

NATIONAL PARK MANAGEMENT POLICIES AND FUNCTIONS
IN THE UNITED STATES AND WEST GERMANY

by

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

Introduction

The idea of setting aside land for preservation is very old. For many centuries kings and princes have established preserves, but there is no evidence of any areas with the comprehensive protection of a contemporary national park before the nineteenth century. In 1832, George Catlin proposed that the United States government should set apart a large tract of land in some suitable location of the West to be preserved forever as a "Nation's Park, containing man and beast, in all the wilderness and freshness of their nature's beauty."¹ Catlin got this idea from painting the fascinating landscapes of the unsettled American West.

In 1872, the world's first national park in the modern sense was created in the United States with the designation of a tract of land lying near the headwaters of the Yellowstone River in Wyoming as a public park. Since that time, many countries throughout the world have followed this example and established a considerable number of national parks or equivalent reserves.

The importance of national parks increases as the worldwide growth in population aggravates land use conflicts. The availability of land is limited. More and more land is needed for urban activities and exploitation of resources, bringing into use most of the lands not set aside for preservation. A growing population with increasing leisure time creates a greater demand for recreational and other uses of preserved areas.

¹Hiram M. Chittenden, The Yellowstone National Park, (Norman: University of Oklahoma Press, 1964), p. 78.

Multiple use combined with a high degree of motorization results in a functional change in the purpose of national parks: It is no longer only preservation of nature; it is preservation of nature and provision of recreation within the same areas. This forces governmental institutions to develop new management policies in order to avoid overuse of the parks and to guarantee preservation and recreation at the same time.

A comparison of these management policies and the functions of national parks in the United States of America and the Federal Republic of Germany will be the subject of this thesis. Only national parks according to the original meaning of this expression in the United States will be discussed. National monuments, national historical parks, and all other areas administered by the U.S. National Park Service and other federal and state agencies are not being investigated. In West Germany only two nature preserves are legally designated as national parks and will be included in this study.

In order to understand management policies and functions of the national parks in the United States and West Germany, some background knowledge is necessary. In the first chapter the reader will be informed about the history and development of national parks in both countries so far as it is relevant for understanding recent management policies and functions. The subsequent discussion of the international definitions of national parks clarifies the often wrongly used expression "national park" and shows the general goals of these areas. A section titled "Global Parks" reveals the place of the American and West German national parks in an international context. A brief literature review will concentrate on geographic and non-geographic publications that have contributed the most to the concept and contents of this study.

The second chapter will describe the U.S. and West German national park systems, beginning with a short explanation of technical terms. This is necessary because the countries investigated have different languages and some terms are often incorrectly translated and misinterpreted. The discussion of the physical situation and the location of the parks facilitates understanding of management policies and functions, as does the description of the legal background and the institutions involved in national park affairs.

The third chapter will provide an analysis and comparison of management policies and functions in the United States and West Germany. Management policies and functions are linked so closely and they influence each other so fundamentally that they will be discussed within one chapter.

Based on the findings of the thesis, chapter four offers concluding remarks about the success and problems of the management policies and functions in both countries investigated. Some suggestions for future management policies for the national parks in the United States and West Germany are also contained in this final chapter.

The National Park Concept in the United States and West Germany

To properly understand the recent situation of the national parks in the United States and West Germany, it is necessary to have some knowledge about the history and development of the national park concept in both countries. As already mentioned, the idea of setting aside land in the United States for preservation preceded the movement for the establishment of Yellowstone National Park. In 1832, forty years before the creation of Yellowstone, Hot Springs Reservation in Arkansas, a health resort rather than a scenic park, was set aside by the federal government. Hot

Springs is the oldest element of the national park system, but was not established as a national park, because this term was not used at that time. It was integrated into the national park system and received the status of a national park in 1921.² Several other areas became national parks earlier, because Hot Springs is small in size and could not compete with the attractions of the others.

In 1844, Ralph Waldo Emerson generalized the public need for recreational areas in saying that "the interminable forests should become graceful parks for the use and delight."³ But all attempts to establish national park-like reserves failed at that time because of a lack of public and governmental interest based on insufficient information, until the Yellowstone area was explored. Most people looked at wilderness as an enemy and saw no need to preserve it.

Early in the last century, a few hunters, trappers, and prospectors visited the upper Yellowstone country in Wyoming and brought back accounts of the wonders they had seen in the form of geysers and hot springs.⁴ However, their tales were almost universally disbelieved. In 1869, an expedition went to the much-talked-of area to determine the truth or falsity of the rumors of amazing phenomena around the upper reaches of the Yellowstone. It reported that the area had unique features that should be protected by the government. In 1870, a second expedition, led by H.D. Washburn, G.C. Doane, and N.P. Langford, explored the same region somewhat more thoroughly. Its published reports aroused intense interest

² John Ise, Our National Park Policy; A Critical History, (Baltimore: Johns Hopkins Press, 1961), p. 244.

³ Merrill D. Beal, The Story of Man in Yellowstone, (Caldwell: The Caxton Printers, Ltd., 1949), p. 244.

⁴ Jenks Cameron, The National Park Service - Its History, Activities and Organization, (New York/London: D. Appleton and Company, 1922), p. 2.

throughout the entire country, and so a governmental expedition under the joint auspices of the Geological Survey and the Engineer Corps of the Army was sent out for precise scientific observations in 1871.⁵

Although the information given by the governmental expedition was more exact, the idea of a national park is thought to have been raised during the Washburn-Doane expedition. In order to prohibit profitable speculation by taking up land surrounding the phenomena, it was expressed that the discovered wonderland should never be allowed to pass into private ownership. It was proposed that it should be set aside for the use and enjoyment of all the people.⁵ A movement, composed of influential nature lovers and politicians, awoke to establish a public park in Yellowstone. It became so strong that the government passed the Yellowstone Act on March 1, 1872, thereby creating the world's first national park. However, the term "national park" was not mentioned in a law until Mount Reinier National Park was established in 1899.⁶ Earlier, the areas were called public parks.

Soon after the creation of Yellowstone Park, there was a call for additional reserves. The intention was to set aside land containing all different types of landscape. At the same time, of course, other countries like Canada had begun to create a park system. In 1916, the U.S. national park system was enlarged to 16 parks, which were all located in the Western United States.⁷ At the beginning, the parks were under the exclusive control of the Secretary of the Interior and were one of the least important tasks of the Department of the Interior. Park problems were of minor interest for the federal government.

⁵Jenks Cameron, The National Park Service - Its History, Activities and Organization, (New York/London: D. Appleton and Company, 1922), pp. 2-4.

⁶Ibid., p. 107.

⁷Ibid., p. 8.

The first real change in the administration of U.S. national parks occurred in 1886. By this time, it had become evident that the civilian superintendents were not operating Yellowstone Park very well and that poaching and vandalism were rampant. In August of 1886, the U.S. cavalry under the direction of Moses Harris marched into Yellowstone and took control. The military was so successful in protecting the natural wonders of Yellowstone against vandalism that it was also sent to Yosemite, Sequoia, and General Grant Parks.⁸

The idea of a separate park administration was recognized as early as 1907 by the military superintendents, but their political influence was inadequate to convince the government to found a new authority. In 1915, the government decided that military protection was no longer needed to patrol the parks. Finally, in 1916, the government agreed to found the National Park Service and an act was passed on August 25 to establish this new institution which became operational the following year. Steven T. Mather was appointed the first director of the National Park Service and he paved the way for many of the policies that the National Park Service follows today. Until 1916, each park was a separate unit, administratively unrelated to the others. With the National Park Service it became possible to promote and regulate the use of all national parks and to conserve the scenery, the natural and historic objects, and the wildlife therein.⁹

Mather made use of all his possibilities and promoted the national park system in every regard. He enlarged the existing parks, improved facilities, added new parks to the system, and created a ranger force.¹⁰

⁸Duane H. Hampton, How the U.S. Cavalry Saved Our National Parks, (Bloomington/London: Indiana University Press, 1971), p. 41.

