural Areas Commission is assisting the State in the purchase of over one million dollars of privately owned natural areas. In Indiana a public commission or council was not formed and the natural areas program is being administered by a Division within the Department of Natural Resources.

Four basic recommendations for improving the Michigan program were made. If adopted, these would create a natural areas board attached to the Department of Natural Resources, bring legal protection to dedicated natural areas, create one classification and definition for natural areas, and establish a systematic approach to a natural areas program. Four other recommendations would give the Governor authority to appoint a natural areas board made up of representatives of specific institutions, give the natural areas board and the Natural Resources Commission specific powers and duties to administer a natural areas program, and suggest to the natural areas board, if created, procedures for selecting and dedicating natural areas. Limitations, such as a potential resistance against another advisory board by the Department of Natural Resources, were described for several of the recommendations.

A COMPARATIVE STUDY OF FOUR STATE NATURAL  
AREAS SYSTEMS WITH RECOMMENDATIONS  
FOR MICHIGAN

By

John William Humke

A THESIS

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

MASTER OF SCIENCE

Department of Resource Development

1970

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Lastly, I wish to gratefully acknowledge the contribution of my wife, Mary. Her constant encouragement and willing assistance made this study a family accomplishment. My infant daughter, Erika, was most patient with her parents as they devoted many hours to this work.



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## CHAPTER I

### INTRODUCTION

#### Introduction

No living man will see again the long-grass prairie, where a sea of prairie flowers lapped at the stirrups of the pioneer. We shall do well to find a forty here and there on which the prairie plants can be kept alive as species. There were a hundred such plants, many of exceptional beauty. Most of them are quite unknown to those who have inherited their domain.

. . . . .  
No living man will see again the virgin pineries of the Lake States, or the flatwoods of the coastal plain, or the giant hardwoods; of these, samples of a few acres each will have to suffice. . . .

One of the fastest-shrinking categories of wilderness is coastlines. Cottages and tourist roads have all but annihilated wild coasts on both oceans, and Lake Superior is now losing the last large remnant of wild shoreline on the Great Lakes. . . .

. . . . .  
A representative series of these areas can, and should, be kept. Many are of negligible or negative value for economic use. It will be contended, of course, that no deliberate planning to this end is necessary; that adequate areas will survive anyhow. All recent history belies so comforting an assumption. . . .<sup>1</sup>

In the above quotation Aldo Leopold was entering a plea for the protection of wilderness. Very little wilderness remains in the Lake States. Logging, mining, farming and grazing took too much of the land. However, a fair number of relatively wild parcels of land have survived these

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<sup>1</sup>Aldo Leopold, A Sand County Almanac (New York: Oxford University Press, 1949), pp. 189-92.

forces of development. In most cases these are Leopold's "a forty here" or "a few acres." The reason that much of the remaining wild land did survive was because certain far-sighted individuals set aside public parks, forests and wildlife refuges.

For years most resource managers felt that these wild remnants were adequately protected merely by being in public ownership. However, the forces of progress do not always recognize parks or public forests as having any special protected status. Highways, powerlines, pipelines, and various economic development schemes continue where logging and mining may have been stopped. At the same time, these practices are perhaps not the most serious threat to the remaining wild places. A relatively new phenomenon has appeared on the scene. It is called outdoor recreation. The last prairie may not be plowed or the last virgin pine community may not be cut but they may succumb to snowmobiles or all-terrain vehicles or an expanded campground. This is not to say that informed resource managers would knowingly allow this to happen. However, unless the remaining wild lands are protected by special laws and programs the pressures of a growing population, greater leisure time, increasing affluence and mobility may take the matter out of the resource managers' hands.

Various organizations, societies, agencies and individuals have recognized the values and uses of our remaining wild lands and their growing scarcity. Also, various



terminology has been developed in describing these lands. The term that has received the widest acceptance, and will be used in this study, is natural areas.<sup>1</sup>

### The Problem

In Michigan, organized concern for natural areas started in the mid-1940's and took the form of the Michigan Natural Areas Council in 1952. This private group has played a major role in calling attention to the remaining wild areas of the state and obtaining a degree of protection for many of them. Other institutions or organizations have also made important contributions. Several universities have acquired natural areas for their research and educational needs and citizens groups have raised funds to purchase and protect endangered natural areas. While some progress has been made a question remains as to the long-range protection these areas will receive under the increasing pressures being placed on our natural resources. Also, will the fragmented programs in Michigan incorporate an adequate representation of the various natural communities in protected areas?

Several states have legislatively created special councils, commissions, or boards to establish natural areas programs and systems. In some cases natural areas that are dedicated into a system receive substantial legal protection against other land uses that would destroy their natural

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<sup>1</sup>The justification for and uses of natural areas and a discussion of the term natural areas are presented in Chapter II.

character. Three of the Great Lake States have such programs in operation.

### The Purpose and Plan of the Study

The purpose of this study is to examine and compare the natural areas programs of Michigan, Wisconsin, Illinois and Indiana in an effort to recognize concepts or procedures that would, if adopted, improve the program to protect a representative system of natural areas in Michigan. Wisconsin, Illinois and Indiana were selected for comparison primarily because each of these Great Lake States has a legislatively established natural areas program that differs from each other in their approach to similar goals. Within the three states there is a total of twenty-seven years of experience in natural areas protection under a legislatively established program. Michigan, on the other hand, does not have a legislatively established program. However, a natural areas program, with similar goals to the other three states, has been carried out by the private Michigan Natural Areas Council for the past eighteen years.

The plan of this study is to first examine the development of the concern for the conservation of our natural resources with an emphasis on the interest in wild or undisturbed lands. The various uses of the term natural areas will be explored and the need or justification for the preservation of such areas will be presented. This will be followed by a description of several significant approaches of

incorporating dedicated natural areas into a natural areas system based on full representation of all natural community or feature types.

The main body of the study will describe the organization, accomplishments, problems, and continuing goals of the natural areas programs in Michigan, Wisconsin, Illinois and Indiana. From these descriptions key concepts or procedures will be identified. These will be stated along with a brief description of how each state program has handled this concept or procedure. At this point a recommendation, along with a justification for the recommendation and a statement of limitations of the recommendation, will be made based on the experiences of the four states.

#### Definition of Terms Used

Natural Areas.--The term natural areas has several connotations. For the purposes of this study it will mean areas of land or water which retain or have reestablished their natural character, or have unusual flora or fauna or have biotic, geological, scenic or paleontological features containing aesthetic, scientific or educational values. Natural areas do not have to be protected. They may be in public or private ownership. Their boundaries are normally natural.

Dedicated Natural Areas.--Dedicated natural areas are natural areas that have been formally recognized through a natural areas program and have been given some degree of legal or administrative protection.

Natural Areas Program.--A public or private program whose principal function is to identify natural areas and give them protection as dedicated natural areas.

Natural Areas System.--A natural areas system is a procedure whereby dedicated natural areas in a natural areas program are selected on criteria that will lead to full representation of natural area types in a given region.

Natural Areas Board.--A natural areas board is a legislatively established entity with the duties and powers to dedicate natural areas and undertake other activities necessary to create and manage a natural areas program or natural areas system.<sup>1</sup>

### Assumptions

Much of this study is based on the assumption that concepts and procedures that have met with success in Wisconsin, Illinois, Indiana would, if applied, meet with equal success in Michigan. It is a general assumption of this study that natural areas have value and are worthy of being protected from forces that would destroy them. It is also assumed that the best interests of the citizens of Michigan

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<sup>1</sup>The above five terms were created for general use in this study. The various states have developed other terms for these concepts. For example, a dedicated natural area is called a scientific area in Wisconsin and a nature preserve in Illinois. When the author is speaking of the concept in a general way he will use the above terms but when he is describing a particular state he will use the term developed by that state.

would be served if a fully representative system of dedicated natural areas were created in the state.<sup>1</sup>

In making recommendations at the conclusion of the study the author will attempt, as far as possible, to justify such recommendations on factual material presented in the study. It should be pointed out however, that the author developed some expertise in the area of natural areas programs when he served as the Midwestern Regional Field Representative of The Nature Conservancy from 1966 to 1968. During this time he met, on many occasions, with the leaders of the state natural areas programs described in this study. Therefore, the recommendations may in part be based on knowledge gained by the author at these meetings but not reported in literature that formed the basis for the descriptions of the state systems.

#### Hypothesis Stated

The guiding hypothesis of this study is that "an examination of the natural areas programs of Wisconsin, Illinois and Indiana will produce concepts and procedures that, if adopted, would improve the natural areas program in Michigan."

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<sup>1</sup>The justification for and the use of natural areas are developed in Chapter II. The above assumption is based on the proposition that what the legislators of Illinois and Indiana felt was in the best interests of their citizens would also be in the best interests of the citizens of Michigan.



## CHAPTER II

### LITERATURE REVIEW

#### Introduction

In Chapter I, it was pointed out that the term natural areas has a range of interpretations. As a result, there are several types of literature dealing with the different concepts associated with this term. For the purposes of this study five types of literature were reviewed. A brief examination was made of sources dealing with the origins and development of the conservation movement in the United States. This led to a more detailed look at the origins of a concern for natural areas. Literature giving various definitions of the term natural areas were also explored. Another body of information concerns the justification for and use of natural areas. The final type of literature explored deals with the development of natural area systems.

The historical information was obtained from periodical articles and texts. The principal source of information describing Michigan's and the other three state natural areas systems was in the form of memorandums, reports, and a few periodical articles. These were primarily obtained from the files of the organization and agencies in question and The

Nature Conservancy. There is, however, one major text dealing with state natural areas systems. This is A. A. Lindsey's Natural Areas In Indiana and Their Preservation.<sup>1</sup>

The Conservation Movement and the  
Concern for Natural Areas

The principal characters and concepts of the conservation movement of the United States are found in Stewart L. Udall's The Quiet Crisis.<sup>2</sup> In this work the author starts before the establishment of the nation and describes the land wisdom of the Indians. Other early chapters cover Jefferson's land policy, several of the early settlers and trappers, Thoreau and the early naturalists, and the era of severe resource exploitation. Udall credits the book, Man and Nature, by George Perkins Marsh, as the beginning of wisdom in land attitudes in this country. This is followed by descriptions of the early work done by men such as Carl Schurz, John Wesley Powell, Gifford Pinchot, John Muir, Theodore Roosevelt, and Franklin Delano Roosevelt. The remainder of the book deals with individual action, cities in trouble, conservation and the future, and notes on a land ethic for tomorrow. Udall states that:

The culmination of Roosevelt's [Theodore] effort to re-educate his countrymen was the White House Conference

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<sup>1</sup>Alton A. Lindsey, Damian V. Schmelz, and Stanley A. Nichols, Natural Areas In Indiana and Their Preservation (Lafayette, Ind.: Indiana Natural Areas Survey, 1969).

<sup>2</sup>Stewart L. Udall, The Quiet Crisis (New York: Holt, Rinehart and Winston, 1963).

on Conservation he convened in the spring of 1908. This presidential Chautauqua did more to crystallize opinion than any event of TR's tenure. It was salesmanship of the highest order and it consecrated Pinchot's new watchword - conservation. . . .<sup>1</sup>

This White House Conference of 1908 is described by Loomis Havemeyer in Conservation of Our Natural Resources as follows:

Never before in the history of the nation had so representative an audience gathered together. . . . Apparently President Roosevelt must have thought that the question of conservation was one of fundamental importance before he took so far-reaching a step. Never before in the history of the nation had the scientific men of the country met upon equal footing with those engaged in politics. This in itself was sufficient to mark the White House Conference as a meeting of the first importance in reference to the future of the nation.

The audience of the 13th of May was indeed an impressive one. Upon the right of the President sat the Vice President and the members of his Cabinet. Upon his left were the justices of the Supreme Court. Before him were assembled the governors, the members of Congress, many of the leading scientific men of the country, and numerous other delegates.<sup>2</sup>

For the purposes of this study the White House Conference had two important results. Immediately after the conference the President established the National Conservation Commission which undertook an inventory of the country's natural resources. This inventory "furnished a basis for quantitative and therefore scientific discussion of the future of our resources."<sup>3</sup> This was particularly important because

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<sup>1</sup>Ibid., p. 134.

<sup>2</sup>Loomis Havemeyer, ed., Conservation of Our Natural Resources (New York: The MacMillan Company, 1930), pp. 7-8.

<sup>3</sup>Ibid., p. 10.

because Roosevelt withdrew 234,000,000 acres from public entry during his administration. Within these lands are found many of the finest natural areas in Federal ownership today. On another level, the governors who attended the conference "recommended that states establish conservation commissions to cooperate with one another and with a similar national commission. Several of the governors announced that their very first acts upon reaching their respective states would be to appoint such commissions."<sup>1</sup> It is essentially on the lands controlled by these state conservation commissions and their successors that state natural area programs are now operating.

Udall's The Quiet Crisis reports that a concern for the natural features of our land predates settlement and that several key individuals like Thoreau and Marsh called attention to this concern. The first federal action towards preservation, however, came in 1864 when President Lincoln ceded Yosemite Valley to the State of California as a scenic reserve. Eight years later the first national park was established when President Grant signed the Yellowstone Park bill.<sup>2</sup>

The beginning of organized scientific interest in natural areas, particularly those outside of federal holdings

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<sup>1</sup>Ibid., p. 8.

<sup>2</sup>Udall, Quiet Crisis, pp. 112-13.

and state parks, is not fully known. The editors of the Journal of Forestry have stated:

Although the origin of concern about the preservation of natural areas for scientific and educational purposes is obscure, ecologists in the United States under the direction of Victor E. Shelford emphasized their importance as early as 1917.<sup>1</sup>

It was at this time that the Ecological Society of America formed a Committee for the Preservation of Natural Conditions under Shelford's leadership. The outstanding contribution of this committee was the publication of their 761 page Naturalist's Guide to the Americas. The committee broke from the Ecological Society to become a private organization, The Ecologists Union, which in 1950 adopted the name The Nature Conservancy.<sup>2</sup> A. A. Lindsey, in his Natural Areas in Indiana and Their Preservation, says:

During the past quarter century the natural area idea has become familiar nationally to ecologists, amateur naturalists and many public-spirited citizens through the land preservation program of The Nature Conservancy.

. . . .<sup>3</sup>

#### Definitions of the Term Natural Areas

As mentioned in the introduction, the term natural areas has several connotations. Cain gives a broad scientific interpretation when he says:

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<sup>1</sup>John F. Shanklin, "Natural Areas Project--An Historical Review of the Activities and Accomplishments of the Committee on Natural Areas," Journal of Forestry, LXVI (November, 1968), 873.

<sup>2</sup>S. Charles Kendeigh, et al., "Nature Sanctuaries in the United States and Canada," The Living Wilderness (Winter, 1950-51), 1-42.

<sup>3</sup>Lindsey, Indiana, p. 4.



A natural area is a geographic unit of any order or size with sufficient common characteristics of various sorts to be of some practical usefulness in biogeography. . . .

However loose the term may be, a natural area will have one or more specified natural characteristics. It occupies space and within the specified area the ascribed characteristics generally are prevalent. It follows that a natural area has boundary, even though at an ecotone, and is contiguous with other areas.

. . . . .  
We can reach certain conclusions about natural areas. No natural area has more than a degree of naturalness in the sense that it has more than a degree of homogeneity over space and, consequently, generally has an indefinite boundary. When a natural area is defined by two or more characteristics in a certain combination, the areas of these characteristics usually are not coincident in space. . . .<sup>1</sup>

Cain's definition is on a higher level than that generally found. He is concerned with natural areas from a rather pure ecological point of view. Most discussions of the term are concerned with three things: the degree of naturalness, the degree of protection, and the size.

In 1933 the Committee for the Study of Plant and Animal Communities of the Ecological Society of America published a report that defined nature sanctuaries as follows:

First-Class Nature Sanctuaries are fully protected areas, with virgin vegetation and of sufficient size to contain all the animal species in the self-maintaining populations historically known to have occurred in the area (except primitive man).

Second-Class Nature Sanctuaries are fully protected areas, with original vegetation more or less disturbed or fairly mature second-growth, with not more than two important animal species missing from the original fauna, or areas too small to insure maintenance of normal populations of the larger animals.

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<sup>1</sup>Stanley A. Cain, "Biotope and Habitat," in Future Environments of North America--Transformation of a Continent, ed. by F. Fraser Darling and John P. Milton (New York: The Natural History Press, 1966), pp. 38-40.

Third-Class Nature Sanctuaries are small areas inadequately protected or areas modified to a greater extent than those of the first and second classes.<sup>1</sup>

Under this classification the first-class areas are defined in a way that would closely follow the form that the National Park Service uses for the term natural areas. The National Park Service defines all their "national parks and national monuments of scientific significance"<sup>2</sup> as natural areas.

An important body of definitions of natural areas places heavy emphasis on their value as research areas. Perhaps the most outstanding work on these types of areas has been done by the Natural Areas Committee of the Society of American Foresters. Its definition of a natural area is as follows:

An area set aside to preserve permanently in unmodified condition a representative unit of the virgin growth of a major forest type primarily for the purposes of science, research, and education. Timber cutting and grazing are prohibited and general public use discouraged.<sup>3</sup>

The committee "set a minimum size of twenty acres for a single area, within which a single type might be as small as ten acres," and agreed "that the preservation of a single type in blocks of more than 1,000 acres was unnecessary."<sup>4</sup>

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<sup>1</sup>Kendeigh, "Nature Sanctuaries," p. 7.

<sup>2</sup>U.S., Department of the Interior, National Park Service, Compilation of the Administrative Policies for the National Parks and National Monuments of Scientific Significance (Washington, D.C.: Government Printing Office, 1967), p. 9.

<sup>3</sup>Shanklin, "Committee on Natural Areas," p. 873.

<sup>4</sup>Ibid.

E. William Anderson, Chairman of the Natural Areas Committee of the American Society of Range Management, presents an interesting discussion on the definitions of natural areas.<sup>1</sup> He gives the Society of American Foresters definition, presented above, a definition suggested by the Council Study Committee on Natural Areas of the American Association for the Advancement of Science, and the Forest Service definition as examples and then suggests the following definition for the range managers:

An area set aside which illustrates or typifies virgin conditions of forest or range growth, as well as other (including grazed) conditions that have special or unique characteristics of scientific interest and importance for the purpose of science, research and education.<sup>2</sup>

Anderson then goes into discussion comparing the term natural areas with several others which he defines. The other terms are wilderness area, primitive area, recreational area, scenic area, geological area, archeological area, historical area, botanical area, and memorial parkway. He closes this discussion by stating:

Broadly, all of the above areas are natural areas set aside for some specific purpose. Unfortunately, the term Natural Area applied specifically to areas preserved for only research and study use can cause confusion. The dual use of this term requires clarification.<sup>3</sup>

The state natural area systems that are described in this study also have developed definitions. Wisconsin

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<sup>1</sup>E. William Anderson, "Natural Areas," Journal of Range Management, XIX (July, 1966).