⁹John Ise, Our National Park Policy; A Critical History, (Baltimore: Johns Hopkins Press, 1961), pp. 185-192.

¹⁰*Ibid.*, pp. 185-323.

His successors, Horace Albright and Arno Cammerer, continued many of these policies. In 1933, when Cammerer took over, he faced many difficulties because of the Depression. The biggest problem was money. But the parks were helped by the use of free labor from the Civilian Conservation Corps (CCC). Many unemployed signed up and worked in the parks, constructing roads, bridges, camp grounds, and other facilities.¹¹

In 1955, under the National Park Service administration of Conrad Wirth, a comprehensive plan called "Mission 66" was formulated. It considered problems then facing the National Park Service - protection, staffing, interpretation, use, development, financing, needed legislation, forest protection, fire - and many other phases of management. This plan looked toward the Service's fiftieth anniversary in 1966, with the general idea to develop the parks so that they could properly accommodate the visitors expected.¹² But this change in policy to permit more visitors within the national parks encouraged some doubtful development like unprecedented growth in the responsibilities of the National Park Service and a tripling of the visitations between 1960 and 1975, resulting in an increase from 27,000 to 44,000 in the annual number of visits per permanent National Park Service employee.¹³ The national Park Service presently administers 48 National Parks throughout the United States and has influenced the establishment and management of national parks in all continents.

The history of the German national parks is much shorter. At the turn of our century the public call for plant reserves and nature preserves came up so strong that a considerable number of these preserves were

¹¹John Ise, Our National Park Policy; A Critical History, (Baltimore: Johns Hopkins Press, 1961), pp. 360-364.

¹²Ibid., pp. 546-547.

¹³R.A. Rowntree, D.H. Heath, and M. Voiland, "The United States National Park System,: International Experience with National Parks and Related Reserves, ed. J.G. Nelson et al. (University of Waterloo, 1978), p. 94.

established. The area that is now Berchtesgaden National Park was one of them.¹⁴ In the 1930's, plans for a national park in the Bavarian Forest were considered, but World War II delayed the creation of the park.¹⁵

After the war, the idea of a national park in Berchtesgaden, the Bavarian Forest, and other areas gained importance again. Finally, in 1969, Bavarian Forest National Park was established, partially because of the expectation of positive side-effects in the form of touristic development in this region. Berchtesgaden National Park followed in 1978. There is no separate authority for the two German parks.

International Definitions of National Parks

To understand the comparison and analysis of the U.S. and German national park systems in regard to management policies and functions, knowledge of the international definitions of national parks is helpful and should be kept in mind. There is much confusion with the term "national park", and sometimes areas are labelled as such that do not fit the international definitions. In order to avoid further misuse of the expression "national park", the International Union for Conservation of Nature and Natural Resources (IUCN) defined national parks at their world conference in New Delhi (India) in 1969. According to this internationally accepted definition, a national park is a relatively large area where

1. one or several ecosystems are not changed substantially by human use; where flora and fauna and geological and morphological phenomena are of special interest for science, education, and recreation, or natural landscapes are of splendid beauty; and

¹⁴Hubert Zierl, Nationalpark Berchtesgaden - Geschichte eines Schutzgebietes, (Berchtesgaden: Anton Plenk KG, 1981), p. 7.

¹⁵H. Weinzierl, H. Bibelriether, and G. Sperber, Nationalpark Bayerischer Wald, (Grafenau: Verlag Morsak, 1972), pp. 35-36.

where

2. the highest responsible authority of the country takes suitable action to prohibit use in the whole area as early as possible or to effectively guarantee that the ecological, geological, morphological, or esthetical features that were conditions for the establishment of the preserve remain inviolable, and where
3. visitors have access for inspiration, education, and uplift under certain conditions.¹⁶

The governments were asked by the IUCN not to label the following areas "national parks":

1. Scientific reserves that require special allowance for entering.
2. Preserves run by a private organization or lower authorities, if they are not accepted and controlled by the highest administrative authority.
3. Special reserves according to the African Convention of 1968 such as animal, plant, or geological reserves.
4. Populated and economically used areas, where planning and development created a touristic 'recreation area', where in general outdoor recreation has priority of preservation of ecosystems, as in nature parks (Naturparks).¹⁶

According to the strict New Delhi definition, both German and a few U.S. national parks like Hot Springs National Park in Arkansas fail to satisfy the requirements of a national park. The New Delhi definition caused criticism, especially among European countries that have only very few natural landscapes that fulfill the definition.¹⁷ Therefore, a modified definition of national parks was proposed at the Banff National Park Conference (Canada) in 1972. It suggests a classification of three categories of preserves in national parks. These are:

¹⁶Hubert Zierl, Nationalpark Berchtesgaden. Geschichte eines Schutzgebietes, (Berchtesgaden: Anton Pienk KG, 1981), p. 128, slightly simplified translation.

¹⁷Hubert Zierl, "Amerikanische und deutsche Nationalparke im Vergleich." Berichte der Akademie für Naturschutz und Landschaftspflege, No. 3, (1979), p. 31.

1. Preserved natural landscapes.
 - Strict preserves without maintenance work,
 - preserves with maintenance work,
 - wilderness areas according to the U.S. definition.
2. Preserved cultivated landscapes.
 - Natural landscapes with primitive human civilizations,
 - landscapes with ancient economic systems,
 - areas of special archeological interest.
3. Areas of historic and prehistoric importance.
 - Areas of prehistoric importance,
 - areas of historic importance.¹⁸

Combinations of these categories are possible within national parks.¹⁸

The Banff classification means that the German Bavarian Forest and Berchtesgaden National Parks could have park status, because they fit the cultivated landscape category. The American Mesa Verde National Park in Colorado would also fulfill the Banff definition for its old Indian cliff dwellings are of historical and archeological importance.

The controversy about the definitions of national parks continues and the different definitions should always be kept in mind when speaking of national parks. In this thesis, the Banff proposal is used as the basis for defining a national park, unless it is otherwise indicated.

Global Parks

To understand the place of the U.S. and West German national parks in an international context it is necessary to have some information about the worldwide distribution of this form of nature preserve. From the United States national parks spread over much of the rest of the world after Yellowstone was created in 1872. Up to now more than 1,200 national

¹⁸Nationalparkverwaltung Berchtesgaden, Internationale Definitionen des Begriffs Nationalpark. Informationsblatt, Ramsau: 1980.

parks or equivalent reserves in almost one hundred countries have been established, but only in a few countries, e.g., Canada and New Zealand, has development been on anything similar to the American scale. Significantly, these countries, like the United States, could set aside wild lands before a demand to use them arose. At the time when the majority of the parks were established there were no settlements in those remote regions and the countries were wealthy enough to afford large national parks and to administer and protect them reasonably well. Today, these countries face almost the same problems as the rest of the world. The natural conditions of the lands have already been changed by human impact in many cases, and other uses compete with the creation of national parks, as the controversy about the proposed U.S. Tallgrass Prairie Park in Kansas shows.¹⁹

Canada was the first country to follow the American example, with almost the same beginning. In 1887, the government established Rocky Mountain - later changed to Banff - National Park, an area that was first explored during the construction of the Canadian Pacific Railroad. The wording of the creating act was nearly identical to that of the Yellowstone Act of fifteen years earlier.²⁰

The first of New Zealand's national parks was created in 1894. The parks of that country were set aside because of splendid mountain landscapes, glaciers, lakes, waterfalls, heavy forests, and alpine meadows that were considered valuable enough to be withdrawn from human activities

¹⁹David E. Kronn, "Management of the Proposed Tallgrass Prairie National Park, U.S.A.," International Experience with National Parks and Related Reserves, ed. J.G. Nelson et al. (University of Waterloo, 1978), pp. 549-572.