<sup>2</sup>Ibid., p. 239.

<sup>3</sup>Ibid.

apparently has recognized a terminology problem, such as that pointed out by Anderson, because they call the areas within their system scientific areas. Scientific areas have been defined by Wisconsin's Scientific Area Preservation Council as:

A tract of land or water in its natural state set aside and permanently protected or managed for the purpose of preservation of native plant and animal communities or of rare or valuable individual members of such communities or archeological sites.<sup>1</sup>

However, some people in Wisconsin believe that one term or classification may be too limiting. The Wisconsin Academy of Sciences, Arts and Letters made a study of Wisconsin's natural areas needs and recommended the following classifications:

Recreational and Educational Areas -- These are areas in which the use by the travelling public and by schools and colleges is comparatively heavy. The criteria for selection of these sites are not as exacting as for the other kinds of areas. They may be of secondary excellence, yet very attractive and comparatively undisturbed. Portions of existing state and county parks are representative of this type of use. . . .

Natural History Areas -- These are areas which are very little disturbed. They represent outstanding examples of native plant and animal communities or other features of natural history. They would be expected to withstand a moderately heavy use for educational purposes in addition to research uses. . . .

Scientific Areas -- These are areas which represent as closely as possible the original condition of the vegetation in the State. They are of the highest quality and are designed for the preservation of plant or animal

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<sup>1</sup>Wisconsin, State Board for the Preservation of Scientific Areas, State Board for the Preservation of Scientific Areas (Madison, Wisc.: 1966), p. 3.

species, a biological community, or some particular geological or archeological feature. . . .<sup>1</sup>

This classification of natural areas brings in a strong emphasis on the concept of use.

Illinois uses the term "nature preserve" in a definition that emphasizes natural values and legal protection. The definition in the Illinois Nature Preserves System Act states:

As used in this Act, unless the context otherwise requires, "nature preserve" means an area of land or water in public or private ownership which is formally dedicated, pursuant to the terms of this Act, to being maintained in its natural condition consistent with the purposes of this Act, which area either retains to some degree its primeval character (though it need not be completely natural and undisturbed at the time of dedication) or has unusual flora, fauna, geological or archeological features of scientific or educational value and which area is used in a manner consistent with its continued preservation, without unreasonable impairment, disturbance, or development, for the public purposes of scientific research, education, esthetic enjoyment and providing habitat for plant and animal species and communities and other natural objects.<sup>2</sup>

The Illinois act recognizes that all natural areas worthy of attention by the Illinois Nature Preserves Commission are not covered in the above statement. Because of this, the Commission is empowered:

To maintain registries and records of nature preserves and other areas of educational and scientific value and of habitats for rare and endangered species of plants and animals in the State; and to promote by

---

<sup>1</sup>Wisconsin Academy of Sciences, Arts and Letters, Report of the Academy, 1964-65 Report to the Governor (Madison, Wisc.: n.p.), p. 10.

<sup>2</sup>Illinois, Illinois Nature Preserves Commission, The Illinois Nature Preserves Acts (Rockford, Ill.: 1968), p. 4.

advice and other assistance the protection of natural areas in the State which are not dedicated as nature preserves.<sup>1</sup>

The Indiana program is based heavily on the concepts and definitions developed in Illinois. They do however distinguish between "area", meaning natural area, and "nature preserve." The definitions as found in the Indiana Act are as follows:

The word "area" means an area of land or water or both land and water, whether in public or private ownership, which either retains or has reestablished its natural character (although it need not be undisturbed) or has unusual flora or fauna or has biotic, geological, scenic or paleontological features of scientific or educational value.

The term "nature preserve" means an area, any estate, interest or right in which has been formally dedicated under the provisions of this act.<sup>2</sup>

Thus, the natural values are separated from the legal protection.

Of the four states studied Michigan's Natural Areas Council has developed the most complex set of terminology. Their by-laws list six categories of natural areas. In addition, they have special terminology such as Community Nature Study Area and Private Natural Area to meet special situations. The six basic categories and their definitions are as follows:

Scenic Site

Definition: An area of land having unusual scenic values and which has been dedicated for their preservation and public enjoyment.

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<sup>1</sup>Ibid., p. 3.

<sup>2</sup>Indiana, Senate Enrolled Act No. 176 (1967).  
(Mimeographed.)

.....  
Nature Study Area

Definition: An area of land possessing significant natural history values, so located as to be available for general use in nature study, conservation education, and the development of knowledge of natural processes and dedicated for these purposes.

.....  
Natural Area Preserve

Definition: An area of land which contains one or more typical or unusual examples of various plant and animal communities and which has been dedicated for maximum preservation and for the observation and scientific study of these communities.

.....  
Nature Research Area

Definition: An area of land dedicated primarily for scientific research even though, whether because of its intrinsic nature or the wishes of the owner or managing agency regarding its use, it may not be satisfactorily classified in one of the other categories.

.....  
Managed Tract

Definition: An area in which specific desired habitats are maintained or established by artificially regulating or manipulating the conditions which control the environment.

.....  
Nature Reservation

Definition: A tract of land containing one or more dedicated or potential Nature Research Areas, Managed Tracts, Natural Area Preserves, Nature Study Areas and/or Scenic Areas, together with such buffer and service areas as may be required for these special classes of areas, and designated as a Nature Reservation for the purposes of administration for the protection of the natural history values contained within that tract of land.

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Along with the definitions the by-laws provide additional explanation which describes in some detail how each natural area category should be managed or developed.

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<sup>1</sup>Michigan Natural Areas Council, "Constitution," Ann Arbor, Mich., 1970, pp. 6-8. (Mimeographed.)

### Justification For and Use of Natural Areas

Many articles reviewed by the author discussed the justification for preserving natural areas. This justification generally fell into two categories. The first, and ultimate, emphasizes the benefits of natural areas to mankind. The second is based on the fact that natural areas are disappearing at a rapid rate.

Lindsey gives the most detailed list of benefits to be derived from protected natural areas as follows:

- A. Scientific Research
  - 1. Ecology
  - 2. Zoology
  - 3. Botany
  - 4. Geology, including paleontology and paleobotany
  - 5. Soil-science
- B. Educational and cultural programs, youth and adult; nature centers
  - 1. Science teaching and self-learning
  - 2. Local history and human geography
  - 3. Art education
  - 4. Conservation and land use
  - 5. Outdoor manners
  - 6. Nature hobbies
    - a. Bird study
    - b. Wildflower and tree study; tree leaf collection
    - c. Insect collection
- C. Aesthetic and perceptive-recreational benefits
  - 1. Photography and painting
  - 2. Nature appreciation
  - 3. Hiking and walking for pleasure
  - 4. Intelligent travel
  - 5. Fishing
  - 6. Rock-climbing (in controlled spots)
- D. Practical benefits
  - 1. Provide outdoor laboratories for training much-needed ecology and conservation professionals
  - 2. Protection of rare or endangered species, for their
    - a. Intrinsic scientific and human interest
    - b. Potentially valuable genes (DNArrium)
    - c. Possible future use as new experimental animals for medical and behavioral research



3. Harbor populations (of commoner species) to continually replenish unprotected ones elsewhere
  4. Preservation of biotic communities, to serve as untreated "controls" in evaluating management techniques in forestry and range practices
  5. Perpetuation of complex natural ecosystems as a source of future knowledge crucial to maintaining and renewing (not merely exploiting) man's resource base in nature
- E. Long-range socio-economic benefits
1. Hold some options open for future generations by deferring irreversible decisions on land use
  2. Project all present benefits into the indefinite future, when the scarcity value of undisturbed nature will be extremely high
  3. Retain environmental diversity, thus reducing monotony in human experience and increasing the intellectual content of travel and outdoor life
  4. Enhance physical and emotional health through many avenues of contact with the natural world, despite accelerating technological dominance

The loss or threatened destruction of many important natural areas has acted as a major stimulus for getting scientists, resource managers, other professionals and citizens active in programs to protect our remaining natural areas. An important method by which the loss of natural areas is documented is through early inventories which are later rechecked to see how many areas remain. Concerning this matter Lindsey states:

The majority of those places listed in old natural area inventories have been overrun by agricultural or urban expansion, highway or reservoir developments, timber cutting or purposeless vandalism. At least twenty areas in Indiana, including several of the very highest quality and educational-scientific interest, have been spoiled in the past decade.<sup>2</sup>

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<sup>1</sup>Lindsey, Indiana, pp. 12-13.

<sup>2</sup>Ibid., p. 18.

### Natural Areas Systems

The early attempts at a systematic approach towards dealing with natural areas consisted primarily of inventories. The Naturalist's Guide to the Americas published in 1926 was such an inventory. Many inventories have been made and published. In the Winter of 1950-51 the Wilderness Society published an inventory entitled "Nature Sanctuaries in the United States and Canada--A Preliminary Inventory" which included 691 areas of which 675 totaled 696,349,238 acres. This inventory listed huge areas such as entire national or state parks and Canadian preserves. The average size of the Canadian sanctuaries is over 11,000,000 acres.<sup>1</sup> Other inventories, like Farb's<sup>2</sup> also follow this pattern. On the other hand, inventories such as Lindsey's in Indiana deal with much smaller areas in greater detail. In Lindsey's study, which is much more than an inventory because considerable scientific information is reported for each area, entire parks are not normally listed. That is, if a portion of a park is undisturbed only that segment is considered as a natural area.<sup>3</sup> Another difference between inventories is that some require areas to be protected to be classified and

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<sup>1</sup>Kendeigh, "Nature Sanctuaries," p. 1.

<sup>2</sup>Peter Farb, Face of North America (New York and Evanston: Harper Colophon Books, 1963), pp. 261-97.

<sup>3</sup>Lindsey, Indiana.

others include all natural areas regardless of ownership or management. The Wilderness Society list is an example of the former while Lindsey's list exemplifies the latter.

After inventories are made it is logical for ecologists and others to compare these inventories with studies that show the potential types of natural areas to see how completely various types of natural areas are represented by protected areas. This in turn may lead to a systematic attempt to locate and protect the missing segments. Examples of natural areas' potential studies include Curtis' The Vegetation of Wisconsin in which thirty-two plant communities are described for the state,<sup>1</sup> and the list of the Society of American Foresters which includes 156 forest types.<sup>2</sup>

There are several programs of systematically locating and preserving natural areas in the United States. These include federal, state, professional and private endeavors. They may cover the entire country or be limited to one state. The Federal Government has established a Federal Committee on Research Natural Areas which has compiled a classification scheme that totals 332 natural area types including forests, shrubs, grasslands, shrub and grassland combinations,

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<sup>1</sup>Clifford Germain, "The Wisconsin Scientific Area Program" (paper presented at a meeting of the American Institute of Biological Sciences, Columbus, Ohio, Sept. 4, 1968), pp. 2-3.

<sup>2</sup>John F. Shanklin, "Society of American Foresters Natural Areas," Journal of Forestry, LVIII (Nov., 1960), 905.

grassland and forest combinations, zoologic, geomorphologic, petrologic, mineralogic, paleontologic, aquatic and pedologic. As of 1968, this committee has registered 336 research natural areas on Federal lands. Each have been designated as research natural areas by the administering agency. The 336 areas do not represent all the 332 types and the committee believes that they may have to go outside of Federal lands to find all the types.<sup>1</sup>

Wisconsin's Scientific Areas Preservation Council has developed a systematic approach in their program based on Curtis' plant community types and other types, including aquatic, developed from other sources. This is described in detail in the portion of this study dealing with Wisconsin.

Not all natural area programs are oriented this strongly toward a systematic approach. Many operate primarily on an opportunity basis or a combination of a systematic approach and opportunity basis. In an opportunity basis program more emphasis is placed on the availability of an area than on its type. The program of the Michigan Natural Areas Council has this characteristic in many ways. An example of the combination type would be the Illinois system. Both the Michigan and Illinois programs are described in detail later in this study.

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<sup>1</sup>U.S., Federal Committee on Research Natural Areas, Research Natural Areas (Washington, D.C.: Government Printing Office, 1968), pp. 3-104.

## CHAPTER III

### NATURAL AREAS PROGRAMS IN MICHIGAN

#### Introduction

In Michigan, several approaches to protecting natural areas are being utilized. The largest single program, in terms of acres of natural areas, is that of the Michigan Natural Areas Council. Other natural areas preservation activities involve federal, state, private and university programs.

#### The Michigan Natural Areas Council

##### The Origin of the Council

The Michigan Natural Areas Council was established in January, 1952. However, its roots go back to the mid-1940's in several committees of the Michigan Botanical Club. Paul W. Thompson, one of the founders, describes the creation of the Council as follows:

. . . Whereas, past conservation movements and various individual conservationists contributed indirectly to the birth of this project, the actual conception and promotion of this particular organized movement for the preservation of Michigan wild life was initiated by the Wilderness Tracts and Trails Committee of the Southeastern Chapter of the Michigan Botanical Club.

. . . For a number of years the Southeastern Chapter maintained a Conservation Education Committee which advocated the preservation of Michigan flora and wildlife . . .

especially emphasizing habitat preservation as a basic principle of wildlife conservation. When the Michigan Department of Conservation acquired the Haven Hill Section of the Highland Recreation Area Mr. George Thomson and the writer made a preliminary survey of the area. As a result of this work . . . recommendations were made to the Conservation Department that the area be designated for the above purposes [preservation]. . . . recommendations were also made for the establishment of a unique Ecology Trail on this tract.

The construction of this trail was undertaken by the Conservation Education Committee but since the expanded aims of the Committee were the establishment of a number of natural area tracts in southeastern Michigan and the development of the Ecology Trail and similar nature trails, the Committee adopted the more descriptive title of the 'Wilderness Tracts and Trails Committee.' The members selected at that time consisted of persons well versed in conservation principles as follows: Stanley A. Cain, Douglas Grubb, Mr. and Mrs. Clarence Messner, C. Marvin Rogers, Mr. and Mrs. Carl Wilson, Mr. and Mrs. Paul Van Buskirk and Paul W. Thompson (chairman).

With the construction of the Haven Hill Ecology Trail in 1948, the need for a set of standards and policies relating to the operation and maintenance of wilderness or natural areas became very apparent.

. . . the Wilderness Tracts Committee decided to draw up a set of policies and standards that would be applicable to the preservation of any selected natural area in the state and then to promote the preservation of all types of wilderness tracts (natural areas) throughout Michigan. . . .<sup>1</sup>

Since an extensive wildlife preservation project of this nature could best be conducted on a state-wide scale, the Committee asked Mr. Walter Nickell, then Michigan Botanical Club president, to adopt this project as a Club program. Subsequently, he appointed a Steering Committee . . . to supervise such a conservation

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<sup>1</sup>Thompson, in the same source, reports that the document, Policies and Standards for Natural Area Preservation, that was drafted by this committee became an "invaluable guide in the promotion of a realistic and successful conservation program to preserve Michigan wildlife habitats." He further states that the document, because it was based on "sound fundamental conservation principles and careful significant planning," was adopted by the Michigan Botanical Club's Natural Areas Committee and was used by a Nature Conservancy committee as a "basis for drafting a 'Policies and Standards For the Preservation of Natural Areas' to be used on a continental scale."

project. At the first meeting of the Steering Committee in June 1949 plans were laid for the organization of a Michigan Botanical Club Natural Areas Committee (Council) which would be composed of club members as well as other persons and representatives of conservation organizations interested in the preservation of natural areas. . . . This new Committee promoted the preservation of Michigan wildlife until early 1952 when an independent organization, known as the Michigan Natural Areas Council, was formed to carry on this important program in the interests of all conservation organizations of the State.<sup>1</sup>

### The Organization and Functions of the Council

The Michigan Natural Areas Council is made up of individual members, organizational members, directors, and officers. It is a private corporation with its principal office located at the University of Michigan Botanical Gardens, Ann Arbor.

The purpose of the Council is described in its Constitution, as amended through December 19, 1969, as follows:

To assure the preservation in perpetuity, by obtaining dedication by the managing agency in the case of public lands, or by private owners, or by other means including purchase, of (1) suitable areas recognized as having values for: (a) scientific study of natural features; or (b) use as nature study or nature education areas; or (c) general public enjoyment because of scenic or natural history values; and/or (2) sites adapted to the preservation of particular species of native plants and/or animals under natural conditions, or of specific examples of vegetational types or other features of scientific interest.

Study and evaluation of areas to determine the suitability, desirability, feasibility, and possible means of preservation for the purposes described above.

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<sup>1</sup>Paul W. Thompson, "The Early History of the Michigan Natural Areas Project," Birmingham, Mich., 1958. (Mimeographed.)

Education of the public in regard to the preservation of natural areas and in regard to the features contained therein.

Promotion of the use of such areas for appropriate scientific research, education and/or public enjoyment.<sup>1</sup>

As reported in the constitution,<sup>2</sup> membership in the Council is open to all individuals and organizations interested in furthering its purposes. Each member is entitled to one vote. Organizations are represented by a designated delegate or an alternate. As of March, 1969, the membership included 145 individual members, fifteen organizational members, and fifteen courtesy members.<sup>3</sup>

Financially, the Council is supported by membership and organizational dues, five dollars per year, and contributions. At the meeting on February 15, 1970, it was reported that the treasury contained \$1,770.05. The corporation is authorized to make payments and disbursements from the treasury for "reasonable compensation for services rendered" and in "furtherance of the purposes set forth in Article III hereof." In a recent amendment to the Constitution, the Council has limited its activities as follows: "No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise

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<sup>1</sup>Michigan Council, "Constitution," p. 1.

<sup>2</sup>Unless otherwise noted, the information contained in the remainder of this section dealing with organization and functions is based on the previously cited source, Michigan Council, "Constitution."

<sup>3</sup>Michigan Natural Areas Council, "1969 Membership List," Ann Arbor, Mich., 1969. (Mimeographed.)



attempting to influence legislation, and the corporation shall not participate in, or intervene (including publishing or distributing statements) in any political campaign in behalf of any candidate for public office."<sup>1</sup> This limitation was made in an effort to qualify for non-profit corporation status under the United States Internal Revenue Law so that membership dues and contributions to the Council will be tax-deductible. Provision is also made for the distribution of the Council's assets upon dissolution. Essentially this clause provides that after the payment of all liabilities the assets of the Council will go to The Nature Conservancy provided that organization is in existence and has tax-exempt status.