²⁰William C. Everhart, The National Park Service, (New York/Washington/London: Praeger Publishers, 1972), pp. 208-210.

and preserved. The management of the parks is well organized and protection effective.²¹ Australia has an impressive number of parks. The country has a strong need for these preserves, for perhaps no other country in the world has suffered such devastation from the introduction of exotic animals like rabbits and mice.²¹

Almost all European parks and reserves were established long after the original vegetation and wildlife had been considerably altered or even destroyed by many centuries of cultivation and grazing. European parks also represent only a fraction of the original habitats of the continent. Although some lack spectacular scenery and wildlife populations, their unique value is the display of living landscape characteristics of large areas of Europe.²² Most European parks are relatively small in size; however, in remote regions in Eastern Europe and Scandinavia are some larger ones that show almost natural conditions.

With the exception of but a few countries, such as Argentina, the Latin American nations have not yet built extensive national park systems. Everhart believes that the main obstacles are economic problems, land ownership patterns, and inaccessibility of promising areas.²³

In most Asian countries a high population density combined with economic scarcity hinders the establishment of national parks. Japan has the best developed national park system in Asia, but the strong demand for recreational and other uses diminishes preservation.²⁴

²¹William C. Everhart, The National Park Service, (New York/Washington/London: 1974; Praeger Publishers), p. 220, and John Ise, Our National Park Policy; A Critical History, (Baltimore: Johns Hopkins Press, 1961), pp. 662-663.

²²William C. Everhart, The National Park Service, (New York/ Washington/London: Praeger Publishers, 1972), p. 211.

²³Ibid., p. 210.

²⁴Ibid., pp. 214-215.

Africa south and east of the Sahara has the largest national parks of all continents. (See Table 1) The parks and reserves provide a permanent sanctuary for the vast herds of African wildlife, probably the most spectacular and diverse animal populations left on earth.²⁵ On the plains of Africa are found the significant remnants of that community of animals and peoples which, during the Pleistocene era, existed in one version or another throughout the grasslands of much of the world. The setting aside of park lands started in 1892, when Oom Paul Krüger created the Sabie Game Reserve in the southeast of Africa.²⁵

Table 1

Leading Countries in Descending
Order of Parkland Area* (1978)

Rank	Country	Area (sq. km.)
1.	U.S.A.	164,641
2.	Canada	80,758
3.	Australia	76,641
4.	U.S.S.R.	71,450
5.	Zambia	58,988
6.	Chad	52,997
7.	Zaire	52,620
8.	South Africa	51,273
9.	Botswana	47,273
10.	Kenya	35,123

*Parkland area includes other nature preserves besides national parks

Source: Paul F. Wilkinson, "The Global Distribution of National Parks and Equivalent Reserves," International Experience with National Parks and Equivalent Reserves, ed. J.G. Nelson et al. (University of Waterloo, 1978), p. 607.

The United States leads in the total area of preserved lands; West Germany ranks 56th with only 1,148 square kilometers of nature preserves. The other West European countries have similar values.²⁶

As mentioned earlier, a discussion of foreign parks is difficult. Many of the so-called "national parks" do not qualify as national parks according to the international definitions. They are small areas, perhaps quite like municipal or local parks, without great scenic value. Often they are largely or entirely unprotected, sometimes open to grazing, hunting, mining, lumbering, or even farming.²⁷

Literature Review

The following literature review concentrates on the published materials that have contributed the most to the concepts and contents used in this study. Many non-geographic publications provided necessary information for this thesis, and the three most important ones will be discussed briefly. Although a study of national parks, especially a comparison among different countries, is a geographical topic that perfectly fits in man/land studies, there has been little work done by geographers. This fact will be explained and leads into a discussion of the general studies conducted by geographers on national parks that were essential for the comparison between U.S. and German national parks. Two publications, one of them a collection of papers, will be reviewed with regard to their contributions to this study.

²⁵William C. Everhart, The National Park Service, (New York/Washington/London: Praeger Publishers, 1972), pp. 216-219.

²⁶John Ise, Our National Park Policy; A Critical History, (Baltimore: Johns Hopkins Press, 1961), p. 658.

²⁷Paul F. Wilkinson, "The Global Distribution of National Parks and Equivalent Reserves," International Experience with National Parks and Equivalent Reserves, ed. J.G. Nelson et al. (University of Waterloo, 1978), p. 623.

In 1968, Lawrence C. Merriam, Jr. wrote about two European parks and an American comparison.²⁸ He is professor of forestry at the University of Minnesota and visited European parks in 1967 to observe their management and problems. Merriam selected the Swiss National Park near Zerneß in the very east of Switzerland adjacent to Italy and the Parc National de la Vanoise in the French Alps near Chambéry next to the Italian border. In his six-page essay Merriam pointed out that a comparison between the national parks in the Alps and those in the mountains of the Western United States is difficult because of dissimilarities rooted in cultural differences and historic land ownership and use patterns. The author briefly described zoning techniques, guidance of visitors, visitor information, administration, and purpose of the parks. Problems like adjacent touristic development, grazing, fishing, and private ownership were also mentioned. Merriam discussed the problem of establishing unique scenic and natural preserves for limited public use and scientific study under the crowded conditions of Europe. There are no public lands to be set aside, only lands used for centuries and then mostly abandoned.²⁹ This study suggested topics that could be used for a comparison between U.S. and German national parks and gave some background information on the U.S. and European parks in general.

In 1979, Hubert Zierl, Director of the German Berchtesgaden National Park, published a four-page article that compared American and German national parks.³⁰ After the general definition and purpose of national

²⁸ Lawrence C. Merriam, Jr., "Two European Parks and an American Comparison," National Parks Magazine, 42 (1968), pp. 13-18.

²⁹ *Ibid.*, p. 18.

³⁰ Hubert Zierl, "Amerikanische und deutsche Nationalparks im Vergleich," Berichte der Akademie für Naturschutz und Landschaftspflege, No. 3 (1979), pp. 30-33.

parks, the author showed the different situation in the two countries in regard to size, stress on the landscape, and historical development of preservation. Zierl further examined briefly the goals of national parks and their differing problems in the United States and West Germany. He noted that preservation is more difficult in Germany, because there is a strong competition among uses. The situation for scientific research is similar in both countries, but problems related to education and recreation are more severe in Germany, because overuse of the parks occurs faster as a result of the smaller size. A specific German park problem is the preservation of historical heritage within the parks.³¹

Zierl concluded that it will be several years, perhaps the rest of this century, before the "idea of national parks" will be accepted by the German population, because it is not easy for them to waive the claim to use potentially productive areas.³² This is a problem typical of developed countries with only little wilderness left, especially the densely populated countries of Europe. It is a reason for the relatively small number and late establishment of the European parks. Zierl's short essay gave some useful hints as to which features of the U.S. and West German national parks to compare. His basic ideas had a strong impact on the framework of this study.