The officers of the Council consist of a chairman, vice-chairman, secretary and treasurer. There are three directors, two of whom are elected and the other is the retiring chairman. The terms of the officers and directors are for one fiscal year which runs from January 1 to December 31. An Executive Committee, which is empowered to handle the general affairs of the Council, consists of the officers and directors.

The Council has three standing committees and other committees as provided for by the Executive Committee or a majority vote of the members. The standing committees are the Publicity and Public Relations Committee, the Natural

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<sup>1</sup>Michigan Council, "Constitution," p. 2.

Areas Screening Committee and the Scenic Sites Committee. The Natural Areas Screening Committee has three members one of whom must be a recognized botanist.

In addition to the Constitution the Council has, in the same document, a set of by-laws. Three of the five articles in the by-laws refer to the general administration of the Council. These are dues, conduct of meetings, and amendments to the by-laws. The other two articles refer to the program of the Council. These articles are entitled "Categories of Natural Areas" and "Procedures Relative to the Establishment of Proposed Natural Areas."<sup>1</sup>

The six categories of natural areas given in the by-laws are as follows: Scenic Site, Nature Study Area, Natural Area Preserve, Nature Research Area, Managed Tract, and Nature Reservation. Definitions and additional explanatory material is presented for each category.<sup>2</sup>

Under "Procedures Relative to the Establishment of Proposed Natural Areas" in the by-laws seven points are made. Point one states that any person may propose an area of land for classification under one of the six categories of natural areas. The proposal must include the location, general boundaries, and reasons for preservation of land. These proposals are referred to the Natural Areas Screening Committee which, if the proposal is complete and appears to have

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<sup>1</sup>Ibid., pp. 6-8.

<sup>2</sup>These definitions were presented in Chapter II.

merit, recommends that a Reconnaissance Committee be formed to study the area. However, if the proposed area is suited only for a Scenic Site it is referred to the Scenic Sites Committee. The Chairman of the Council appoints the Reconnaissance Committee, one member of which must be a competent naturalist. This committee usually consists of two or three people including the person who made the original proposal if possible.

After studying the area, the Reconnaissance Committee reports back to the Natural Areas Screening Committee which, if the report is complete, reports on the suitability of the area to the Council. The report made by the Reconnaissance Committee shall "describe the area, giving precise boundaries, and its natural features with an appraisal of their value for preservation under one or more categories of natural areas and the practicability of such preservation." It shall also show "the amount of field work on which it is based and by what persons this work was done."<sup>1</sup> The Reconnaissance Committee also recommends a classification for the area.

When the Reconnaissance Committee report, approved by the Natural Areas Screening Committee, is received it is placed on the agenda for a meeting of the Council. At the meeting it is voted on and if supported the Chairman appoints three members of the Council to a Site Committee including, if possible, a member of the Reconnaissance Committee. In

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<sup>1</sup>Michigan Council, "Constitution," p. 9.

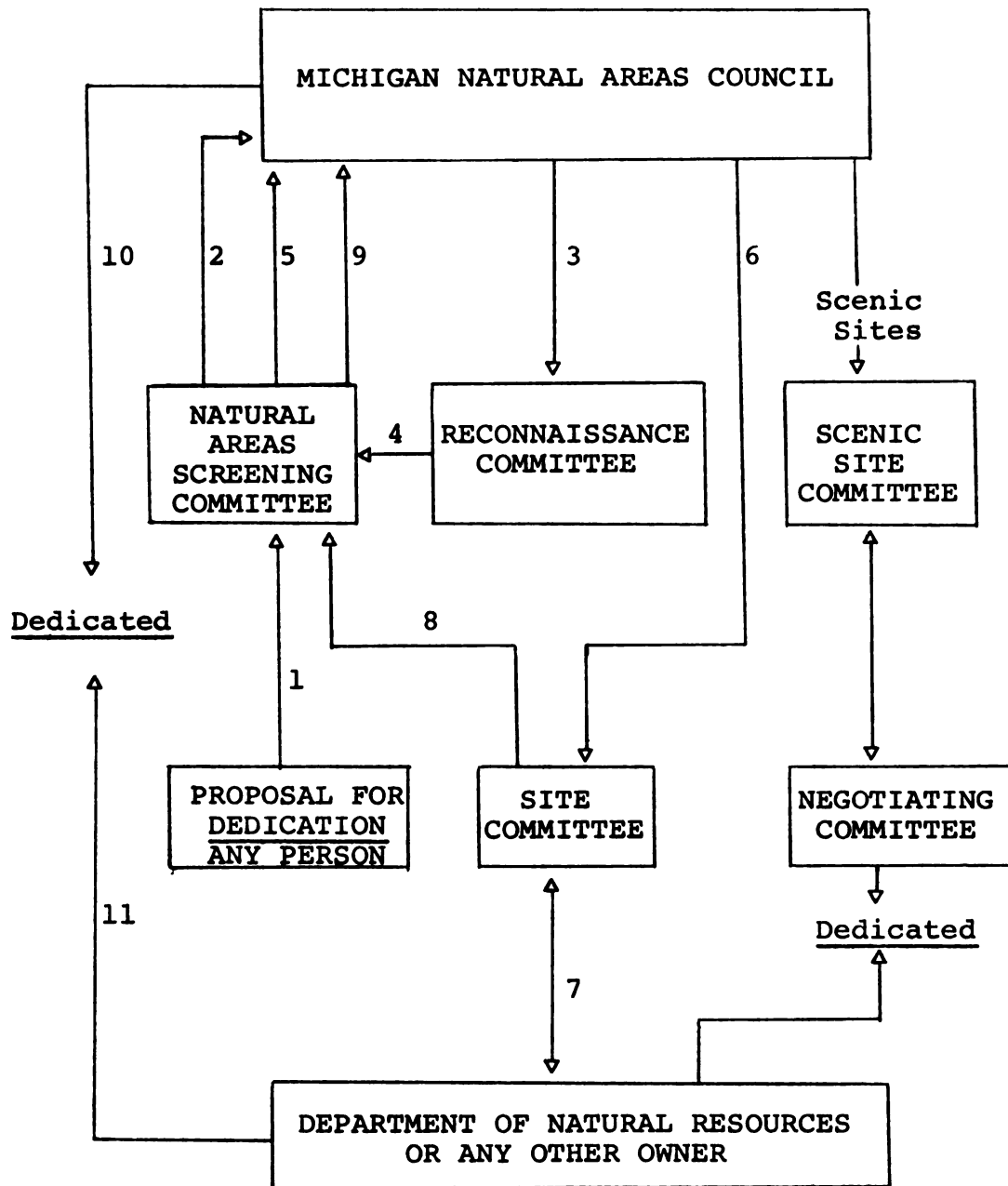
addition, the Chairman contacts the owner or agency responsible for the area and requests that they appoint one to three people to cooperate with the Site Committee. This group meets on the area and then prepares a report that includes "a map of the area . . . , boundaries and descriptions of specially designated natural areas, such as Natural Reservations, Nature Study Areas, Natural Area Preserves, and Scenic Sites with emphasis on the special qualities which make these areas worthy of classification."<sup>1</sup> This report is examined by the Natural Areas Screening Committee and then submitted to the Council for approval.

In the case of areas suitable only as Scenic Sites the Reconnaissance Committee is replaced by the standing Scenic Site Committee. The Site Committee procedure is followed except that a Negotiating Committee is created to obtain the dedication of the proposed area.

This is the extent of the procedures as spelled out in the by-laws. However, it should be noted that during the Site Committee stage considerable negotiation with the land owning agency may be taking place. In the case of lands controlled by the Department of Natural Resources an agreement is reached wherein both the Site Committee and the involved Department personnel are satisfied. Therefore, when the Council gives the area final approval and submits a request to the Natural Resources Commission that the lands in question

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<sup>1</sup>Ibid.



Source: Michigan Natural Areas Council, "Constitution."

Figure 1.--Dedication of Natural Areas--Michigan Natural Areas Council.

be officially dedicated for the use determined by the Council this request is supported, or at least not opposed, by the Department staff.

### The Accomplishments of the Council

The principal accomplishment of the Michigan Natural Areas Council has been the dedication of approximately 100,000 acres of natural areas in the state. In addition to this main activity the Council has contributed the considerable skills of its membership to the furtherance of protecting natural values and conservation education in many ways including testifying at public hearings, writing expressions of concern, sponsoring meetings, assisting in the creation of nature centers, surveying and studying areas of interest to governmental agencies, raising funds for the purchase of areas, preparing and distributing publications, and making inventories of natural areas.

#### Dedicating Natural Areas on State Lands

Approximately seventy-five per cent of the 100,000 acres of dedicated land is found on Department of Natural Resources lands. Most of this acreage is on Parks Division lands but several areas are located on Forestry and Game Division lands.<sup>1</sup>

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<sup>1</sup>One very likely reason that the Council has located most of the dedicated natural areas on Department of Natural Resources lands, other than the fact that they hold extensive

At its meeting of December 8, 1949 the Michigan Natural Resources Commission<sup>1</sup> went on record as supporting the concept of designating natural areas on state lands. The proceedings of the Natural Resources Commission on that date includes the following item:

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lands and are agreeable to the concept of dedication, is the effect of a 1926 report, "A Suggested Program for State Preserves in Michigan," Twenty-Seventh and Twenty-Eighth Annual Reports of the Michigan Academy of Science, Arts and Letters (Ann Arbor, Michigan: 1926), pp. 31-38, that was prepared by the Academy's Committee of Conservation. This report states that the important uses in state parks, state monuments, state tourist camps, and wildlife refuges should be "recreational, including camping, hiking, boating, swimming, etc.; educational, the study of trees, flowers, birds and other animals, rocks, physiography, historical features, etc.; scientific, the securing of original information about animals, plants, geology, and other features under natural conditions; and, economic, as a wild life refuge for the propagation of game, fur animals, and other beneficial animals." The report calls for the purchase of lands for state parks and preserves with special emphasis on "those features, such as white pine forest and hard wood forest, which are in great danger of being completely destroyed." The report itemizes eleven "wild life environments in Michigan which should be represented in preserves," four "types of archeological remains in Michigan which should be preserved," nine "types of geological and geographical features which should be preserved," and nine "features of historical interest which should be preserved in Michigan." The author has no concrete evidence that this report influenced the acquisition of certain types of land in Michigan but the fact that this report was in response to a report entitled "Proposed Course for a System of Michigan State Parks" presented by "Superintendent Hoffmaster before the last Annual Meeting of the Michigan Academy" indicates that the report was submitted to the conservation authorities of the state.

<sup>1</sup>In 1949 the Michigan Natural Resources Commission was entitled the Conservation Commission. To avoid confusion the author will only refer to the Natural Resources Commission, Proceedings of the Natural Resources Commission and the Department of Natural Resources even though during much of the period covered by this study the official name was Conservation Commission, Department or Proceedings. However, reference footnotes and quotations will use the form of the source or the quote.

The Director brought to the attention of the Commission a proposal sponsored by a number of interested groups, including the American Ecological Society, that certain areas in state forests, game areas, parks, etc., which are of special interest because of natural ecological conditions be designated as natural areas. Such designation would provide protection for plants, trees, shrubs, etc., by preventing the cutting or planting of trees on the areas, campground development, or development of any other kind which would disturb the existing natural plant associations. He advocated approval by the Commission of a policy of designating such areas when they have been selected and recommended by qualified groups and checked by members of the Department staff.

The Commission expressed itself as being in accord with the idea, and it was moved . . . that the policy as outlined by the Director be approved. The question being stated by the Chair, the motion prevailed.<sup>1</sup>

The next time the Commission concerned itself with natural areas was at its meeting of April 19, 1951. At this time two items were brought before the Commission. The first was a letter from Stanley A. Cain, Chairman of the Site Selection Committee for Wilderness State Park, to the Director of the Department of Natural Resources.<sup>2</sup> Excerpts from Cain's letter are as follows:

On November 20, 1950 the Chairman of the Site Selection Committee for Wilderness State Park (which is a committee of the citizen's Natural Areas Committee) prepared a preliminary report on Wilderness State Park. This report contained the tentative recommendation of the Committee members based on their joint inspection of the Park earlier in November. . . .

In the meantime, Mr. Arthur Elmer (Head of the Park Division) visited Wilderness State Park and has gone

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<sup>1</sup>Michigan, Proceedings of Conservation Commission (1949-50), XXIX, pp. 243-44.

<sup>2</sup>This occurred before the formation of an independent Michigan Natural Areas Council so the author assumes that this Site Committee was authorized by the Natural Areas Committee of the Michigan Botanical Club, the predecessor to the Council.



over the ground involved in the recommendation, keeping in mind the relations of the proposals of the Committee to the policies and management problems of the park division. On February 9 the Site Selection Committee met in Lansing with Mr. Elmer and reached an agreement that is embodied in the following report.<sup>1</sup>

The second item brought before the Commission was a document entitled "Report of the Site Selection Committee for Wilderness State Park." The report defined a "Natural Area Preserve" and a "Nature Study Preserve" and then recommended that two tracts of land in the park, Crane Island (twenty-three acres) and Sturgeon Bay--Sucker Creek (550 acres) be dedicated as Natural Area Preserves and that two tracts of land, Waugoshance Point (250 acres) and Big Stone--Cecil Bay (1,360 acres), be dedicated as Nature Study Preserves. During the Commission meeting "Mr. Elmer discussed the above recommendations, pointing out that dedication of the areas would not conflict with use of the land for hunting and fishing or other recreational uses."<sup>2</sup> The Commission adopted the recommendations in the report and the first four natural areas were dedicated on Department land.<sup>3</sup>

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<sup>1</sup>Michigan, Proceedings of Conservation Commission  
(1950-51), XXX, p. 399.

<sup>2</sup>Ibid., pp. 399-400.

<sup>3</sup>It was reported to the author by a member of the staff of the Department of Natural Resources that at this time the Park Division was engaged in logging operations in a portion of Wilderness State Park that became dedicated and this is an important reason that the Natural Areas Committee selected this location for the first dedicated areas.

Over three years later, at a meeting held on August 13, 1954,<sup>1</sup> the Natural Resource Commission readopted definitions and general rules for Natural Area Preserves and Nature Study Areas, a new name for Nature Study Preserves, and adopted definitions and general rules for Scenic Sites and Nature Reservations, two new types of natural areas. These definitions and general rules were written by the Michigan Natural Areas Council. At the same meeting the Council recommended the establishment of additional dedicated areas. The Commission responded by approving four Natural Area Preserves, two Nature Study Areas, four Scenic Sites, and two Nature Reservations in Tahquamenon Falls and Porcupine Mountains State Parks, Highland Recreation Area, and Lake Superior State Forest.

This action by the Commission, involving over 65,000 acres of land, was the result of a considerable amount of study by members of the Council. The seven-page Reconnaissance Report<sup>2</sup> on the Porcupine Mountains areas was the result of some six weeks spent in the park by the Reconnaissance Committee Chairman. During this time he hiked over fifty miles of trails in the park and spent some ten hours in conferences with the park superintendent and other local officials. In addition, meetings were held with Department

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<sup>1</sup>Michigan, Proceedings of Conservation Commission (1954-55), XXIV, pp. 47-55.

<sup>2</sup>Michigan Natural Areas Council, "A Reconnaissance Report on the Porcupine Mountains Area," Ann Arbor, Mich., n.d. (Mimeographed.)

officials in Lansing and a review of scientific literature concerning the park was made. The Reconnaissance Report contains sections on the topography, geology, floristic features, faunistic features, present development and recreational usage, plans for the future and complicating features in the development of the park, tentative recommendations and conclusions, and a general description of the park.

The Site Committee also submitted a seven-page report.<sup>1</sup> This report, based on a four day survey in the park, summarizes the findings of the Site Committee in two proposals for dedication and six recommendations concerning developments in the park.

In 1966 the Council requested the dedication of 1,652 acres in the Tabico State Game Area. The marsh area for which dedication was sought was maintained by an artificial water-control structure and therefore the area did not fit into any of the four classifications of natural areas previously adopted by the Commission. Therefore, at the same meeting the Council introduced a new category, the managed tract. The new category and the Tabico Marsh dedication were adopted by the Commission.<sup>2</sup>

These actions by the Natural Resources Commission established the principles and procedures that have essentially

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<sup>1</sup>Michigan Natural Areas Council, "Site Committee Report on Porcupine Mountains State Park," Ann Arbor, Mich., n.d. (Mimeographed.)

<sup>2</sup>Michigan, Proceedings of Conservation Commission (1966), XLVI, pp. 221-23.

been followed by the Council, the Department, and the Commission ever since. As of 1969 the Commission has dedicated one managed area, ten natural area preserves, nine nature study areas, five scenic sites, and five nature reservations totaling 72,660 acres in state parks, state forests and state game areas.<sup>1</sup>

The working relationship between the Commission, the Department and the Council appears to be quite good. Two cases have come up where boundaries of dedicated areas had to be changed due to programs of the Department that were not anticipated at the time of dedication. At the Commission meeting of June 14, 1963,<sup>2</sup> the boundary of the Porcupine Mountains Nature Reservation was adjusted to exclude an area for the re-routing of a road that was prohibited in the dedication. When this action was approved the Chairman of the Commission, Stanley Cain, stated "that he would like to have the record show that this action is compatible with policies of the Natural Areas Council."<sup>3</sup> In the other case in 1965,<sup>4</sup> the boundaries of the Betsy Lake Natural Area Preserve were adjusted to facilitate certain land exchanges desired by the

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<sup>1</sup>Ronald O. Kapp, "Natural Area Preservation in the Age of the Megalopolis," The Michigan Botanist, IIX (1969), 32.

<sup>2</sup>Michigan, Proceedings of Conservation Commission (1963), XLII, p. 476.

<sup>3</sup>Ibid.

<sup>4</sup>Michigan, Proceedings of Conservation Commission (1965), XLIV, pp. 274-75 and pp. 408-13.

Department for blocking in their holdings. At present, \$250,000 has been authorized to build a fish ladder around a waterfalls in the Presque Isle Scenic Site. Such construction would be in violation of the dedication of this area. Members of the Council have strong objections to this violation and are now in communication with the Department.<sup>1</sup> In order to coordinate the activities of the Department and the Council the Department has assigned Jon Roethele, In Charge Interpretive Services, Parks Division, to act as a liaison between the two bodies. Roethele attends the meetings of the Council.