Another very important publication for this thesis is the current National Park Service manual for management policies for U.S. parks.³³ It contains the guidelines for park planning, park facilities, natural resource

³¹Hubert Zierl, "Amerikanische und deutsche Nationalparks im Vergleich," Berichte der Akademie für Naturschutz und Landschaftspflege, No. 3 (1979), p. 32.

³²Ibid., p. 33.

³³U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.; U.S. Government Printing Office, 1978).

management, use of the parks, and many other management policies. The information given comprehends all U.S. national parks and all park authorities are obligated to follow the formulated policies. This manual was not only a source for many details and general statements, it was also responsible for the framework of the analysis and comparison of park management policies. None of the three publications discussed above was written by a geographer.

By looking at William D. Pattison's four traditions of geography (area studies, spatial studies, earth studies, and man/land tradition), one can see that national park studies clearly fit into the man/land tradition.³⁴ National parks express the relationship of humans to the land by setting aside areas for preservation. This study analyzes and compares national park management policies and functions in two countries which show this relationship and thus placing this thesis into the man/land tradition. Up to now, only little research has been done by geographers on national parks, but two publications where geographers at least participated provided fundamental information for this study and will be briefly reviewed.

In 1969, F. Fraser Darling, an ecologist, and Noel D. Eichhorn, a geographer, wrote Man & Nature in the National Parks; Reflections on Policy. They examined the nature of national parks, national parks as a resource, management of plants and animals, and the concept of wilderness, and they analyzed human impact on the national parks. Darling and Eichhorn concluded that the national parks faced dangers from within in addition to the older and more generally recognized external pressures for economic exploitation of the parks' timber and mineral resources. These new dangers come from a growing number and density of visitors, spending more of their increasing

³⁴William D. Pattison, "Four Traditions of Geography," Journal of Geography, 63 (1964), pp. 211-215.

leisure time in the parks, and bringing more of their autos and accompanying paraphernalia with them.³⁵ With the explanation of the problems of the U.S. parks the book gave some useful background information for the analysis of natural resource management problems.

In 1978, J.G. Nelson, a geography professor from the University of Waterloo, Canada, together with R.D. Needham and D.L. Mann, edited International Experience with National Parks and Related Reserves. The book contains a collection of 20 papers written by geographers from many countries and ranging from an introduction of the general situation to specific regional national park problems such as management of the proposed Tallgrass Prairie National Park in the Great Plains (U.S.A.).³⁶

Of general interest were the theoretical papers on the international experience with national parks, the general guide for participants in international comparative studies of national parks, and the role of natural parks and reserves in scientific study and recreational development. Paper 5, "The United States National Park System," by R.A. Rowntree, D.E. Heath, and M. Voiland explores the evolution and status of the national park system, and perceptions, attitudes and values in relation to park policy, public use, conflicts of interest, and management problems.³⁷ The discussion of the problems of the U.S. parks was useful in determining the important topics for a comparison between the U.S. and German parks; thus it

³⁵F. Fraser Darling and Noel D. Eichhorn, Man & Nature in the National Parks; Reflections on Policy, The Conservation Foundation, Washington, D.C. 1969.

³⁶J.G. Nelson, R.D. Needham and D.L. Mann, International Experience with National Parks and Related Reserves, (Waterloo: University of Waterloo, 1978).

³⁷R.A. Rowntree, D.E. Heath and M. Voiland, "The United States National Park System," International Experience with National Parks and Related Reserves, ed. J.G. Nelson et al. (University of Waterloo, 1978), pp. 91-140.

has influenced the structure of the chapter on management policies and park functions in this thesis.

Statement of Problem

The purpose of this thesis is to examine and compare management policies and functions of national parks between the United States and the Federal Republic of Germany. Comparing the acts and laws forming national parks reveals no significant difference between the countries, because the West German parks were established later, based on the American experience. But there are other factors that influence park management and the functions of the parks, such as differences in population density, availability of land, and social status of the parks. The national parks might be expected to reflect these differences.

I therefore hypothesize that park management and function differ between the United States and the Federal Republic of Germany. I further postulate that parks in both countries differ in terms of fulfilling the general international objectives of national parks that were discussed earlier in this chapter. To determine these differences I will analyze management policies such as the methods of zoning and limiting access, and the accomplishment of stated goals and the importance of the national parks in both countries.

Although the geographical situation differs between the countries, some of the problems the national park systems face are similar. There is a strong competition among various opposing interests in the use of the national parks, such as nature preservation and recreation.

It is expected that this study will show the strengths and weaknesses of management policies in both countries in terms of planning, administering,

and protecting the national parks. Both countries might benefit by the other's experience.

CHAPTER II

THE U.S. AND WEST GERMAN NATIONAL PARK SYSTEMS

Terminology

The technical terms used in this study cause some confusion because the countries investigated have different languages. Sometimes it is not possible to make a literal word for word translation. Several technical terms used in one language have no equivalent word in the other, because the subject of the word does not exist in the other country.

There is much confusion with the expression "National Park." The German spelling is simply "Nationalpark" and no other term means the same. In many English-language publications "Naturpark" is also translated to mean national park, but this is incorrect. In a Naturpark human recreational needs are an important factor, and the protection of nature is much less than in a national park. In Germany there are only two Nationalparks in Bavaria. These were established by special acts which will be discussed later in this chapter.

Other preserved areas in Germany are "Naturschutzgebiet" and "Landschaftsschutzgebiet," also sometimes wrongly translated to be national parks. Naturschutzgebiet means an area with strict protection of nature. All human activities that have an impact on nature require special permits. Nevertheless, the comprehensiveness of protection does not reach national park standard. Landschaftsschutzgebiet has an even less strict form of preservation. Both Naturschutzgebiet and Landschaftsschutzgebiet are usually smaller in size than national parks. "Pflanzenschutzgebiet" means a plant reserve, which most of the area of Berchtesgaden National Park was before achieving park status.

In order to avoid confusion in this study the German term will be often set in parentheses after the English translation. German terms like "Landratsamt," that cannot be translated word for word, and the English expressions of county or district government, that could be misleading will be explained by footnotes. Quotations from German sources will be marked as such, and my translation will be as close as possible. If necessary, footnotes will be used for explanation again.

The "Nationalpark Bayerischer Wald" is translated into Bavarian Forest National Park. "Nationalpark Berchtesgaden" is the official name of the other German national park. In older literature it is also sometimes named "Nationalpark Königssee." Both terms are translated as Berchtesgaden National Park. This study always uses the English version of the names.