#### Dedicating Natural Areas on Federal Lands

The Michigan Natural Areas Council has secured the dedication of 5,163 acres of federally owned land. The Huron, Manistee, Ottawa and Hiawatha National Forests and the Seney National Wildlife Refuge all contain a Managed Tract or a Natural Area Preserve.<sup>2</sup> The procedure the Council follows on federal lands is similar to that followed for state lands. That is, Council members undertake reconnaissance and site studies, approve the project within the Council, and then request the federal agency to take appropriate action.

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<sup>1</sup>Michigan Natural Areas Council, Minutes of Meetings of the Council meeting of February 15, 1970. (Mimeographed.)

<sup>2</sup>Michigan Natural Areas Council, "Natural Area Acreage Dedicated in Michigan," Ann Arbor, Mich., 1968. (Mimeographed.)

### Dedicating Natural Areas on Organization and University Lands

The Council has dedicated approximately 20,000 acres<sup>1</sup> of privately controlled organization or university owned lands in two Managed Tracts, nine Natural Area Preserves, and three Nature Study Areas. These areas are owned by various private organizations such as the Michigan Nature Association; the Michigan Audubon Society; the Huron Mountain Club; Woldumar, Incorporated and the University of Michigan.

The largest privately dedicated area involves 17,700 acres of property owned by the Huron Mountain Club. Around 1960 the Michigan Natural Areas Council was asked by the Huron Mountain Club to study their area and make recommendations. Extensive reconnaissance and site studies were made and two dedications resulted. The first, involved 5,000 acres which were dedicated as a Nature Research Area. Around the research area, the Council dedicated most of the remaining club land as a Nature Reservation.

### Dedicating Private and Community Natural Areas

The Michigan Natural Areas Council has developed a separate procedure for dedicating natural areas owned by private individuals and communities.<sup>2</sup> For this purpose a

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<sup>1</sup>Ibid.

<sup>2</sup>Michigan Natural Areas Council, "A Program for the Preservation of Private and Community Natural Areas," Ann Arbor, Mich., n.d. (Mimeographed.)

Committee on Private Natural Areas has been established. Under this program an owner of a natural area or a person acquainted with such an area files a request for consideration with the Committee. The Committee then assigns a member of the Council to be a project leader for the area. This person visits the area and reports on its size, location and desirability. He also classifies the area as to its potential use as a dedicated area. If the area is being used by large groups it would be classified as a Nature Study Area and if it has very limited use it would be classified as a Nature Reservation. When the project leader has reached a satisfactory agreement with the owner he files copies of his report with the Committee, the Secretary of the Council and the owner. At this time the Committee notifies the owner of the Council's acceptance and dedication of the area.

The areas classified as Nature Study Areas would normally be owned by "schools, communities, or special groups and planning will be oriented for educational use."<sup>1</sup> One such area is a seventeen acre wooded and marsh tract owned by the Dexter Community Schools<sup>2</sup> and dedicated as a Community Nature Study Area by the owner through the Council. Areas classified as Nature Reservations would normally be "owned principally by single private owners and will in contrast

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<sup>1</sup>Michigan Natural Areas Council, "A Program for the Preservation of Private Natural Areas," Ann Arbor, Mich., n.d., p. 1. (Mimeographed.)

<sup>2</sup>Michigan Natural Areas Council, "Dexter Mill Creek Outdoor Laboratory," Ann Arbor, Mich., 1966. (Mimeographed.)

have a very limited use."<sup>1</sup> The Council has engaged in a half-dozen or more of these types of dedications. A typical example would be the eleven acres of land containing a unique collection of American Chestnut trees owned by James Rogers of Frankfort, Michigan. The dedication on this area reads as follows:

I own a 11 acre tract which contains an American Chestnut Grove (Benzie Co.--T26N, R13W--Sect. 35) which I would like to have the Council dedicate as a Private Natural Area. I will attempt to preserve the natural conditions on this tract. I understand that I may withdraw this area from classification or request a change in boundaries by notifying the Council at the following address:

Signed: Mollie Rogers Date: February 24, 1968  
Accepted (MNAC): Paul W. Thompson<sup>2</sup>

This type of dedication, which is similar to the one used for community areas, is not legally binding. It is merely an expression of the owners interest in preserving the area. The importance of this type of dedication is the recognition given to the owner and the resultant pride he may take in the further protection of his land.

#### Other Activities of the Council

In addition to dedicating natural areas, there are several other activities that the Council engages in from time to time in the interest of protecting natural values

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<sup>1</sup>Michigan Council, "Program for Private Natural Areas," p. 2.

<sup>2</sup>Michigan Natural Areas Council, "Private Natural Area Agreement," Ann Arbor, Mich., 1968. (Mimeographed.)



and conservation education. One such activity has been a survey of southern Michigan natural areas undertaken by the Council's Inventory Committee.<sup>1</sup> This study involves the sending out of natural area inventory forms to conservation groups and other likely respondents and asking them to inform the Council of potential natural areas in their local area. During the period of January to September, 1966, respondents described some twenty-two potential areas.

The Council has also contributed its expertise through special studies and recommendations, on various public proposals and hearings. One such case occurred in 1959 when a scenic highway was proposed for the Upper Peninsula. At that time certain members of the Council, "familiar with the territory concerned and especially with the natural history and scenic features,"<sup>2</sup> made a detailed study which recommended certain routes and features to be included and also recommended certain sensitive natural values to be avoided. The Council has submitted statements in support of the establishment of the following wilderness areas: Isle Royal National Park, Michigan Islands, Huron Islands, and Seney National Wildlife Refuge.

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<sup>1</sup>Michigan Natural Areas Council, "Inventory of Natural Areas in Southern Michigan," Ann Arbor, Mich., n.d. (Mimeographed.)

<sup>2</sup>Michigan Natural Areas Council, "A Scenic Highway Around the Upper Peninsula of Michigan," Ann Arbor, Mich., 1959, p. 1. (Mimeographed.)

One member of the Council, Paul W. Thompson, has undertaken studies of several of the dedicated areas. His reports have appeared in such publications as the American Fern Journal, the Cranbrook Institute of Science News Letter, the Papers of the Michigan Academy of Science, Arts and Letters, and the American Midland Naturalist.<sup>1</sup> Thompson has also made a detailed study of the Sleeping Bear Dunes area<sup>2</sup> in which he documented some fourteen natural areas. Many other studies have been undertaken by the Council. Most of these have been in the form of reconnaissance or site reports for established or potential dedicated areas.

In 1967 the Michigan Natural Areas Council was honored by being "selected to receive the 1967 Award for Conservation Organization of the Year"<sup>3</sup> by the Michigan United Conservation Clubs.

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<sup>1</sup>Specific articles include the following: Paul W. Thompson, "An Unusual Fern Station on South Manitou Island, Michigan," American Fern Journal, LII (October-December, 1962), 157-59; Paul W. Thompson, "Michigan Big Trees," Cranbrook Institute of Science News Letter, October, 1958, pp. 23-27; Paul W. Thompson, "The Character of An Ancient White Cedar Forest on South Manitou Island, Michigan," Papers of the Michigan Academy of Science, Arts and Letters, XLVIII (1963), 177-86; and Paul W. Thompson, "Vegetation on Haven Hill, Michigan," The American Midland Naturalist, July, 1963, pp. 218-23.

<sup>2</sup>Michigan Natural Areas Council, "Study of Sleeping Bear Dunes Areas--Natural Areas," Ann Arbor, Mich., 1964. (Mimeographed.)

<sup>3</sup>This quote is taken from an unsigned and undated news release entitled, "Natural Areas Council to Receive Conservation Award."

Other Natural Areas Preservation  
Activities in Michigan

Besides the Michigan Natural Areas Council, there are several other agencies, organizations and institutions preserving natural areas in Michigan. It is not a purpose of this study to describe these organizations in detail but mention of the type of programs they are engaged in is needed to bring the work of the Council into perspective.

The federal government protects natural areas in Michigan in several ways. The National Park Service considers all its national parks and national monuments of scientific interest as natural areas. Its administrative policies for such areas state that "the preservation of natural areas is a fundamental requirement for their continued use and enjoyment as unimpaired natural areas."<sup>1</sup> Therefore, by their definition Isle Royal National Park is a natural area. The United States Forest Service has several use classifications under which their lands may be protected as natural areas. Forest Service "Regulation U-3 (36 CFR 251.22) authorizes the classification of areas which should be managed for recreation uses substantially in their natural condition. Scenic areas, geological areas, archeological areas, historic areas, and botanical areas are examples of this classification."<sup>2</sup> Two scenic areas and one historical area in Michigan

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<sup>1</sup>Interior, Park Service, Administrative Policies, p.16.

<sup>2</sup>U.S., Department of Agriculture, Forest Service, Forest Service Manual--2300 (Washington, D.C.: Government Printing Office, 1967), article 2360.1.

have been set aside under this regulation.<sup>1</sup> The Forest Service also has Regulation U-4 which classifies areas as "experimental areas and research natural areas." "A number of experimental Forests exist in Michigan under the authority of Regulation U-4 but no natural areas have been established."<sup>2</sup> The Federal Government has established a Federal Committee on Research Natural Areas made up of "representatives of the Forest Service, U.S. Department of Agriculture; and Bureau of Land Management, Bureau of Sport Fisheries and Wildlife, and National Park Service, U.S. Department of Interior, together with liaison representation from the U.S. Department of Defense, Atomic Energy Commission, and Tennessee Valley Authority." "The purpose of the Federal Committee on Research Natural Areas is to inventory natural areas which have been established on Federal Lands, compile a directory of Research Natural Areas, and pinpoint gaps."<sup>3</sup> The 1968 compilation of Federal Research Natural Areas shows six of these areas in Michigan.

The Natural Resources Commission from time to time dedicates lands for certain purposes that are similar to dedications requested by the Michigan Natural Areas Council.

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<sup>1</sup>U.S., Department of Agriculture, Forest Service, Administratively Designated Special Areas in the National Forest System (Washington, D.C.: Government Printing Office, 1968), p. 4.

<sup>2</sup>Letter from John O. Wernham, Chief, Division of Recreation, Range and Wildlife, Eastern Region, Forest Service, U.S., Department of Agriculture, February 10, 1970.

<sup>3</sup>Federal Committee, Research Areas, p. 2.

For example, at their meeting of October 10, 1958,<sup>1</sup> the Commission dedicated a 42.5 acre tract in the Au Sable State Forest as the Pine Stump Preserve. This area is of scientific and historical interest because of the white pine stumps that are concentrated on a parcel where some of the choicest white pine in the state were once found. This action was taken at the suggestion of the Grand Traverse County Historical Society, the Northwest Michigan Botanical Club, and the Walter Hastings Audubon Club.

In 1967 the Natural Resources Commission created the Conservation Education Reserve Program.<sup>2</sup> Under this program the Department of Natural Resources works to establish agreements between schools and landowners whereby a cooperating landowner makes his pond, woodlot, marsh, etc. available for school use. The Department provides a distinctive sign and planning assistance. These areas have a minimum size of five acres and average twenty acres. Seven have been established in southern Michigan.

Several private organizations dedicated to the protection of natural areas operate in Michigan. Foremost among these is the Michigan Nature Association.<sup>3</sup> Organized, in

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<sup>1</sup>Michigan, Proceedings of Conservation Commission (1958), XXXIIX, pp. 112-13.

<sup>2</sup>Michigan, Department of Natural Resources, Conservation Education Reserve Program (1967).

<sup>3</sup>Information acquired from Mr. Richard Holzman, Vice-Chairman, Michigan Nature Association, on February 15, 1970 at Ann Arbor, Mich.

1952, as the Macomb County Nature Association, it became the Eastern Michigan Nature Association in 1965, and very recently changed its name to the Michigan Nature Association as its program expanded. The principal activity of the Association is the acquisition and management of natural areas. To date it has acquired nineteen areas.

Another organization, The Nature Conservancy, is national in scope and operates in Michigan through its Midwest Regional Director and an appointed Michigan Representative. The Conservancy's program is also aimed at acquiring and protecting privately owned natural areas. In addition, they also acquire tracts of land at the request of governmental agencies and then sell them to the agency as public funds become available. The Nature Conservancy<sup>1</sup> owns three natural areas in Michigan; has assisted, through loans to local organizations, in the acquisition of four others and is holding or has sold five areas to the United States Forest Service or the Department of Natural Resources.

Other private organizations such as the Michigan Audubon Society, the Grand Mere Association, the Kalamazoo Nature Center and the Michigan Botanical Club either own or have assisted in the acquisition of private natural areas.

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<sup>1</sup>From the following sources: The Nature Conservancy, "Checklist of Nature Conservancy Preserves," The Nature Conservancy News (Spring, 1968), 14-15, and The Nature Conservancy, "Supplementary Checklist of Nature Conservancy Preserves," The Nature Conservancy News (Spring, 1969), 15.

Many universities and colleges in Michigan own natural areas. These are often portions of experimental forests, biological field stations, outdoor laboratories or undisturbed sections of the campus. Some are officially recognized as natural areas and others are not. Some of the natural areas owned by these institutions<sup>1</sup> are the University of Michigan's E. S. George, Mud Lake Bog, Mathi Property, Douglas Lake Biological Station and others; Michigan State University's Baker Woodland, Kellogg Biological Station and others; Albion College's Harvey Ott Preserve and Alma College's MacCurdy Ecological Tract. Central Michigan University, Western Michigan University, Grand Valley College and Washtenaw County College are also reported to own areas. No doubt there are others.

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<sup>1</sup>This information was collected from personal interviews with Dr. Ronald O. Kapp of Alma College on January 28, 1970 and Dr. Clarence J. Messner of Ann Arbor on February 3, 1970.

## CHAPTER IV

### OTHER NATURAL AREAS PROGRAMS

#### Introduction

Wisconsin, Illinois and Indiana have natural areas programs with similar goals to those of the Michigan Natural Areas Council and Michigan's Natural Resources Commission. However, significantly different approaches to reaching these goals are found in the programs of these three states. It is the purpose of this chapter to describe these other programs.

#### Wisconsin's Scientific Areas Preservation Council

##### Origin of the Wisconsin Council

Wisconsin's Scientific Areas Preservation Council has its roots in a motion made by Aldo Leopold to the Wisconsin Conservation Commission back in 1945.<sup>1</sup> Leopold's motion, he was then a member of the Commission, was adopted and a natural area committee of three men was created. In 1951 the Wisconsin legislature passed a statute creating the

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<sup>1</sup>Germain, "Wisconsin Program," p. 1.



State Board for Preservation of Scientific Areas which replaced the natural area committee. The State Board, in turn, was renamed the Scientific Areas Preservation Council under a state government reorganization in 1967.

Orie L. Loucks, present chairman of the Council, credits Wisconsin's early action in recognizing the need for establishing a state natural area system to the "wave of [national] enthusiasm for preservation initiated during the late 1940's [which] was not lost on Wisconsin biologists of the time, including such figures as Aldo Leopold, Norman Fassett and John Curtis." In addition, Loucks states: "Since most of the lands in question were owned and managed by agencies of the state government, proposals for preservation of natural areas could have been stopped before they were even begun had there not been a large measure of encouragement within the Wisconsin Conservation Department. The imagination and wide-ranging interests of C. L. Harrington, Superintendent of Forest and Parks for the Conservation Department<sup>1</sup> at the time, was probably the key to the initial success of the Wisconsin program. Equally concerned from different vantage points were G. E. Watson, State Superintendent

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<sup>1</sup>Wisconsin's Board of Natural Resources and Department of Natural Resources were formerly called the Conservation Commission and Conservation Department respectively. To avoid confusion, the name Natural Resources only will be used from this point except in the case of reference footnotes or in direct quotes.

of Public Instruction, and Albert Fuller, Curator of Botany at the Milwaukee Public Museum."<sup>1</sup>

The Wisconsin Statute and  
Related Legislation

The 1951 Statute 23.27 creating the State Board for the Preservation of Scientific Areas contains five brief sections. Section one creates the Board for the following purposes: "to formulate policies for the preservation selection, acquisition and management of areas necessary for scientific research, the teaching of conservation and natural history, and for the preservation of rare or valuable plant and animal species and communities."<sup>2</sup> Sections two, three and four state who will serve on the Board, their relationship to the Department of Natural Resources,<sup>3</sup> and the fact that the expenses of the members will be paid by the institutions they represent. The final section directs and empowers the Board as follows:

(a) Determine the acceptance or rejection of areas of special scientific interest that may be offered as a donation by individuals or organization for preservation.

(b) Make recommendations to appropriate federal agencies or national scientific organizations of areas in the state that are considered worthy to be listed as scientific areas of national importance.

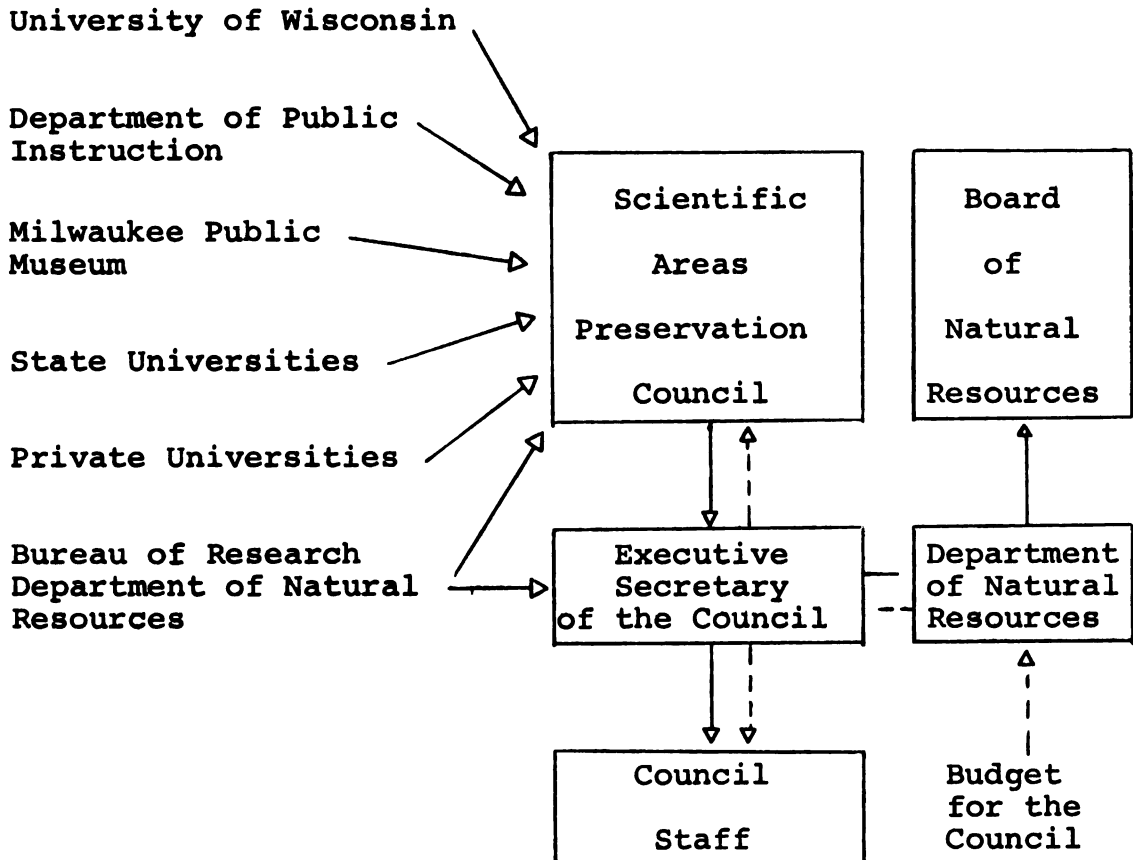
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<sup>1</sup>Orie L. Loucks, "Scientific Areas in Wisconsin--15 Years in Review" (Reprinted from Wisconsin Academy Review, Spring, 1967), 1-2.