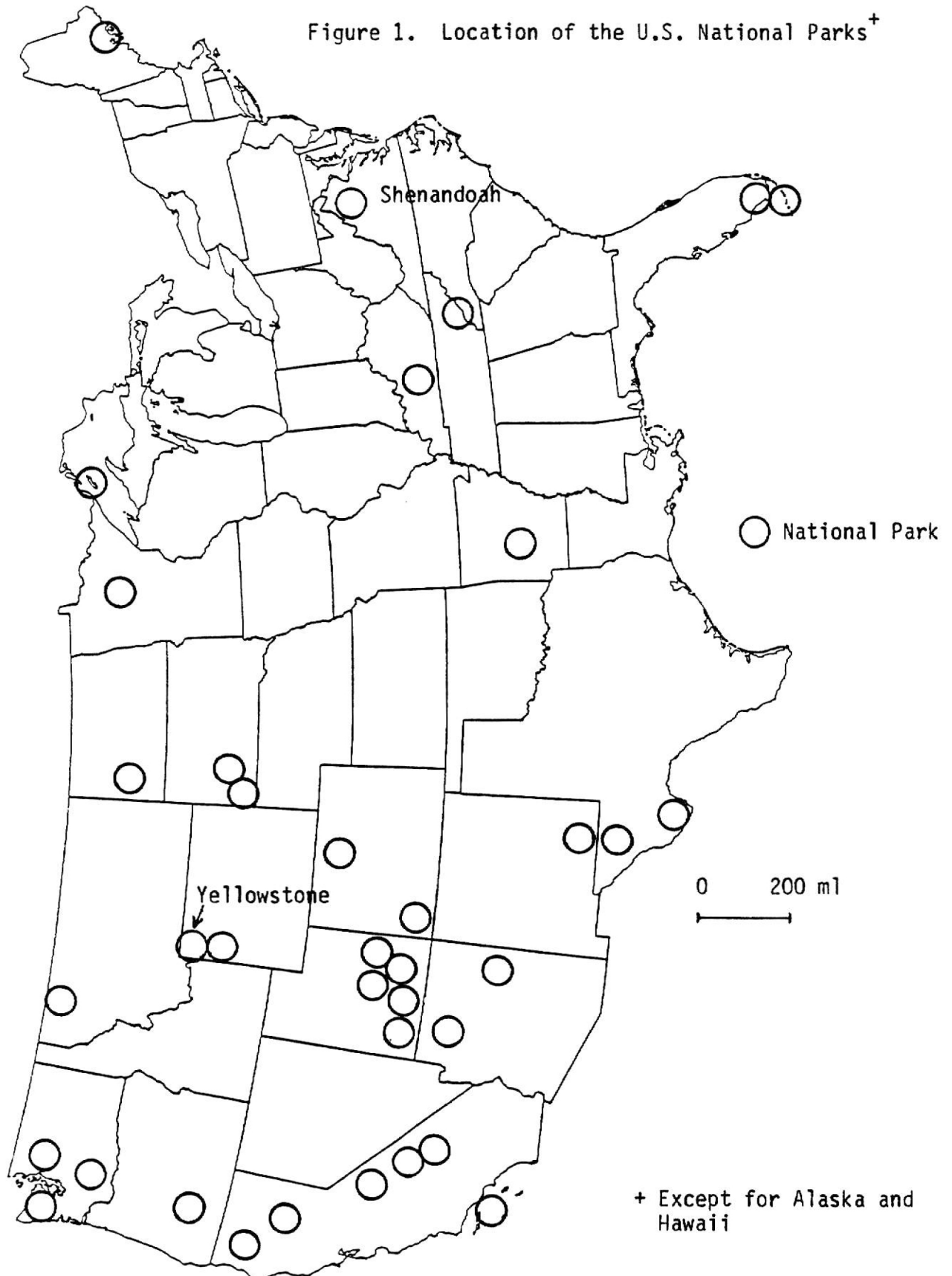
Physical and Locational Aspects

Today, 110 years after the establishment of Yellowstone, there are 48 national parks in the United States. (See Figure 1.) The first parks were established in the west, where large tracts of unsettled land were available and could be set aside for preservation. In all cases, except for Mesa Verde National Park in Colorado, unique features and the scenic value of the landscape were the main reasons for the creation of a national park. Mesa Verde was set aside because of well-preserved old Indian cliff dwellings. The first park east of the Mississippi was Acadia National Park in Maine, which was founded in 1919. It was followed by a few more eastern parks like Great Smoky Mountains, Shenandoah, and Everglades. They all are located in areas not suitable for agriculture because of the physical situation. Mountainous ranges and swamps were not favorable

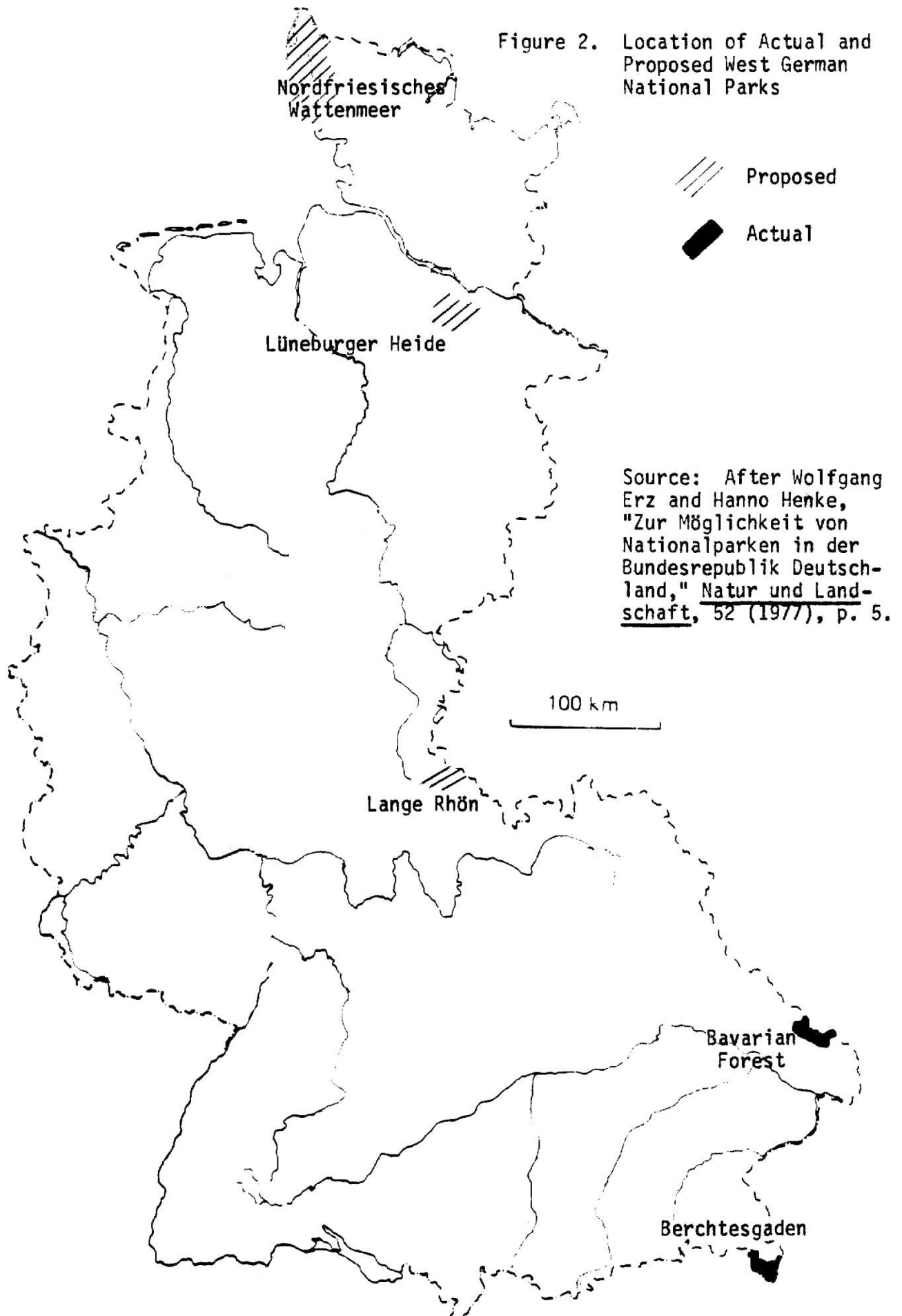
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Source: U.S. Department of the Interior, National Park Service, Index 1979, National Park System and Related Areas, (Washington, D.C.: U.S. Government Printing Office, 1979 and Update 1982).