<sup>2</sup>Wisconsin, State Board, Board for Preservation, p. 12.

<sup>3</sup>See Figure 2, p. 55.

One Representative From:



Source: Germain, "Wisconsin Program."

Figure 2.--Organization of Wisconsin's Scientific Areas Preservation Council.

(c) Advise the conservation department and other agencies on matters pertaining to the acquisition, development, utilization and maintenance of scientific areas, including determinizations as the extent of multiple use that may be allowed on approved scientific areas that are a part of a state park, state forest, public hunting ground or similar property of the commission.

(d) Prepare and publish an official state list of scientific areas available for research and the teaching of conservation and natural history, and recommend publication of studies made in connection with these areas.

(e) Co-operate with federal agencies, other states, counties, or organizations concerned with similar purposes.

(f) Take such other action as may be deemed advisable to facilitate the administration, development, maintenance or protection of the scientific area system or any part or parts thereof.<sup>1</sup>

The 1967 state government reorganization renamed the State Board as the Scientific Areas Preservation Council.<sup>2</sup> It also attached the Council to the Department of Natural Resources for budgetary and administrative purposes. The make-up of the Council and its responsibilities remained essentially unchanged.

Just prior to the state reorganization, it was recognized by the State Board that the administrative work load was too great a burden without staff assistance. Therefore, "with the support of several Wisconsin conservation organizations it . . . sought and obtained legislation providing

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<sup>1</sup>Wisconsin, State Board, Board for Preservation, p. 13.

<sup>2</sup>Edw. Schneberger, "Statutes Pertaining to the Scientific Areas Preservation Council" (report to the Wisconsin Scientific Areas Preservation Council, Madison, Wisconsin, January 21, 1969), p. 1.

a budget to employ trained permanent staff, and to provide operating expenses to carry out an expanded field program.<sup>1</sup> This budget and staff is provided through the Department of Natural Resources and the staff are official employees of the Department assigned to the Council through the Bureau of Research, the Director of which is the Executive Secretary of the Council.

### Wisconsin's Scientific Areas Preservation Program

#### The Early Council

John Curtis, a noted Professor of Botany at the University of Wisconsin, became the first chairman of the Council.<sup>2</sup> The principal responsibility of the Council, as stated in the 1951 statute, was to "formulate policies and take other action as necessary to acquire, manage and preserve tracts of land and water in a natural or near natural state for scientific research, the teaching of conservation, and preservation of native biotic communities."<sup>3</sup> Professor Curtis defined scientific areas as "tracts of land in their natural state, set aside and permanently protected or managed

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<sup>1</sup>Loucks, "Areas in Wisconsin," p. 2.

<sup>2</sup>From this point on the author will only refer to the Council, but activities carried out prior to 1967 were accomplished under its predecessor, the State Board for the Preservation of Scientific Areas.

<sup>3</sup>Wisconsin, State Board, Board for Preservation, p. 13.

in order to preserve native plant and animal communities-- either the whole community, or rare or valuable individual members of such areas."<sup>1</sup> Curtis also defined scientific areas by stating that "primarily they were to be used for scientific and educational use and not usable for timber harvest or parks." By management, Curtis meant that "some management may be employed to develop or maintain a particular state of succession."<sup>2</sup>

Loucks reports that "during the first few years the results were impressive. A scattering of Scientific Areas was established quickly. Several were known to need treatment if preservation of the communities was to be achieved; the treatments were duly recommended and carried out. By 1954, J. T. Curtis, the first Board Chairman, was able to report the establishment by the Board of sixteen scientific areas throughout the state. By 1961 the number of scientific areas had risen to 33, totaling 3,200 acres. Students using the areas numbered several hundred annually, and several major research projects had been completed on preserved sites."<sup>3</sup>

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<sup>1</sup>Clifford E. Germain, "Preserving Nature's Textbook," Wisconsin Conservation Bulletin (January-February, 1970), 15.

<sup>2</sup>Germain, "Wisconsin Program," p. 1.

<sup>3</sup>Loucks, "Areas in Wisconsin," p. 2.

The Middle 1960's--A Period of  
Reappraisal

After some ten years of operation the Council recognized several problems that had not been anticipated in the original legislation.<sup>1</sup> A serious loss of unprotected privately owned natural areas was occurring and the State land acquisition programs were concerned only with expanding the existing system of forests and parks. Also, with the growth of public interest in the program the large number of areas that were being suggested for consideration was beyond the capacity of the non-staffed Council. In addition, there were many demands for scientific and educational use of established areas. Also, during this period of problems, most of the original Council members had to be replaced due to death, retirement or transfer.

Upon recognition of these problems, and others, there was a complete reappraisal of the program including a detailed study undertaken by the Wisconsin Academy of Sciences, Arts and Letters.<sup>2</sup> As a result of this reappraisal, the Council took action on three fronts. "With the support of several Wisconsin conservation organizations it has sought and obtained legislation providing a budget to employ trained permanent staff, and to provide operating expenses." The Council also "explored many possible sources of financial assistance in the acquisition of important new sites." On

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<sup>1</sup>Ibid.

<sup>2</sup>Wisconsin Academy, Report, Governor.

the third front, at the suggestion of the Wisconsin Academy of Sciences, Arts and Letters, the Council began "investigating the possibility of assisting local governments and school boards in the preservation and management of light-use zones in city and county parks and in school forests throughout the state."<sup>1</sup>

### The Present Council

The six member Council has been meeting about nine times a year. Between meetings the staff, which consists of the Staff Ecologist and his two assistants, carry out the administration of the program. The first budget, 1965-66, consisted of \$36,200.00 and since then \$31,800 per year has been appropriated for the Council through the Department of Natural Resources.<sup>2</sup> A principal activity of the Chairman of the Council is to maintain contacts between the Council and federal agencies, the scientific community, and cooperating private organizations. The Secretary of the Council, who is by statute the representative from the Department of Natural Resources, maintains a liaison with the Department of Natural Resources.<sup>3</sup>

When a staff was provided for the Council in 1966 one of their first duties was to investigate the ten-year

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<sup>1</sup>Loucks, "Areas in Wisconsin," p. 2.

<sup>2</sup>This budgetary information was obtained from Mr. William Tins, a member of the Council's staff, in a telephone conversation on February 18, 1970.

<sup>3</sup>Germain, "Wisconsin Program," p. 1.



back-log of suggested scientific areas. This had been essentially completed. Continuing duties involve investigating new suggestions which are ranked for priority by the Council, making periodic inspections of existing areas and discussing maintenance problems with the property manager, preparing descriptive leaflets for each scientific area, and other activities as directed by the Council.<sup>1</sup>

#### The Wisconsin Scientific Areas System

The Scientific Areas Preservation Council is utilizing a highly developed systematic approach to protect representative terrestrial and aquatic communities in Wisconsin.<sup>2</sup> Basically, it consists of a classification of natural communities and features overlain by a cultural classification of scientific research and educational needs.

Much of the credit for the natural classification goes to John T. Curtis and his colleagues at the University of Wisconsin who classified the terrestrial vegetation in their work entitled The Vegetation of Wisconsin, 1959. This work describes thirty-two plant communities in the State. To make the natural classification more complete the Council has identified twenty-nine distinct types of aquatic areas. This was done from an adaptation of the Wisconsin Surface

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<sup>1</sup>Ibid., pp. 1-4.

<sup>2</sup>Wisconsin, Scientific Areas Preservation Council, "Distribution of Scientific Area Types in Wisconsin," Madison, Wisc., 1967. (Mimeographed.)

Water Inventory study undertaken by the Department of Natural Resources and the classification developed by the United States International Biological Program--Aquatic Ecosystems Committee. Geological features, archeological sites and animal species preserves are also being classified.

The cultural system that overlays the natural system was developed by the Council. It consists of four institutional-use regions. The boundaries for these use regions were based on two criteria: (1) the "locations of major colleges and universities; . . . areas are needed within a one day field trip distance from the educational institution" and (2) "the inclusion of a maximum diversity of vegetation within each region."<sup>1</sup>

In this dual system approach each institutional-use region is examined for its maximum scientific area potential. For example, in the southwest region twenty-seven of the thirty-two terrestrial types and twenty-three of the twenty-nine aquatic types are expected to be found.<sup>2</sup> Therefore, the object of the Council in the southwest region is to establish protected scientific areas that contain all these types. This does not mean that there will have to be fifty areas in the southwest region because more than one type may be found in one area.

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<sup>1</sup>Germain, "Wisconsin Program," p. 3.

<sup>2</sup>Ibid.

Memorandums of Agreement, Acquisition, Ownership and Management of Scientific Areas

The Council does not acquire or own scientific areas. Its "main role is to serve as a catalyst . . . collecting and evaluating information on values of natural areas [and] then persuading and assisting public and private agencies with either land or funds to take the action needed to preserve these values." Scientific areas in the system are found on public and private lands. They are located by suggestions from several sources. "About a third of the suggestions for new areas are received from educators and others who use the scientific areas. Another third are contributed by Department of Natural Resources field men. Council and staff contribute the balance."<sup>1</sup>

The greatest potential for locating scientific areas for the system are on the 5,000,000 acres of public lands in the state. On Department of Natural Resources lands the "areas are established by action of the Council and ratified by the Natural Resources Board."<sup>2</sup> In a similar manner, the Council advises federal and county agencies on areas worthy of protection and seeks memorandums of agreement to preserve them.

The Department of Natural Resources has not normally purchased natural areas. However, in a few cases, where

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<sup>1</sup>Ibid., pp. 5-6.

<sup>2</sup>Ibid., p. 4.

potential scientific areas were adjacent to existing state lands, the Department has expanded its acquisition boundaries to acquire a scientific area. A more common practice is for the Council to encourage private conservation organizations to acquire areas that are privately owned and in need of more protective ownership. One such organization, the Wisconsin Chapter of The Nature Conservancy, has had an outstanding record of cooperation with the Council. In September of 1968 Germain reported that "the Wisconsin Chapter has contributed nearly half of the scientific areas established in the past two years."<sup>1</sup> Many university owned areas have been included in the system. These private and university owned areas are also protected by memorandums of agreement. As of late 1969 the ownership of scientific areas in Wisconsin was as follows:

- (1) State park, forest and game areas--forty-six
- (2) Privately owned areas, including universities--twenty-two
- (3) County park and forest areas--eight
- (4) Federally owned areas--two.<sup>2</sup>

Management responsibility lies principally with the land owning agency. However, the staff of the Council does make periodic inspections and advises the property manager at least biannually. Special management problems such as snowmobiles and other mechanical vehicles are being studied as to their potential damage to scientific areas. In one

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<sup>1</sup>Ibid., p. 6.

<sup>2</sup>Germain, "Nature's Textbook," pp. 16-17.

case, the Council spent \$10,000.00 to fence a 150-acre yew and hemlock stand on state property to exclude deer because the deer were keeping the stand from regenerating itself.<sup>1</sup>

#### New Programs and Continuing Goals

In September, 1968, Germain<sup>2</sup> described four new programs or goals for the Council. The first of these is based on recommendations that resulted from the 1965-66 study done by the Wisconsin Academy of Sciences, Arts and Letters. They suggested that "the Council develop a system of natural history study areas--natural areas that would be made available for educational use on the high school level. Establishment of this 'secondary' system would, first, protect the scientific areas from over-use and secondly provide good natural areas that could tolerate heavier educational use than the more sensitive scientific areas." In response to this recommendation, the Council is creating a county by county registry of natural areas. They will obtain the landowners approval before listing the area and this approval will also permit educational use upon request. The Council sees the registry as "a more complete picture of what is available totally in the natural area program and also a good reserve list on which to select future scientific areas."<sup>3</sup>

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<sup>1</sup>Germain, "Wisconsin Program," p. 4.

<sup>2</sup>Ibid., pp. 6-7.

<sup>3</sup>Ibid., p. 6.

In a second new program, the Council has asked "the Department of Natural Resources to classify the 800,000 acres of state conservation lands, for varying degrees of public use."<sup>1</sup> The purpose of this request is to have the Department aware of the most sensitive areas so they will not be destroyed before their value is recognized in an era of increasing demands by the public for development of public lands.

In a third area, the Council has recognized that most of its early effort was directed toward preserving plant communities and as a result it has built up a competence in this type of natural area. Aquatic areas, geological and archeological sites and animal species preserves also need protecting. To achieve competence in preserving these other areas "the Council is now establishing advisory committees to represent the special needs of these interests." In a similar way, "the Wisconsin Chapter of the SCSA plans to cooperate with the Council by asking soil scientist members to map the soils on scientific areas in their locality."<sup>2</sup>

In February, 1970, Germain further stated that the Council is seeking additional legislation in two areas. The first would "increase Council membership from 6 to 10 members to better represent the growing enrollments and new campuses utilizing natural areas," and the second would "specify

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 7.

natural areas or scientific areas acquisition as a proper aim of the total Department of Natural Resources program."<sup>1</sup>

The ideal goal of the Council is to "have all of the thirty-two terrestrial and twenty-nine aquatic types represented in each region where they occur"<sup>2</sup> protected in scientific areas. However, it is anticipated that some types are so rare that they will never be included in the system. The Council has set a more practical goal of 275 communities on approximately 200 scientific areas. They hope to reach this figure by 1980. This would involve approximately 12,000 acres of land.

#### Problems and Unsatisfied Needs

To reach their scientific areas system goal by 1980 the Council feels that "some new means of financing will be necessary, both specific funds within the Department budget for preservation projects and more acquisition by educational institutions."<sup>3</sup> The latest legislation requests are a step in this direction.

One area that may be a serious problem for the Council in the future is the lack of legal protection offered to the scientific areas by the articles of agreement that are

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<sup>1</sup>Letter from Mr. Clifford E. Germain, Ecologist, Scientific Areas Preservation Council, Madison, Wisc., February 24, 1970.

<sup>2</sup>Germain, "Wisconsin Program," p. 7.

<sup>3</sup>Ibid.

presently used. The Wisconsin Academy study recognized this when they pointed out that:

. . . In some cases, notably that of the deep canyon, Parfey's Glen, the subsequent management was diametrically opposed to the procedure necessary for preservation of the community as a whole and the rare species in it--for which it was originally set aside. Extremely disturbing, too, was the loss by sale and destruction of Scientific Area 7, the Wychwood Sanctuary on Lake Geneva, despite its designation by the State Board [Council] as an area to be preserved. It has become apparent that a stronger control rather than moral persuasion is necessary to save some of our very important scientific areas.<sup>1</sup>

The Council has always been aware of this weakness but also feels that memorandums of understanding have the "advantage of flexibility and furthermore overcome reluctance of owners to dedicate areas in perpetuity." Germain also reports that:

Obviously, legal agreements, if they can be obtained, are preferable: but some additional flexibility seems necessary.

We are going to investigate the use of long term leases--with the Department of Natural Resources acting on our behalf as the grantee--to give more permanence to some areas. We will obtain leases where possible and the present method of memorandums in other cases.

With leases we will be able to apply Department of Natural Resources rules and be in a position to enforce rules to protect areas from abuse just as we now do on the state parks and wildlife areas.<sup>2</sup>

### Illinois' Nature Preserves Commission

#### Origin of the Illinois Commission

The Illinois Nature Preserves Commission Act and The Illinois Nature Preserves System Act became effective on

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<sup>1</sup>Wisconsin Academy, Report, Governor, p. 2.

<sup>2</sup>Letter from Germain, February 24, 1970.



August 28, 1963 when Governor Otto Kerner signed his approval to these two pieces of legislation. In the words of W. D. Klimstra, Chairman of the Commission, "the purpose of the nature preserves system is to provide and protect natural areas of the State of Illinois for scientific research, for teaching and for preservation of rare and valuable plants and animals together with their natural communities."<sup>1</sup>

The above mentioned acts are the result of the efforts of many individuals but one person, George B. Fell,<sup>2</sup> deserves special recognition. His leadership through the Citizen's Committee for the Promotion of Conservation resulted in the drafting of a model bill for a state nature preserves program. In 1961, after discussion with Governor Kerner and Department of Conservation Director William Lodge, a bill was introduced, passed, and sent to the Governor for signature. At the request of the Department of Conservation the Governor vetoed the bill. After discussions with the Governor's office, Fell arranged for a modified bill to be introduced in 1963. During the same legislative session the Department of Conservation introduced their own bill for a

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<sup>1</sup>W. D. Klimstra, "The Illinois Nature Preserves System" (paper presented at a meeting of the American Institute of Biological Sciences, Columbus, Ohio, Sept. 4, 1968), p. 1.

<sup>2</sup>George B. Fell, a professional conservationist, was the first director of The Nature Conservancy. He is the director of the Natural Land Institute and has been the Secretary of the Illinois Nature Preserves Commission since its inception.

nature preserves commission and system. Both bills passed but the Governor only signed the Department of Conservation bill.<sup>1</sup>

### The Illinois Nature Preserves Acts

#### The Commission Act

The Illinois Nature Preserves Commission Act<sup>2</sup> was approved on August 28, 1963, with amendments being approved on June 25, 1965, and July 31, 1967. It contains eight sections.

Section One creates a commission of nine persons appointed by the Governor with the advice of the Chief of the Illinois Natural History Survey and the Director of the Illinois State Museum. The members are selected from persons "with an interest in the preservation of natural lands."<sup>3</sup> Appointees serve for three years and after two consecutive full terms are ineligible for reappointment for one year. The Commission organizes by selecting a chairman and secretary and providing rules for transacting business and keeping records. Commission members receive no compensation but may be reimbursed for necessary expenses. Meetings are held

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<sup>1</sup>This information on the compromises, etc. that took place was reported to the author by Mr. George B. Fell in Rockford, Ill. on January 18, 1970.