places for the early settlers; therefore, these regions experienced little human impact and could become nature preserves. During recent years, mostly large natural areas in Alaska have been given national park status. They were already national monuments. There is a great variation in the size of American national parks. Wrangell-St.Elias National Park in Alaska is more than a thousand times larger than Hot Springs National Park in Arkansas. (See Table 2)

The establishment of the German national parks was very difficult because almost all the land had been used during the last centuries. Therefore, it was not possible to set apart natural areas devoid of any human impact. Five areas were proposed to become national parks (See Figure 2), and in 1970 Bavarian Forest National Park was established.¹ Both Bavarian Forest National park and Berchtesgaden National Park, which was created in 1978, are located in very remote regions of Bavaria with low population density. The terrain of both is mountainous and much of the area is forested. Each of the two parks borders a foreign country; Bavarian Forest National Park adjoins Czechoslovakia, and Berchtesgaden National Park is next to Austria. Nordfriesisches Wattenmeer, Lüneburger Heide, and Lange Rhön were also considered, and they are suitable to become national parks too, but their establishment has failed up to now because of the lack of interest and enterprise of the state governments involved. In the near future, Nordfriesisches Wattenmeer, Lüneburger Heide, and Lange Rhön will not receive national park status, because the political influence of the supporters of the parks is not strong enough.

¹Wolfgang Erz and Hanno Henke, "Zur Möglichkeit von Nationalparken in der Bundesrepublik Deutschland," Natur und Landschaft, 52 (1977), pp. 3-9.

TABLE 2
American and German National Parks in Order of Their Size

Rank	National Park/State	Size (acres)	Year Established*
1	Wrangell-St.Elias/Alaska	8,147,000	1980
2	Gates of the Arctic/Alaska	7,052,000	1980
3	Katmai/Alaska	4,430,125	1980
4	Denali/Alaska ⁺	4,065,493	1980 (1917)
5	Glacier Bay/Alaska	3,878,269	1980
6	Lake Clark/Alaska	2,439,000	1980
7	Yellowstone/Wyoming	2,219,823	1872
8	Kobuk Valley/Alaska	1,710,000	1980
9	Everglades/Florida	1,398,800	1934
10	Grand Canyon/Arizona	1,218,375	1919
11	Glacier/Montana	1,013,595	1910
12	Olympic/Washington	908,720	1938
13	Yosemite/California	760,917	1890
14	Big Bend/Texas	708,118	1944
15	Isle Royale/Michigan	571,796	1931
16	Kenai Fjords/Alaska	567,000	1980
17	Great Smoky Mountains/Tennessee	517,368	1934
18	North Cascades/Washington	504,780	1938
19	Kings Canyon/California	460,136	1890
20	Sequoia/California	403,023	1890
21	Canyonlands/Utah	337,570	1964
22	Grand Teton/Wyoming	310,516	1929
23	Rocky Mountain/Colorado	263,791	1915
24	Badlands/South Dakota	243,302	1978
25	Capitol Reef/Utah	241,904	1971
26	Mount Rainier/Washington	235,404	1899
27	Hawaii Volcanoes/Hawaii	229,177	1916
28	Voyageurs/Minnesota	219,128	1975

*Year when the area was established as a national park.

⁺Former Mount McKinley National Park, enlarged.

Table 2 (continued)

Rank	National Park/State	Size (acres)	Year Established
29	Shenandoah/Virginia	194,328	1935
30	Biscayne/Florida	175,700	1980
31	Crater Lake/Oregon	160,290	1902
32	Zion/Utah	146,547	1919
33	Channel Islands/California	124,740	1980
34	Redwood/California	109,027	1968
35	Lassen Volcanic/California	106,372	1916
36	Petrified Forest/Arizona	93,493	1962
37	Guadalupe Mountains/Texas	76,293	1972
38	Arches/Utah	73,379	1971
39	Theodore Roosevelt/North Dakota	70,345	1978
40	Mammoth Cave/Kentucky	52,129	1941
41	Mesa Verde/Colorado	52,085	1906
42	Berchtesgaden/Bavaria (Germany)	51,900	1978
43	Carlsbad Caverns/New Mexico	46,755	1930
44	Acadia/Maine	38,524	1919
45	Bryce Canyon/Utah	35,835	1924
46	Bavarian Forest/Bavaria (Germany)	32,125	1970
47	Haleakala/Hawaii	28,655	1960
48	Wind Cave/South Dakota	28,292	1903
49	Virgin Islands	14,709	1956
50	Hot Springs/Arkansas	5,826	1921

Source: National Park Service, Index of the National Park System and Related Areas 1979 and Update (1982).

German parks are relatively small. Table 2 shows that they are ranked number 42 and 46 if parks in both countries are listed in order of their size. But reserves in the adjacent countries Czechoslovakia and Austria enlarge the total area protected. The Czechoslovakian Sumava Preserve has a size of 400,000 acres, and parts of it are Strict Nature Preserves. Thus, the actual protected area of Bavarian Forest National park is much larger than indicated in Table 2. Berchtesgaden National Park borders on a smaller Austrian preserve.

Legal Background

There were so many acts and laws passed to establish the U.S. national parks and to regulate their administration and many other tasks, that it is not possible to mention them all. Only the ones that are important for this study will be discussed. These are the Yellowstone Act, the National Park Service Act, and the Wilderness Act in the United States, and the Federal Law for the Preservation of Nature, the Bavarian Law for the Preservation of Nature, and the two acts that established the national parks in Germany. The legal background of national parks begins with the act of March 1, 1872 creating Yellowstone National Park. Because of its basic contents it will be cited.

Section 1 of the act reads:

The tract of land in the territories of Montana and Wyoming, lying near the head-waters of the Yellowstone and described as follows, . . . is reserved and withdrawn from settlement, occupancy, or sale under the laws of the United States, and dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people; and all persons who locate, or settle upon, or occupy any part of the land thus set apart as a public park, except as provided in the following section, shall be considered trespassers and removed therefrom.²

²Jenks Cameron, The National Park Service - Its History, Activities and Organization, (New York/London: D. Appleton and Company, 1922), pp. 93-94.

Section 2 states:

Such public park shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be, as soon as practicable, to make and publish such regulations as he may deem necessary or proper for the care and management of the same. Such regulations shall provide for the preservation, from injury or spoilation, of all timber, mineral deposits, natural curiosities, or wonders, within the park, and their retention in their natural condition. The Secretary . . . shall provide against the wanton destruction of the fish and game found within the park, and against their capture or destruction for the purposes of merchandise or profit. He shall also cause all persons trespassing upon the same to be removed therefrom, and generally is authorized to take all such measures as may be necessary or proper to fully carry out the objects and purposes of this section.²

This act became the basis for a new land use policy for public lands in designated reserves owned by the U.S. Government. All national parks which were established later followed the main guidelines formulated in the Yellowstone Act.

The Act of August 25, 1916 established a separate authority for national parks in the United States to be known as the National Park Service. Section 1 of the act says that the National Park Service was to be administered by the Department of the Interior. The service should be under the charge of a director appointed by the Secretary of that department. The new authority was to promote and regulate use of federal areas such as national parks, monuments, and other reservations, which were found to conserve natural and historic objects and wildlife. Those areas should be protected to leave them unimpaired for the enjoyment of future generations.³ In section 2 it was further determined that the director would have control and supervise all the areas mentioned above which were under the jurisdiction of the Department of the Interior, and of those with similar character that might be created by Congress.³ The last statement is still valid. In the

³Jenks Cameron, The National Park Service - Its History, Activities and Organization (New York/London: D. Appleton and Company, 1922), pp. 87-88.

United States the establishment of a national park requires an act passed by Congress, which means that the federal government decides about the creation of national parks. Section 3 of the National Park Service Act empowered the Secretary of the Interior to order all regulations necessary for management of the areas under the jurisdiction of the National Park Service.⁴

Since 1916 many laws and acts related to national parks and the National Park Service have been passed by Congress. A very important act for this study is the Wilderness Act of September 3, 1964. It tries to assure that an increasing population, expanding settlements, and growing mechanization will not occupy and modify all areas within the United States. Some lands should remain in natural condition for the benefit of the American people of present and future generations. For this purpose a National Wilderness Preservation System was established that is composed of federally owned lands designated by Congress as wilderness areas.⁵ This act became the basis for the establishment of large and numerous wilderness areas within the U.S. national parks such as those in Shenandoah National Park that will be discussed later. Wilderness zones are strict nature preserves which have to be protected as completely as possible from any human impact. Therefore, many restrictions for visitors are used, such as the prohibition of motorized equipment, mechanical transport, and permanent roads. Only backcountry campsites with limited number of users are permitted in some of the larger wilderness areas in the U.S. national parks.

⁴Jenks Cameron, The National Park Service - Its History, Activities and Organization (New York/Lond: D. Appleton and Company, 1922), pp. 87-88.

⁵Lawrence C. Merriam, Jr., "The National Park System - Growth and Outlook," National Parks and Conservation Magazine, No. 12 (1972), p. 8.

The legal status of national parks in the Federal Republic of Germany is based on both federal and state law, unlike the United States where there is only federal law. The Bundesnaturschutzgesetz (Federal Law for the Preservation of Nature) of December 20, 1976 is the general guideline given by the federal government and authorizes the states to create national parks. Section 1 of the law says that national parks have to be legally established and are uniformly protected areas which are

- large in size and of exceptional individuality,
- able to fulfill the conditions of a nature preserve in most of their area,
- in a habitat with little or no human impact,
- able to preserve as many different types of native plants and animals as possible.⁶

Section 2 regulates that the states have to guarantee that national parks will be protected like nature preserves with respect to necessary exceptions caused by large size and included settlements. As far as the goals of protection allow, national parks have to be made accessible to the general public.⁶

Only one of the ten states composing the Federal Republic of Germany, Bavaria, has national parks. Article 8 of the Bayerisches Naturschutzgesetz⁷ (Bavarian Law for the Preservation of Nature) provides that landscapes which are very important because of their balanced ecological situation, their terrain features, and their diversity or beauty can be declared

⁶ Gesetz über Naturschutz und Landschaftspflege (Bundesnaturschutzgesetz) vom 20. Dezember 1976, Paragraph 14 Nationalparke.

⁷ Gesetz über den Schutz der Natur, die Pflege der Landschaft und die Erholung in der freien Natur (Bayerisches Naturschutzgesetz) vom 27. Juli 1973, Artikel 8 Nationalparke.

national parks. They should have a minimum size of 10,000 hectares (25,000 acres), and an act must be passed by the state legislature to establish them.

Based on the Bayerisches Naturschutzgesetz, the state legislature decided on June 11, 1969 to establish Bavarian Forest National Park. Berchtesgaden National Park was created by the act of July 18, 1978.⁸ According to the park authorization acts, the national park authorities have to prepare so-called Nationalparkpläne (National Park Plans), which must be approved by the Department of State Development and Environmental Affairs. They then become guidelines for all the work of the national park authorities.

The purpose of the national parks is also fixed in the Landschaftsrahmenprogramm (Landscape Development Program), which is contained in the Bayerisches Landesentwicklungsprogramm (Bavarian State Development Program).⁹ The Regionalbericht (Regional Bericht) of the region Donau-Wald,¹⁰ which is obligatory for all governmental authorities, defines that the development of the Bavarian Forest National Park and the adjacent areas has to be planned together in a planning commission.¹¹

A summary of the legal background of the U.S. and German national parks shows two main differences between the countries: There is no

⁸Bayerisches Gesetzes- und Verordnungsblatt No. 18/1978, Verordnung über den Alpen- und Nationalpark Berchtesgaden, vom 18.7.1978, München 1978.

⁹Bayerisches Staatsministerium für Landesentwicklung und Umweltfragen, Landesentwicklungsprogramm Bayern, München 1976, Teil B, pp. 126+139 und Teil C, pp. 921, 929-930, 1163, 1171-1172.

¹⁰Bavaria is divided into 18 planning regions. Each of them has to publish a Regionalbericht.

¹¹Bayerisches Staatsministerium für Landesentwicklung und Umweltfragen, Regionalbericht Donau-Wald, München 1975, pp. 87-88.

separate park authority for the two German parks like the U.S. National Park Service and the German parks are not established by the federal government as in the United States where parks are created by the Congress. The government of the Federal Republic of Germany enacted a law that enables each of the ten states to create national parks based on state laws.

Institutions and Organization

Since 1916, when the U.S. Congress created the National Park Service, it has been a separate authority under the Department of the Interior. This organization presently includes a headquarters staff in Washington, D.C., nine regional offices, several field offices, one planning and service center, two training centers, and personnel in each of the various parks, monuments, and related areas. The national headquarters in Washington employs the personnel responsible for different aspects of National Park Service activities and interests, which are organized under such basic categories as legislation, administration, operations, and professional services¹²

Head of the National Park Service is the Director, who is responsible to the Secretary of the Interior. Each of the nine regional offices is administered by a Regional Director who supervises Park Service activities within a given region and reports to the Director of the National Park Service in Washington, D.C. Each of the national parks is administered by a Superintendent who reports to the Regional Director.¹²

In West Germany the administration of the national parks does not involve a separate organization. This is not necessary, because there are

¹²Frank C. Brockman, and Lawrence C. Merriam, Jr., Recreational Use of Wild Lands, (New York: McGraw-Hill Book Company, 1979), p. 134.

only two parks. Each national park has a Nationalparkverwaltung (National Park Administration Office) which is, in the case of Berchtesgaden National Park, a special department of the Landratsamt¹³ to which the park belongs. The Director of each Nationalparkverwaltung is nominated by the Bavarian State Department of the Interior with agreement of the State Departments of Food, Agriculture, and Forestry, and that of State Development and Environmental Affairs. Both Nationalparkämter are in permanent and direct contact with the State Department of Food, Agriculture, and Forestry and also closely cooperate with the other departments mentioned above.¹⁴ Nationalparkverwaltung and the responsible forestry office often work hand in hand.

¹³ Landratsamt is an office that regulates the public administration on a Landkreis (district, about county size) level.