<sup>2</sup>Illinois, Preserves Commission, Illinois Acts, pp. 2-4.

<sup>3</sup>Ibid., p. 2.

annually or oftener upon the request of the chairman or three members.

Section Two deals with advisors to the Commission. These individuals who may be "representatives of the Department of Conservation, the Illinois Natural History Survey, the Illinois State Museum, and such other agencies, institutions and organizations as the Commission may determine"<sup>1</sup> have the privilege of discussion and debate but cannot vote. Their expenses may be reimbursed.

Section three introduces the remaining five sections with the statement that "the Commission shall have the powers and duties set out in Sections Four through Eight, inclusive of this Act."<sup>2</sup> These powers and duties are as follows:

To approve or disapprove the acquisition or disposal by the Department of Conservation of any interest in real property for purposes set forth in Section 2A of "an act in relation to the acquisition, control maintenance, improvement and protection of State parks and nature preserves," approved June 26, 1925, as amended.

To advise the Department of Conservation upon the manner of holding and managing any interest in real property . . . of State parks and nature preserves, . . . and to approve or disapprove of such manner of holding or managing such interest in real property.

To formulate policies for the selection, acquisition, management and protection of nature preserves, and to advise the Department of Conservation on the implementation of these policies in specific cases.

To maintain registries and records of nature preserves and other areas of educational or scientific value and of habitats for rare and endangered species of plants and animals in the State; and to promote by advice and other assistance the protection of natural areas in the State which are not dedicated as nature preserves.

To submit to the Governor a report . . . every 2 years . . . accounting for each nature preserve in the

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 3.



System and to publish such additional reports as the Commission may deem necessary.<sup>1</sup>

### The System Act

The Illinois Nature Preserves System Act<sup>2</sup> was approved August 28, 1963, and amended April 15, 1965. It consists of amendments and additions to a June 26, 1925 Act entitled: "An Act in relation to the acquisition, control, maintenance, improvement and protection of State parks."<sup>3</sup> Sections 1a, 2a, 2b, 2c and 2d of the 1925 act are added to, and Sections 3, 4, 5, and 6 are amended.

Section 1a empowers the Department of Conservation to have "the care, control, supervision and management of all nature preserves."<sup>4</sup> It defines nature preserves for the purposes of the Act. Section 2a directs the Department of Conservation to designate areas for preservation as research, teaching, and aesthetic resources and to establish a system of nature preserves. The Department is also authorized to acquire and dispose of rights in real property within and without the system of nature preserves subject to the approval of the Governor and the Illinois Nature Preserves Commission. Section 2b spells out the process for dedicating land or interest in land as a nature preserve, the procedure for amending the articles of dedication, and the requirements to be met in disposing of or granting licenses or easements in

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<sup>1</sup>Ibid.

<sup>3</sup>Ibid., p. 4.

<sup>2</sup>Ibid., pp. 4-7.

<sup>4</sup>Ibid.

dedicated nature preserves. Essentially the Department must have the approval of the Governor and the Commission to take these actions. In the case of disposal or granting rights a public hearing must also be held. Section 2c authorizes and encourages, within existing law, all levels of state and local government to dedicate as nature preserves suitable lands within their jurisdictions. The last section added to, Section 2d, states that this act does not interfere with the purposes of existing local parks, forest preserves, wildlife refuges, etc. except that an agency administering an area designated as a nature preserve is responsible for following the articles of dedication of the nature preserve.

Four sections of the 1925 Act are amended. In Section 2 the title is changed to include the words nature preserves along with State parks. Section 3 is amended to read "In maintaining the State parks and nature preserves the Department of Conservation shall conserve the original character as distinguished from the artificial landscaping of such parks and nature preserves."<sup>1</sup> Section 4 gives the Department standard operating powers such as the making of rules and regulations, the employment of personnel, accepting gifts, making contracts, etc. Section 5 gives officers and designated employees of the Department the necessary police powers to enforce State laws and Department rules and regulations.

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<sup>1</sup>Ibid., p. 6.

Section 6 provides penalties for persons who violate rules and regulations in State parks and nature preserves.

### The Illinois Nature Preserves Commission Program

The Illinois Nature Preserves Commission was created by legislation approved August 28, 1963. The Governor appointed the initial nine members with terms effective January, 1964, and the first meeting was held in Chicago on January 30, 1964. The Commission activities covered in this study will consist primarily of the period from January 15, 1964, to December 31, 1968, because that is the span covered in the two official reports<sup>1</sup> that the Commission has submitted to the Governor.

#### Members--Advisors--Consultants

The Commission Act provided that appointees shall "be chosen from persons with an interest in the preservation of natural lands."<sup>2</sup> In addition to this interest, the thirteen individuals who have been appointed to the Commission through 1968 represent varied backgrounds and skills. Membership includes professors, professional resource managers, professional conservationists, businessmen, and lawyers.

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<sup>1</sup>These reports are Illinois, Illinois Nature Preserves Commission, Illinois Nature Preserves--Three-Year Report--1964-1966 (Rockford, Ill.: May, 1967) and Illinois, Illinois Nature Preserves Commission, Illinois Nature Preserves--Two-Year Report--1967-1968 (Rockford, Ill.: May, 1969).

<sup>2</sup>Illinois, Preserves Commission, Illinois Acts, p. 2.

Both men and women have served on the Commission. The official advisors to the Commission are the Director of the Conservation Department, the Chief of the Illinois Natural History Survey and the Director of the Illinois State Museum. In addition to official advisors the reports list five individuals who have served as consultants to the Commission.

#### Meetings--Expenses

The Illinois Nature Preserves Commission met twenty-three times during the five-year period covered by the two reports. These meetings were held throughout the state and were often located in park or university facilities. The Commission received its operating funds from appropriations to the Department of Conservation. These appropriations totaled \$10,000.00 for the 1965-67 biennium and \$30,000.00 for the 1967-1969 biennium. During the five-year period of the reports the expenses of the Commission totaled \$17,077.15. The expenses of the Commission fall into two categories. During the two-year period from January 1, 1967, to December 31, 1968, approximately one-quarter of the expenditures were for travel by Commission members and three-quarters were for contractual services rendered by the Natural Land Institute, a private, non-profit, consulting organization. Because the Commission lacks its own staff and is not provided with staff by the Department of Conservation much of the routine work of the Commission is accomplished through this contractual arrangement.



## Natural Area Preservation Activities

The principal objective of the Illinois Nature Preserves Commission is to establish a state-wide system of nature preserves. However, the Commission is also empowered to "promote by advice and other assistance the protection of natural areas in the State which are not dedicated as nature preserves."<sup>1</sup> Another function of the Commission is to maintain registries and records of natural areas.

### Establishing Nature Preserves

An early action of the Commission, Resolution 5, created the Rules of Order and Procedure of the Illinois Nature Preserves Commission. Item 10 of these rules, "Procedures for Approval of Nature Preserve Dedications," requires that:

Each area proposed for dedication as a nature preserve shall be examined and reported on in writing to Commission members, advisors and consultants by a person or persons designated by the Commission. . . .

If after receipt of such a report the Commission . . . may adopt a resolution giving preliminary approval to the dedication. . . .

At a meeting subsequent to the meeting at which preliminary approval of such dedication was given, the Commission may give final approval of such dedication . . .<sup>2</sup>

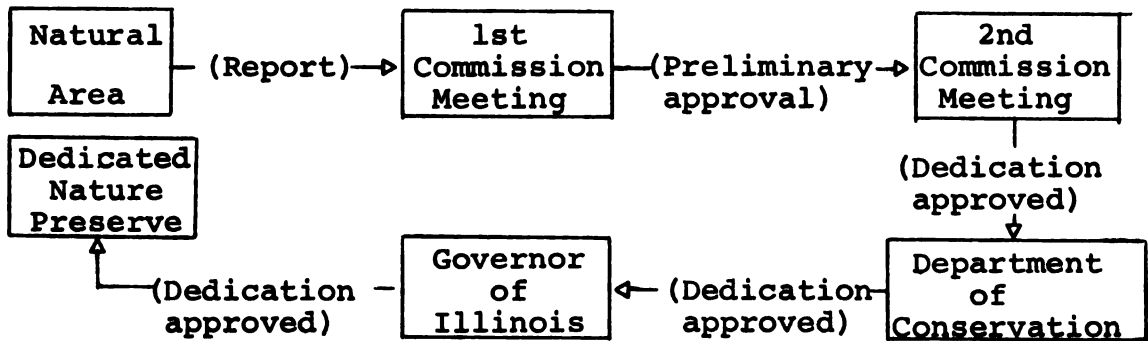
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<sup>1</sup>Ibid., p. 3.

<sup>2</sup>Illinois, Illinois Nature Preserves Commission, Rules of Order and Procedure of the Illinois Nature Preserves Commission (Rockford, Ill.: n.d.).

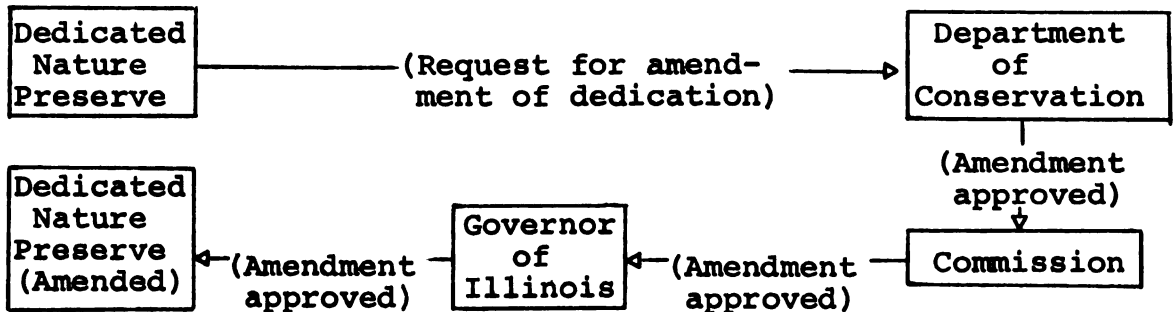
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### Approving Dedications.



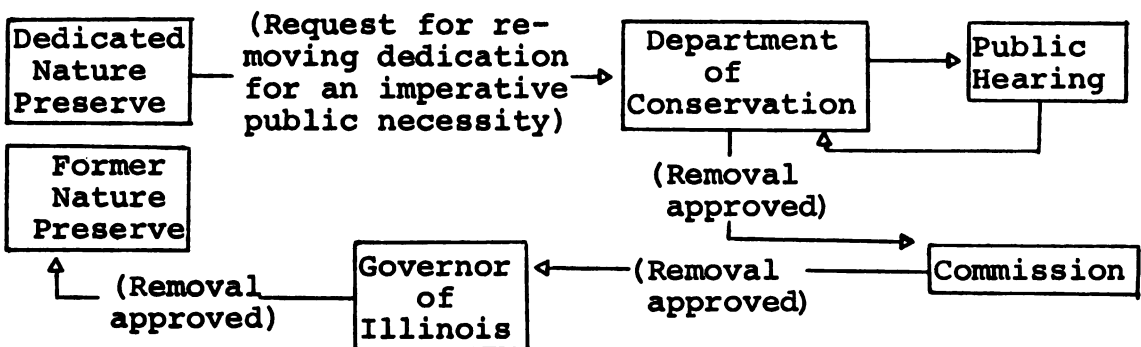

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Amending Dedications (will not permit an impairment, disturbance, or development of the nature preserve).




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Removing Dedications (or the Department of Conservation granting a license or easement in, or disposal, etc. of a nature preserve).




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Sources: Illinois, Preserves Commission, Illinois Acts.  
 Illinois, Commission, Rules of Order and Procedures.

Figure 3.--Approving, Amending and Removing Dedication on Illinois Nature Preserves.

In addition to approval by the Commission, the articles of dedication must be approved by the Director of the Department of Conservation and the Governor.

During the five-year period of the reports<sup>1</sup> eighteen nature preserves were dedicated into the system and fifteen others were approved in principle. The Commission gave its attention to some sixty-six natural areas during this period. The eighteen areas involve some 5,800 acres. Five are located on Department of Conservation administered lands, eleven on lands owned by the Forest Preserve District of Cook County, one owned by the Forest Park Foundation of Peoria and managed by the Peoria Park District, and one owned by Northern Illinois University. The preserves include virgin bottomland forests, wild flower areas, prairies, upland hardwood forests, bogs, dunes and marshes. They range in size from eight to 1,520 acres and the average size is 322 acres.

#### Management of Nature Preserves

The Commission has published a policy booklet entitled Rules for Management of Illinois Nature Preserves.<sup>2</sup> This was done with the concurrence of the Department of Conservation and was adopted at the Commission's fourth meeting.

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<sup>1</sup>Illinois, Illinois Preserves Commission, Reports--1964-1966 and 1967-1968.

<sup>2</sup>Illinois, Illinois Nature Preserves Commission, Rules for Management of Illinois Nature Preserves (Rockford, Ill.: n.d.).



The major concept of these rules is that a master plan, spelling out specific management rules, will be prepared for each preserve. These rules are discussed in the Three-Year Report--1964-1966 as follows:

. . . The master plan is prepared by or under the guidance of the Commission and the Department of Conservation. The master plan covers such matters as land management practices, control of visitors to the preserve, design of structures and facilities, and administrative arrangements.

In practice, each nature preserve has remained in the custody of the owner or someone designated by the owner. If no custodian is designated by the owner of a nature preserve, then the Department of Conservation has custody. It is the responsibility of the Commission to provide guidance to the preserve custodian and to assure that the preserve is being protected and maintained in accordance with the rules and the master plan.

To date, preliminary master plans have been prepared for two preserves. . . . The Commission has periodically inspected the dedicated nature preserves and consulted with the custodians. Since no staff has been available to the Commission, individual members have undertaken this responsibility on a personal basis.<sup>1</sup>

#### Other Natural Area Activity

In addition to establishing a system of nature preserves, the Commission is directed by law to "maintain registries and records of nature preserves and other areas of educational or scientific value and of habitats for rare and endangered species of plants and animals." They are also allowed by law to "promote by advice and other assistance

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<sup>1</sup>Illinois, Illinois Preserves Commission, Report--1964-1966, p. 14.

the protection of natural areas in the State which are not dedicated as nature preserves."<sup>1</sup>

The Commission initiated some twenty-two studies, reports and conferences concerning natural areas during the period from 1967 to 1969. It has not, however, maintained a registry of natural and other areas of educational and scientific value on a systematic basis "primarily because of the lack of staff."<sup>2</sup>

A considerable amount of the Commission's energies have been directed toward natural areas not in the preserve system.<sup>3</sup> The Commission made a study of natural areas in the Shawnee National Forest and submitted a list of nine areas with descriptions and comments to the Forest Service with the recommendation that they be preserved. The Commission made contact and received favorable preliminary responses from nine railroad companies in an effort to protect prairie strips along railroad tracks. The Commission and the Department of Conservation made a joint study seeking means of preserving sections of streams as scenic rivers. And, the Commission gave its attention to six natural areas that were threatened with damage. Such attention took the form of advising in the location of an Interstate Highway

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<sup>1</sup>Illinois, Preserves Commission, Illinois Acts, p. 3.

<sup>2</sup>Illinois, Illinois Preserves Commission, Report--1964-1966, p. 14.

<sup>3</sup>Illinois, Illinois Preserves Commission, Reports--1964-1966 and 1967-1968.

near an area of privately owned rare plants, consulting in the construction of a nuclear power plant on a site with unusual natural vegetation, opposing by resolution a Forest Service reservoir in a very unique canyon, requesting a re-study of a Corps of Engineers reservoir, and advising a group of local conservationists on the means of protecting a woodlot.

### Continuing Goals

In the two reports covering the five-year period the Commission lists eight continuing goals. They are as follows:

1. Prepare an inventory of natural types and features and continue work on the inventory of unique natural areas in the State.
2. Adopt specific policies for selection of areas for inclusion in the nature preserves system.
3. Encourage and facilitate State acquisition and dedication of additional outstanding natural areas, particularly prairie and wetland areas.
4. Encourage other agencies to dedicate appropriate areas as nature preserves.
5. Prepare a master plan and keep permanent records for each nature preserve.
6. Through periodic visits and consultations, guide management practices to assure protection of the preserves.
7. In cooperation with other agencies, improve the program of education on the value and importance of the nature preserves system.
8. Secure a qualified professional staff to assist the Commission.<sup>1</sup>

### Recent Activities of the Commission

In an interview with George B. Fell, Secretary, Illinois Nature Preserves Commission, on January 18, 1970,<sup>2</sup> the author learned that efforts directed towards several items

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<sup>1</sup>Ibid.

<sup>2</sup>In Rockford, Illinois.

listed under continuing goals of the Commission above have produced results. However, before discussing those goals that were listed, another area of progress, budget increases, should be noted. As stated earlier the Department of Conservation appropriation for the Commission in 1965-1967 was \$10,000.00 and in 1967-1969 was \$30,000.00 Fell reported that the appropriation for the fiscal year July 1, 1969, to June 30, 1970, was \$60,000.00, of which over \$40,000.00 was spent, and the Commission has requested \$85,000.00 for the 1970-1971 fiscal year. These higher appropriations and requests are the result of the expanded work of the Commission.

The first two goals, preparing an inventory and adopting selection policies for natural areas is presently being undertaken. A study of the natural divisions broken down into natural types is being undertaken for the entire state. The reason that this can be accomplished at this time, and some of the other activities listed below, is that the Commission has contracted for the services of two full-time staff men through the Natural Land Institute. These men, one a biologist and one a forester, both hold master's degrees. This staff help is a partial fulfillment of continuing goal number eight.

The most outstanding achievement of the Commission in the past year is related to continuing goal number three which states in part, "encourage and facilitate State



acquisition . . . of . . . outstanding natural areas."<sup>1</sup> For the fiscal year July 1, 1969, to June 30, 1970 the Department of Conservation was allocated \$14,000,000.00 for land acquisition. At the request of the Commission and with the approval of the Department of Conservation, (the Governor's approval is pending but thought routine), \$1,152,900.00 of these funds were set aside for the acquisition of seventeen natural areas. Much of recent Commission work has been involved in the selection of these areas which range in size from eighteen to 1,049 acres. As the \$14,000,000.00 land acquisition appropriation must be spent by June 31, 1970, and the Department of Conservation's Land Acquisition Division is understaffed, it is quite likely that all seventeen areas will not be acquired. However, the Commission is hopeful that another appropriation will be forthcoming and that between \$1.5 to \$2 million dollars will be earmarked for natural area acquisition.

While the Commission has continuing goals that are being fulfilled, it also has continuing problem areas. Fell mentioned that under the existing legislation the management of existing nature preserves is not fully adequate as the responsibility for this activity lies with the land-holding agency. The Commission does set the management guidelines in the articles of dedication and master plans but has little control over day-to-day management activities. Also, the

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<sup>1</sup>Illinois, Illinois Nature Preserves Commission, Report--1967-1968, p. 14.

complicated division of duties and authority between the Commission and the Department of Conservation creates administrative problems. The most serious problems involve the Commission's source of funds as a line item in the Conservation Department's budget and the Commission's inability to directly employ a staff. The Commission contracts for its staff help from the Natural Land Institute but these employees, who are in effect paid by the Department of Conservation, are not official State employees and do not receive the benefits of civil service.

### Indiana's Nature Preserves Division

#### Origin of the Indiana Division

Indiana officially initiated a nature preserves program in 1967 when the General Assembly approved Senate Enrolled Act No. 176 which is entitled "An Act creating a division of nature preserves establishing a state system of nature preserves providing for their acquisition, control, use management and protection, and making an appropriation."<sup>1</sup> The Division of Nature Preserves is a division in the Department of Natural Resources but the impetus for this legislative action came from outside the Department. William B. Barnes, Director of Division of Nature Preserves, states that "the idea of nature preserves had not been given much

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<sup>1</sup>Indiana, Act No. 176, p. 1.

consideration by the Indiana Department of Natural Resources prior to the introduction of the bill in 1967."<sup>1</sup>

As happened in Illinois, a model bill was drafted by a group of citizens. In this case, "the bill was prepared by the Indiana State Division of the Izaak Walton League, sponsored by Senator William Christy and Representative Sam Rea, and supported at public hearings by the Indiana Academy of Science and all the major conservation organizations of the state. The bill [was] written chiefly by IWL member James M. Barrett III, an attorney of Fort Wayne."<sup>2</sup> This model legislation borrowed heavily from the Illinois System and called for the creation of a State Board of Nature Preserves with its own powers to acquire, hold and manage properties.

The Indiana act that was passed, Senate Enrolled Act No. 176, followed many concepts of the model legislation quite closely but completely changed the administration of the program. Instead of a State Board of Nature Preserves the law created a Division of Nature Preserves within the Department of Natural Resources and gave some additional powers to the Natural Resources Commission. While the purposes of the acts in Illinois and Indiana are quite similar, the administration is almost reversed. Illinois has a Nature

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<sup>1</sup>William B. Barnes, "Indiana Is On Its Way" (paper presented at a meeting of the American Institute of Biological Sciences, Columbus, Ohio, Sept. 4, 1968), p. 2.

<sup>2</sup>Lindsey, Indiana, p. 34.

Preserves Commission but no official staff while Indiana has a nature preserves staff but no commission or board.

### The Indiana Nature Preserves Act

Senate Enrolled Act No. 176 contains fifteen sections.<sup>1</sup> Sections one and three state the need for natural areas and describe the potential uses to which they may be put. They also provide for a registry of natural areas. Section two defines such terms as nature preserves, dedication, system, division, etc. Section four creates the Division of Nature Preserves within the Department of Natural Resources. Section five provides for the president of the Indiana Academy of Science to be made an ex-officio member of the Natural Resources Commission. This action was apparently taken to bring some scientific expertise to the Commission as it will be responsible for taking formal actions regarding nature preserves.

Section six empowers the Department to acquire nature preserves. It also allows any unit of government within the state and any private owner to dedicate an estate, interest or right in land as a nature preserve upon acceptance of the articles of dedication by the Department. It further provides a procedure whereby the Department may change the articles of dedication. This procedure is designed to give considerable protection to established preserves because

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<sup>1</sup>Indiana, Act No. 176.

amendments require the approval of the Governor, the consent of any owner or owners of any interest in the preserve if not fully owned by the State, a public hearing, and the finding of the Natural Resources Commission that the amendment "will not permit an impairment, disturbance, use or development of the area inconsistent with the purposes of this act."

Section seven gives the Department eight specific powers and duties as follows:

(a) To formulate policies for the selection, acquisition, use management, and protection of nature preserves.

(b) To formulate policies for the selection of areas suitable for registration under the provisions of this act.

(c) To formulate policies for the dedication of areas as nature preserves.

(d) To determine, supervise and control the management of nature preserves and to make, publish, and amend from time to time rules and regulations necessary or advisable for the use and protection of nature preserves.

(e) To encourage and recommend the dedication of areas as nature preserves.

(f) To make surveys and maintain registries and records of unique natural areas within the state.

(g) To carry on interpretive programs and publish and disseminate information pertaining to nature preserves and other areas within the state.

(h) To promote and assist in the establishment, restoration and protection of, and advise in the management of, natural areas and other areas of educational or scientific value and otherwise to foster and aid in the establishment, restoration and preservation of natural conditions within the state elsewhere than in the system.

Section eight declares that nature preserves within the system are being "put to the highest, best and most important use for the public benefit." It also restates that they shall be subject to the rules and regulations of the Department and again spells out the conditions under which they may be modified or disposed of.

Section nine details the procedure for a public hearing that is required before the Commission can "make any finding of the existence of an imperative and unavoidable public necessity, or shall grant an estate, interest or right in a nature preserve or dispose of a nature preserve or of any estate, interest or right therein."

Section ten empowers and urges all "units, departments, agencies and instrumentalities of the state [to] dedicate as nature preserves suitable areas or portions of areas within their jurisdiction."

Section eleven states that the act does not interfere with the "purposes stated in the establishment of or pertaining to any state or local park, preserve, wildlife refuge or other area or the proper management and development thereof, except that any agency administering an area dedicated as a nature preserve . . . shall be responsible for preserving the character of the area in accordance with the articles of dedication and the applicable rules and regulations with respect thereto established by the Department." This section also provides that dedication as a natural area shall not "void or replace any protective status under law which the area would have were it not a nature preserve." Section twelve is a standard clause stating that if any portion of the act is held to be invalid it will not invalidate the remainder of the act.

Section thirteen appropriates \$30,000.00 to the Department for the purpose of the Act. Section fourteen

repeals all laws that are in conflict with the Act. The last section, fifteen, states "whereas an emergency exists for the immediate taking effect of this act, the same shall be in full force and effect on its passage."<sup>1</sup> This emergency is not explained.

### The Indiana Division of Nature Preserves Program

#### Starting the Program

The Division of Nature Preserves was activated on February 16, 1968, and William B. Barnes, a long-time employee in the Division of Fish and Game, was appointed as the Director and sole member of the Division except for the services of a secretary.

During the first six months the principal activity of the Division involved "administrative procedures, preparation of documents for dedication, master plans, rules and regulations. Formal dedication procedures [were] being held in abeyance until [the] approval of legal document forms by the Attorney General. Field inspections of important proposed natural areas [were] in progress and some owners [were] contacted."<sup>2</sup>

#### Budgets and Natural Area Acquisition

The enabling legislation authorized the Department to purchase natural areas and it was anticipated that the

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<sup>1</sup>Ibid.

<sup>2</sup>Barnes, "Indiana," p. 5.

purchase of several endangered privately owned areas would be an early activity of the Division. Director Barnes submitted a request for a biennium appropriation of \$50,000.00 to begin July 1, 1969, for operation and maintenance and \$168,000.00 for land acquisition. These funds were budgeted but only funds needed for administration are being released.<sup>1</sup>

Director Barnes believes an important reason that these funds are being withheld is because "a reluctance has existed in state park acceptance and/or operation of smaller natural areas because of the higher maintenance and operational costs for administering a widely scattered system of small tracts."<sup>2</sup> Because of this situation the acquisition of private natural areas for the preserve system is not likely to occur in the near future.

#### Problems Associated With Not Purchasing Areas

It is unfortunate that the Division will not purchase natural areas, as originally anticipated, for several reasons. Indiana "holds 38th place in size and 12th place in population" among the fifty states, and more importantly, "ranks third among the states in proportion of improved land, being surpassed by only Iowa and Illinois."<sup>3</sup> Also, the natural area acquisition activities of private organizations in Indiana is relatively weak. The land acquiring programs of

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<sup>1</sup>This information was obtained from Director Barnes in a telephone conversation on February 10, 1970.

<sup>2</sup>Barnes, "Indiana," pp. 2-3.

<sup>3</sup>Ibid., p. 6.



the Chapters of The Nature Conservancy in the neighboring states of Illinois and Ohio far surpass that of Indiana. As of the Spring of 1969 the Conservancy's Illinois Chapter has acquired sixteen areas, the Ohio Chapter fifteen areas and the Indiana Chapter seven areas.<sup>1</sup> One of the areas attributed to the Indiana Chapter was actually purchased primarily through the activities of the Illinois Chapter. Indiana does have a fine local land acquiring organization in Acres, Incorporated but this group only operates in the Northeastern portion of the State.

Another important reason that it is unfortunate that the Division was not allowed to purchase natural areas is because a recent inventory of remaining natural areas in Indiana is perhaps the best and most comprehensive such inventory taken in any state. This inventory, which is reported in the book entitled, Natural Areas In Indiana and Their Preservation, was undertaken by Alton A. Lindsey and others of Purdue University under a program known as the "Indiana Natural Areas Survey" financed by the Ford Foundation.

#### Dedication, Registries and Management

Under the Indiana system, nature preserves may be in public or private ownership. Director Barnes feels that "a preserve under ownership of a private individual would represent the weakest type of dedication. It would be difficult

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<sup>1</sup>Nature Conservancy, "Checklist," News, 1968 and 1969.

to hold it in perpetuity. Present owners might have the highest motives for preservation, but the same interest would likely not be held by the heirs to an estate." However, he also believes that "dedication under the ownership of a private organization would be one of the strongest, where its sole objective would be preservation." Director Barnes also feels that some potential for nature preserves lies with private educational institutions as they "already have natural areas in conjunction with their curricula. These could be further protected and recognized by inclusion within the nature preserve system."<sup>1</sup>

While privately held areas may successfully be dedicated into the preserve system, Director Barnes anticipates that "most of our nature preserves will be under some type of public ownership." This is because "any unit of state government, including departments, commissions, counties, municipalities and institutions may dedicate them, and will be responsible for preserving the character of the area." And, "nothing in the Act shall interfere with the major purposes for which the property was originally acquired for park, forestry, fish and game or other similar uses." Perhaps the greatest potential lies within lands administered by the Department of Natural Resources as the Indiana State Park system administers over 60,000 acres, the Division of Forestry owns 227,000 acres and the Division of Fish and

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<sup>1</sup>Barnes, "Indiana," pp. 3-4.

Game has 56,000 acres. Director Barnes notes that "several outstanding natural areas can be found on their properties."<sup>1</sup>

The Indiana Act calls for the Division to establish and maintain a registry of natural areas. Much of the ground work for such a registry has been accomplished by the work of the Indiana Natural Areas Survey. Director Barnes feels that a simple "preparation of a list giving names, locations and descriptions of unique natural areas . . . [would] be of limited value," and states that "thought should be given to a signed agreement between the owner and the state, establishing a registered natural area. Legal documentation would not be required, but rules and regulations could be similar to those for nature preserves. This would, at least, impress some sense of proprietorship and responsibility upon the owner."<sup>2</sup>

The Department of Natural Resources has printed regulations entitled, Rules for Management of Indiana Nature Preserves. In drawing up these rules the Illinois rules were followed almost verbatim. One subsection of the Indiana rules outlines the procedure for the dedication of nature preserves as this is not fully spelled out in the Act. This rule states: "The dedication of a Nature Preserve shall become effective only upon the acceptance of the Articles of Dedication by the Department. The acceptance of the Articles of Dedication shall be signed by the chairman or

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<sup>1</sup>Ibid., pp. 4-5.

<sup>2</sup>Ibid., p. 5.

vice-chairman and secretary of the Commission [of Natural Resources] and by the Director [of the Department of Natural Resources]. No acceptance of Articles of Dedication shall be made or signed until the Articles of Dedication and the Master Plan for the Nature Preserve have been approved by the Commission."<sup>1</sup>

### Accomplishments

To date, Indiana has dedicated six nature preserves.<sup>2</sup> All of the areas are on Department of Natural Resources land. Three are portions of State Parks, two are on Division of Fish and Game lands and one is on land administered by the Division of Forestry. They range in size from ten to 640 acres and total 1,603 acres. These preserves represent several types of forested land and one wet prairie. On February 19, 1970, the first privately owned area was dedicated. This area, known as Beechwood, is owned by Acres, Incorporated, an Indiana not-for-profit corporation. At the same time the seventh Department-owned area, a 100-acre tamarack bog on Division of Fish and Game lands, was dedicated. Director Barnes is working on several more proposals for the dedication of Department lands and feels that several other Acres, Incorporated areas will be offered for dedication in the near future.

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<sup>1</sup>Indiana, Department of Natural Resources, Rules For Management of Indiana Nature Preserves (Indianapolis, Ind.: n.d.), p. 2.

<sup>2</sup>Barnes, telephone, February 10, 1970.

## CHAPTER V

### RECOMMENDATIONS

#### Purpose and Procedure

The purpose of this chapter is to make recommendations, based on the strengths and weaknesses of the natural areas programs in Michigan, Wisconsin, Illinois, and Indiana, that would, if adopted, improve the natural areas program in Michigan. In reviewing the four programs four basic differences appeared. Recommendations concerning these basic differences will be presented first. Other recommendations of a less basic nature will follow. In all the recommendations the paramount consideration will be which concept or procedure best establishes and protects a system of dedicated natural areas. The procedure for making the recommendations will generally be as follows:

1. A recommendation for Michigan
2. A brief summary of how each state handles the concept or procedure upon which the recommendation is based
3. A justification for the recommendation
4. Limitations of the recommendation

### Basic Recommendations

Recommendation: It is recommended that legislation be introduced in Michigan creating a natural areas board, attached to the Department of Natural Resources, with the powers and duties to establish a natural areas system.

#### Present Programs:

Michigan--A private organization consisting of members, committees, directors and officers.

Wisconsin--A legislatively established six-member council attached to the Department of Natural Resources.

Illinois--A legislatively established nine-member commission attached to the Department of Conservation.

Indiana--A legislatively established division within the Department of Natural Resources and a new member appointed to the Natural Resources Commission.

Justifications:<sup>1</sup> The Michigan Natural Areas Council is administering a natural areas program of considerable merit as a private organization. However, it has been demonstrated in Wisconsin and Illinois that a legislatively established body has certain advantages such as obtaining a budget, obtaining staff, and having an official title and function when dealing with other agencies, organizations and individuals. An official board would have legislatively established responsibilities to create a natural areas system

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<sup>1</sup>The above recommendations and these justifications are basic to many of the following recommendations. Therefore, other justifications will serve to further support this concept.

that is authorized and protected by state law. The attached board is better than a division within a department of natural resources, such as Indiana's, because of the amount of expert knowledge required. Wisconsin and Illinois both have found a need for additional advisors beyond the basic members. The Wisconsin staff Ecologist, Clifford E. Germain, agrees with this conclusion as follows: "I believe our attachment to the Department of Natural Resources and administration of the program through the Department of Natural Resources is a satisfactory arrangement and to be preferred over an independent agency approach or, at the other extreme, a program entirely within a department or bureau."<sup>1</sup>

**Limitations:** There are three important limitations to this recommendation. First, the Michigan Department of Natural Resources may be reluctant to have an additional advisory board attached to it. Second, the creation of this official board would greatly reduce the functions of the Michigan Natural Areas Council and this may be resisted by persons who have spent many years building that organization. Third, some individuals, organizations, and agencies may be more reluctant to dedicate lands to a public body than a private body.

**Recommendation:** It is recommended that legislation in Michigan contain provisions for legal protection so that natural areas, having been dedicated, are described by law

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<sup>1</sup>Letter from Germain, February 24, 1970.

as being put to their highest, best and most important use. Legislation would further provide that the removal of this protection would require the establishment of an imperative public need plus the approval of the dedicating bodies and in certain cases a public hearing. Also, dedicated natural areas would be governed by rules and master plans that have a legal basis and violations may result in punishment.

**Present Programs:**

Michigan--Dedicated natural areas do not have this protection. However, on some areas the owning agency may have existing regulations that partially protect natural areas and are enforceable by law.

Wisconsin--Dedicated scientific areas do not have this protection. However, on some areas the owning agency may have existing regulations that partially protect natural areas and are enforceable by law.

Illinois--Dedicated nature preserves have this protection.

Indiana--Dedicated nature preserves have this protection.

**Justification:** Natural areas are scarce, irreplaceable resources with established values for scientific research, education and aesthetic purposes. The primary purpose of this legal protection is to establish a situation where dedicated natural areas won't be destroyed unless an imperative public need is found to exist and due consideration is given by the dedicating bodies. The Michigan



Department of Natural Resources have adversely modified dedications that they have placed on areas. The Presque Isle Scenic Site situation is an immediate example. Wisconsin lost a dedicated, privately owned, scientific area when the owner decided to sell it to a developer. This type of protection allows the natural areas board, through the Department of Natural Resources, to enforce its rules and regulations on privately as well as publicly owned dedicated natural areas.

Limitations: Strong legal protection for dedicated natural areas severely limits the future options of the land-owning agency, organization or individual and this may create a reluctance to dedicating a natural area. At present this is the case in Illinois where the University of Illinois has been unwilling to dedicate the natural areas they own. In Wisconsin Germain feels that "Wisconsin's program differs significantly from Illinois' in that we are using memorandums of understanding for long term preservation rather than legal documents. This has the advantage of flexibility and furthermore overcomes reluctance of owners to dedicate areas in perpetuity. Obviously, legal agreements, if they can be obtained, are preferable; but some additional flexibility seems necessary."<sup>1</sup> This limitation is partially alleviated in the next recommendation.

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<sup>1</sup>Ibid.

Recommendation: It is recommended that legislation in Michigan create one classification and definition of dedicated natural areas. This classification would generally include those areas that the Michigan Natural Areas Council classifies as natural area preserves, natural research areas and managed tracts. In addition, the legislation would create a registry of non-dedicated natural areas that might include the Council's scenic sites, nature study areas, and nature reservations. The registration of these areas would involve a formal, but not legally binding agreement between the land owner and the natural areas board.

**Present Programs:**

Michigan--Areas are dedicated under six basic classifications as scenic sites, nature study areas, natural area preserves, nature research areas, managed tracts, and nature reservations and other special classifications. A formal registry of non-dedicated natural areas is not maintained.

Wisconsin--Areas are dedicated under one classification as scientific areas. A registry of natural areas that includes the approval of the land owner is being created.

Illinois--Areas are being dedicated under one classification as nature preserves. Legislation provides for a registry of non-dedicated areas.

Indiana--Areas are dedicated under one classification as nature preserves. Legislation provides for a registry of non-dedicated areas. The Director of the Division of Nature



Preserves advocates that registration would involve a signed, but not legally binding, agreement giving recognition to owners who protect natural areas.

Justification: The work done in Wisconsin and Illinois adequately demonstrates that one classification is all that is required to build a viable natural areas system. The several classifications in effect in Michigan have the potential for causing confusion among both the citizens and the land-owning agencies, organizations and individuals who dedicate natural areas. While several classifications allow for different definitions and requirements that better fit various types of natural areas, this need can be met with one broad classification and detailed management and use regulations being incorporated into articles of dedication or master plans for each dedicated natural area. A registry, of the type suggested, would have several benefits. It would, as suggested for Indiana, be a means of giving credit to land owners who protect their natural areas. It could, as is being started in Wisconsin, include a permit for educational use of private lands. And, it would be a means for including natural areas, that for some reason cannot be formally dedicated, in a program that offers a degree of informal protection.<sup>1</sup>

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<sup>1</sup>The National Park Service has developed a registry system called the Natural Landmarks Program that is based essentially on these concepts. This program is described in the following Park Service pamphlet: U.S. Department of Interior. National Park Service. The Natural Landmarks Program. (Washington, D.C.: Government Printing Office, 1969).

**Limitations:** The Michigan Natural Areas Council has dedicated approximately 100,000 acres. If the recommendations were followed it is conceivable that much of this acreage would not be dedicated as natural areas or registered under a single classification scheme because the land-owning agency, organization or individual may feel that the purpose under which it was originally dedicated is being changed. Also, it would afford the owners an opportunity to reconsider the advisability of dedicating natural areas in any form.

**Recommendation:** It is recommended that the Michigan natural areas board, if established, develop and utilize a natural areas system. It is further recommended that this system follow a natural communities and institutional-use-region concept similar to that developed in Wisconsin.

**Present Programs:**

**Michigan--**To the author's knowledge, the Michigan Natural Areas Council is not dedicating natural areas under a natural areas system approach.

**Wisconsin--**A natural areas system has been developed and is being used. This system is based on both natural communities and institutional-use regions.

**Illinois--**A natural areas system, based on natural divisions broken down into natural types, is currently under study in Illinois.

Indiana--A partial natural areas system, based on natural divisions, was developed by Lindsey.<sup>1</sup> It is unknown if the Division of Nature Preserves will incorporate this concept into its program.

Justification: A natural areas system organizes and gives additional meaning to a natural areas program. Through the use of a natural areas system a natural areas board can recognize in which area of a state it needs to concentrate its efforts and on what type of natural areas. Having a system is also very beneficial in explaining or justifying a natural areas program. Natural resource managers, such as park, forestry or game officials, are often concerned that dedicating natural areas is an endless process and will indefinitely encroach upon the lands they administer. A system sets a definite limit or goal to a natural areas program. In certain cases, reluctance to dedicate a specific natural area may be overcome if it can be shown to the owning agency, institution or individual that the dedication is needed to meet the goals of a broader program.

Limitation: A natural areas system, calling for the dedication of one example of each natural area type in a region, reduces the justification for dedicating two natural areas of the same type in the same region. In certain cases, such as when two examples of an extremely rare natural area

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<sup>1</sup>Lindsey, "Indiana," pp. 48-61.

type occur in the same region, this may be undesirable as it may be difficult to dedicate the second area.

#### Other Recommendations

The following four recommendations are of two types. The first two are concepts or procedures that should be considered when drafting legislation to establish a natural areas board and a natural areas program. The last two recommendations are those that a natural areas board might consider incorporating into their program if such a board were created.

#### Recommendations Concerning Legislation

Recommendation: It is recommended that a natural areas board in Michigan consist of approximately ten members. It is further recommended that these members be appointed to the board by the Governor. Such appointments shall be made from persons with a recognized interest in the preservation of natural areas and shall include a representative from the University of Michigan, a representative from Michigan State University, representatives from at least three other public universities or colleges, representatives from at least two private universities or colleges, a representative from the Department of Natural Resources, and approximately two individuals not necessarily attached to the above institutions or agency. Members will not receive compensation for serving on the board but the expenses they incur in the performance of their duties will be reimbursed.

**Present Programs:**

**Michigan--**Michigan does not have a natural areas board.

**Wisconsin--**The Scientific Areas Preservation Council has six members that represent specific institutions or agencies. The Council is presently seeking legislation to increase its membership to ten. Members are appointed to indefinite terms by the policy-making board or head of the institution or agency they represent. Compensation for the expenses incurred by the members is paid by the represented institution or agency.

**Illinois--**The Illinois Nature Preserves Commission has nine members appointed to three-year terms. They may only serve two consecutive terms. Appointments, by the Governor with the advice of the Director of the Illinois State Museum and the Chief of the Illinois Natural History Survey, are made from persons with an interest in the preservation of natural lands. Reimbursement for expenses is authorized and comes from the funds budgeted through the Department of Conservation.

**Indiana--**Indiana does not have a natural areas board.

**Comment:** The institutions and agency mentioned in the recommendation is merely a suggestion. Persons more qualified than the author may suggest a more rational make up for a natural areas board in Michigan. It is anticipated that the Governor will receive advice from the Michigan Natural Areas Council, the Department of Natural Resources, and



other qualified sources when making the initial appointments and that subsequent advice on replacement appointments will come primarily from the natural areas board.

Recommendation: It is recommended that the natural areas board and the Natural Resources Commission be given certain powers and duties to establish and maintain a natural areas program. The powers and duties given to the natural areas board are as follows:

1. To formulate policies for the selection of natural areas to be dedicated
2. To formulate policies for the dedication of natural areas
3. To encourage and recommend the dedication of natural areas
4. To make surveys and records of unique natural areas and to register, by memorandums of agreement, natural areas that are not dedicated
5. To publish and disseminate information pertaining to dedicated and other natural areas
6. To promote by advice and other assistance the protection of areas of scientific or educational value, habitats for rare and endangered species of plants and animals, and other natural areas that are not dedicated natural areas
7. To review and make recommendations on all Department of Natural Resources documents,

including State park master plans, that affect the status of dedicated or potential natural areas.

The powers and duties given to the Natural Resources Commission are as follows:

1. To approve and enforce any rules and regulations suggested by the natural areas board concerning the use, management, and protection of dedicated natural areas
2. To provide administrative services, a budget, and staff assistance to the natural areas board.

**Present Programs:**

Michigan--Michigan does not have a natural areas board.

Wisconsin--The Scientific Areas Preservation Council is empowered to perform these duties. The Wisconsin Board of Natural Resources, through the Department of Natural Resources, provides administrative services, budgeting and staffing for the Council.

Illinois--The Illinois Nature Preserves Commission is empowered to perform these duties. The Department of Conservation provides a budget for the Commission from which administrative services and staff are contracted.

Indiana--These powers and duties are vested in the Department of Natural Resources of which the Division of Nature Preserves is a part.

Justification: The first five powers and duties given to the natural areas board are standard operating procedures. Number six is important because it allows the board to express its opinion on natural areas matters and situations beyond those only involving dedicated natural areas. The Illinois Nature Preserves Commission has used this power with considerable effectiveness. Number seven was written specifically for Michigan, although it is analogous to powers in the other programs, because Paul W. Thompson of the Michigan Natural Areas Council pointed out to the author that such a review would eliminate many problems between the Department of Natural Resources and the Council.<sup>1</sup> Specifically, the Council often does not get an opportunity to evaluate the natural areas potential of new State park lands until after a master plan has been approved. The first power, giving the Natural Resources Commission control over what rules and regulations will be approved and enforced, is necessary because it will be on Commission land that most of the dedicated natural areas will be found. This power also gives the Commission authority to enforce natural areas rules and regulations on lands not controlled by the Commission. The second power given to the Commission is for administrative purposes.

Limitations: A major limitation that is incurred when the Natural Resources Commission is given the power to

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<sup>1</sup>This information was obtained in an interview with Paul A. Thompson on February 12, 1970, in Birmingham, Mich.

enforce rules and regulations on dedicated natural areas is that it eliminates the possibility of dedicating federally owned lands because agencies of the U.S. Government cannot give up such authority. This has been a particular problem in Illinois.

#### Recommendations to the Natural Areas Board

Recommendation: It is recommended that when the natural areas board formulates policies for the selection and dedication of natural areas the procedure of reconnaissance and site reports developed by the Michigan Natural Areas Council be incorporated into this policy.

#### Present Programs:

Michigan--The Michigan Natural Areas Council requires that reconnaissance and site reports be prepared and approved before a natural area is dedicated.

Wisconsin--The Scientific Areas Preservation Council creates a file of information, similar to that found in reconnaissance and site reports, on each potential scientific area so that it is available when the decision to include an area into the system is made.

Illinois--The Illinois Nature Preserves Commission must give a potential nature preserve preliminary and then final approval, at separate meetings, before the articles of dedication are forwarded to the Department of Conservation. This approval is based on information brought before the Commission.

Indiana--The author does not know the procedure that the Director of the Division of Nature Preserves goes through before making the decision to dedicate a nature preserve.

**Justification:** The reconnaissance and site reports procedure insures that the natural areas board has made a thorough study of a natural area before dedicating it. This is particularly important in satisfying critics of the program because it demonstrates that natural areas decisions are based on sound evidence. Furthermore, the information found in reconnaissance and site reports forms the basis for articles of dedication and master plans, if such documents are prepared.

**Recommendation:** It is recommended that when the natural areas board formulates the policies for placing dedications, amending dedications, and removing dedications on natural areas the following procedures be used:

**For Dedicating Natural Areas--**

1. The natural areas board approves the natural area for dedication and articles of dedication are prepared enumerating the rules and regulations under which the dedicated natural area will be used, managed and protected.
2. The articles of dedication are submitted to the owning agency, organization, or individual for approval.

3. The articles of dedication are submitted to the Natural Resources Commission for final approval.

**For Amending Dedications--**

1. The owning body or the natural areas board prepares and approves an amendment of the articles of dedication for a dedicated natural area.
2. The amended articles are submitted to either the owner or the board, depending on which body prepared them, for approval.
3. The amended articles are submitted to the Natural Resources Commission for final approval.

**For Removing Dedication--**

1. The Natural Resources Commission is requested to remove a dedication by the owner, the board or another body.
2. The Commission decides if an imperative public necessity might exist requiring the removal of the dedication.
3. The Commission affords any individual, by public hearing or other procedure, to express his opinion on whether or not an imperative public need exists.
4. The Commission approves or denies the request for removal of the dedication.
5. If approved, the removal of the dedication is submitted to the owning agency for approval.

6. The removal of the dedication is submitted to the natural areas board for final approval.

**Present Programs:**

Michigan--Natural areas are dedicated by the Natural Resources Commission, or other owning body, at the request of the Michigan Natural Areas Council. Dedications may be removed by the owning body without the approval of the Michigan Natural Areas Council.

Wisconsin--Scientific areas are dedicated by the owning agency and dedications may be removed without the approval of the Scientific Areas Preservation Council.

Illinois--Dedications, amendments and removal procedures are essentially the same as those that have been recommended except that the Governor's approval is required in each case.

Indiana--Nature preserves are dedicated when the Director of the Department of Natural Resources and the Chairman and Secretary of the Natural Resources Commission sign the articles of dedication. To remove a dedication the Commission, after a public hearing, must find an imperative and unavoidable public necessity and the Governor must approve.

Justification: Formal dedicating, amending, and removing procedures of this type are necessary to place dedicated natural areas under the protection of State law.

## CHAPTER VI

### SUMMARY AND CONCLUSIONS

#### Summary

Lands and waters that have retained or reestablished their natural character, or have unusual flora and fauna or have biotic, geological, scenic or paleontological features containing aesthetic, scientific or educational values, called natural areas in this study, have been recognized as scarce, irreplaceable natural resources requiring special attention and protection by many agencies, professional societies, organizations, institutions and individuals. Various programs have been developed to inventory and protect natural areas. Some programs are based on a procedure of systematically identifying and protecting examples of all the types of natural areas found in a region and other programs operate on an opportunity basis and seek to protect as many natural areas in a region as possible.

Natural areas programs have been developed by federal agencies, professional societies, state agencies, and private organizations. This study describes the origin, organization, programs, and accomplishments of state natural areas programs in Michigan, Wisconsin, Illinois and Indiana.



In Michigan a natural areas program is administered by the Michigan Natural Areas Council, a private organization. Since 1951 the Council has dedicated approximately 100,000 acres as scenic sites, nature study areas, natural areas preserves, nature research areas or nature reservations. Most of the dedicated acreage is on land controlled by the Michigan Department of Natural Resources, but natural areas have also been dedicated on federal, university, private organization and private individual lands.

Dedications by the Council are made after thorough studies are presented in the form of reconnaissance and site reports and an agreement is reached with the land-owning body. These dedications are not legally binding and can be abrogated at the desire of the land owner. Dedications have been adversely modified in a few cases.

In addition to dedicating natural areas, the Council also contributes the expertise of its membership to other activities concerning the protection of natural values. They have made special studies of proposed national lake-shores and scenic highways, submitted statements in support of wilderness programs, and have published many special studies on the natural features of Michigan in the name of the Council.

A brief description of natural areas activities in Michigan, other than those of the Michigan Natural Areas Council, is presented in the study. This includes the efforts of the National Park Service, the U.S. Forest Service,

the Department of Natural Resources, the Michigan Nature Association, the Nature Conservancy and various universities and colleges.

In Wisconsin, a natural areas program is administered by the Scientific Areas Preservation Council. This legislatively established board has been given specific powers and duties to create a scientific areas program. The six-member Council has a budget and is attached to the Department of Natural Resources for administrative purposes. The Department supplies a staff to the Council.

The outstanding feature of the Wisconsin program is their systematic approach to selecting scientific areas for dedication. In this approach the potential types of terrestrial and aquatic communities and other natural features have been calculated for four regions of the State. These regions are based on one-day travel times from universities and colleges. The optimum goal of the Council is to have all potential types represented on dedicated scientific areas in each region. A more practical objective is to have 275 natural types represented on 200 scientific areas by 1980.

The Council does not own the areas. It encourages land-owning agencies, organizations and individuals to dedicate scientific areas that the Council has identified. Dedicated areas are not protected by special legislation and one has been lost and another mismanaged.

The Illinois Nature Preserves Commission and the Illinois Nature Preserves System were created by legislative acts passed in 1963. The nine-member Commission is appointed by the Governor and receives a budget through the Department of Conservation. It is supplied with administrative services and staff through a contractual arrangement with a private organization.

The process for dedicating natural areas in Illinois requires the approval of the Commission, the Department of Conservation and the Governor. Once dedicated, an area becomes a nature preserve and is protected from adverse uses by law. To remove a dedication an imperative public necessity, involving a public hearing, must be established and the approval of the Commission, the Department of Conservation and the Governor must be obtained.

As of December, 1968, eighteen nature preserves, involving 5,800 acres, have been dedicated. At present the Commission is deeply involved in assisting the Department of Conservation to acquire seventeen privately owned natural areas that have been appraised at \$1,152,900.00.

Indiana has taken a different approach in that a natural areas council or commission has been replaced by a Division of Nature Preserves within the Department of Natural Resources. Other than this, the program closely follows that of Illinois' on which it was based.

The Division was established in 1967 and the original plan was to engage in a natural areas land acquisition

program. Funds for this purpose were budgeted but have been withheld because of the reservations about the cost of managing a system of small tracts. To date the Division has dedicated seven nature preserves on Department of Natural Resources lands and one on land owned by a private conservation organization.

### Conclusions

The purpose of describing the natural areas programs of Michigan, Wisconsin, Illinois and Indiana is to identify strengths and weaknesses, based on the criteria of which concept or procedure used best establishes and protects a system of dedicated natural areas, and then make recommendations that would, if adopted, improve the natural areas program of Michigan. The procedure generally followed in making the recommendations is to state the recommendation, briefly describe how each of the four states handled the concept or procedure upon which the recommendation is based, give justification for the recommendation, and describe the limitations the recommendation may have. Eight recommendations are made.

The first four recommendations deal with basic differences between the four state systems. The first suggests that legislation be introduced in Michigan creating a natural areas board attached to the Department of Natural Resources. The second basic recommendation advocates that dedicated natural areas be declared by law as being put to their highest, best and most important use and that removal of this

dedication would require the establishment of an imperative public need for an alternate use for the land. The third basic recommendation calls for the establishment of one classification and definition of all dedicated natural areas and that a registry be established to recognize other natural areas that could not be dedicated. The final basic recommendation suggests that a natural areas system, based on the concepts developed in Wisconsin, be incorporated into a Michigan program.

The other four recommendations fall into two categories. The first two concern natural areas legislation and the last two are for the consideration of a natural areas board if one were established. The first recommendation concerning legislation calls for a ten-member natural areas board appointed by the Governor. The members will be selected from individuals with a recognized interest in the preservation of natural areas and represent specified institutions. The second such recommendation gives seven specific powers and duties to the natural areas board and two specific powers and duties to the Natural Resources Commission.

The first recommendation for the consideration of a natural areas board advocates that they incorporate the reconnaissance and site reports procedure now being used by the Michigan Natural Areas Council when they formulate their policy for the selection and dedication of natural areas. The second such recommendation calls for specific procedures for dedicating natural areas, for amending dedications and

for removing dedications. The approval of the natural areas board, the land-owning body and Natural Resources Commission is called for in each case. In addition, for removal of a dedication, an imperative public necessity must be established and a public hearing must be held.

Several of these recommendations have limitations. The Department of Natural Resources may resist efforts to create another advisory board attached to it. Providing strong legal protection for dedicated natural areas, and thus limiting the future options of the owner, may create a reluctance to dedicating natural areas by owners. The recommended program would require the rededication of most of the existing dedicated natural areas in Michigan and the owners of some of these areas may decline a request for rededication. A natural areas system, calling for the dedication of one example of each natural area type in a region, reduces the justification for dedicating two natural areas of the same type in the same region. And, natural areas on federal lands are excluded from dedication when the Natural Resources Commission is given the power to make rules and regulations for dedicated natural areas.

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