¹⁴ Bayerisches Gesetz- und Verordnungsblatt Nr. 18/1978. Verordnung über den Alpen- und Nationalpark Berchtesgaden, München 1978, pp. 502-503.

CHAPTER III

ANALYSIS AND COMPARISON OF MANAGEMENT POLICIES AND FUNCTIONS

A selection of management policies are discussed in order to examine the differences between the United States and West Germany that were hypothesized to depend on factors like population density, availability of land, and social role of the parks in both countries. Only management policies suitable for a comparison to determine the overall situation with regard to nature preservation, recreation, scientific research, and visitor education of the national parks in the United States and West Germany are included. As stated in the introduction in chapter one, management policies and functions of the national parks are closely linked and have a strong impact on each other. We will begin with a discussion of general management policies in both countries and will further examine specific management policies such as zoning techniques, wilderness preservation, natural resource management, limitation of visitor use, and visitor facilities and concessions management. The following analysis of the functions of national parks in both countries will be based on the information given on management policies and will look at the accomplishment of stated goals and the importance of national parks in both countries.

Throughout this chapter the German national parks, Bavarian Forest and Berchtesgaden, will be mainly compared with the American Shenandoah National Park in Virginia, which had similar problems with reestablishing natural conditions after centuries of human impact to those experienced in the two German parks.

General Policies

According to Zierl, there are four main purposes of the national parks in both the United States and West Germany, that are reflected in management policies.¹ These purposes are preservation of nature, scientific research, education of visitors, and recreation. The ways to achieve these four goals of the national parks differ in some regard because of differing park situations in both countries.

Preservation of nature shows significant differences between the United States and West Germany, because in the first the main task is to preserve the still existing natural or almost natural landscapes, while in West Germany national parks try to reestablish natural conditions.¹ The natural mix of plant and animal species is determined by small areas within the German parks that remained without human impact. Scientific research is also done to find out what was native to the regions. In both German national parks the most effort toward nature preservation must be done in forested areas. Bavarian Forest National Park is 98% forested whereas Berchtesgaden National Park is only about one third forested, but the forest had the strongest human impact during the last centuries. Deforestation and reduction of the number of different trees with regard to diversity of species and age within the same place are major management problems.¹ Forests composed of trees of the same species and age more often suffer from diseases and only allow a limited number of animal species. Whether humans should intervene and help nature regain natural conditions or if they should only rely on time and nature is a point of controversy that will

¹Hubert Zierl, "Amerikanische und deutsche Nationalparke im Vergleich," Berichte der Akademie für Naturschutz und Landschaftspflege, No. 3 (1979), p. 32.

be discussed later. A reduction of the stock of red deer, whose high number causes degradation of the forests, is another task. The purpose of nature conservation also covers the reintroduction of wild animals, formerly native to the region, such as some of the predators.² The problems resulting from this are closely linked with the small size of the German national parks and are therefore much greater than in the larger U.S. national parks. It is often impossible to have the living space of wild animals within the park boundaries. The habitat sometimes exceeds not only the park boundaries, but even extends to adjacent Czechoslovakia and Austria, respectively. Studies showed that animals can easily cross the border to Czechoslovakia. Threats for the preservation of nature in the form of other uses like recreation, lumbering, and fishing will be discussed later. All in all, the problems with nature preservation are much greater in the West German than in the U.S. national parks.

According to Zierl, there are no significant differences with regard to scientific research in national parks between the two countries. The problems, qualified personnel and financing, are about the same, only the dimensions differ. Scientific research in national parks is more observational than experimental research. The main questions are, how ecosystems function and which processes are going on without human impact.³ In both countries many universities and other scientific institutions are involved in these research programs. Of course, more studies have been done in the U.S. national parks because of their higher number and earlier date of

²Hubert Zierl, "Nationalpark Berchtesgaden." Unpublished presentation at Giessen University on November 11, 1980.

³Hubert Zierl, "Amerikanische und deutsche Nationalparke im Vergleich," Berichte der Akademie für Naturschutz und Landschaftspflege, No. 3 (1979), p. 32.

establishment, but a considerable number of projects have already been finished or are going on in the relatively new German parks.

The third task of national parks in both countries, education of visitors, mainly aims to endow the visitors with knowledge about the natural processes in the parks. This education facilitates an understanding of the ecosystems and can have a positive impact on people's behavior with regard to preservation of nature. The methods of visitor education utilized will be discussed under "Visitor Facilities" later in this chapter. In general, visitor education in the U.S. as well as in the West German national parks is sufficient, but the German parks are still under development and therefore not all of the plans for visitor education have been realized.

National parks in both countries are open to some recreational uses. The Yellowstone Act of 1872 stated, that the area is "dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people."⁴ The United States still follows this policy and sometimes touristic overuse of the parks occurs. The Bavarian Law for the Preservation of Nature allows recreation in the national parks and both German parks also attract a considerable number of visitors.⁵ The visitor activities within the U.S. and German parks mainly concentrate on hiking. In the U.S. parks sightseeing plays a more important role. The problems resulting from visitations are more severe in the West German than in most

⁴Jenks Cameron, The National Park Service - Its History, Activities and Organization, (New York/London: D. Appleton and Company, 1922), p. 93.

⁵Bayerisches Naturschutzgesetz vom 27.7.1973, Art. 8 Nationalparke.

U.S. parks because of smaller park size and thus higher impact of the crowds on nature.

Another purpose of national parks in both countries is the conservation of historical heritage like old Indian cliff dwellings in the U.S. Mesa Verde National Park and architecturally interesting huts on mountain pastures in Berchtesgaden. A defined goal of Bavarian Forest National Park is the promotion of touristic development in the adjacent towns and villages in this lightly industrialized and relatively remote region of West Germany.⁶

Zoning Techniques

Zoning is the subdivision of an area in zones for different purposes. It is a very powerful instrument to influence and regulate the use of national parks in order to provide proper recognition and protection for park resources. As a tool for resource management zoning indicates where different forms of physical development may take place and equally important, where they may not take place.⁷ With the help of zoning techniques visitors also can be excluded from special areas while recreational and educational facilities are provided in other zones. Zoning techniques are used in almost all countries that have national parks. Most countries follow categories of zones similar to those described in the next three paragraphs.

⁶Franz Schumertl, "Die Bedeutung des Nationalparks für das Umland," Allgemeine Forst Zeitschrift, 33 (1978), p. 315.

⁷Food and Agriculture Organization of the United Nations (FAO), ed. National Parks Planning, (Rome: FAO Publications Division, 1976), p. 11.

The Food and Agriculture Organization of the United Nations (FAO) lists seven separate and distinct management zones. The first is the Primitive-Scientific Zone, which represents lands with the most important and often the most fragile natural values within the parks. No human activity is permitted that could degrade these values. Only structures necessary for management and preservation of the wilderness are allowed.⁸ The second zone is the Primitive Zone. It contains outstanding natural features too, but has a lesser overall environmental quality than the Primitive-Scientific Zone. Physical development is restricted to only rudimentary trails, simple campsites, guard outposts, and minimal research facilities.⁸

The Extensive Use Zone provides visitors with high quality park environment. Some basic physical development is permitted, but every effort is made to reduce the human impact on this zone.⁹ In the Intensive Use Zone high-density visitor and management use will be found. This zone usually covers only a small percentage of a park's total area and contains facilities like visitor centers, visitor supply stores, formal campgrounds, overnight accommodations, and park administration offices.⁹

The Special Use Zone is designated for basic management services such as employee housing, water and electric generators, etc. The zone also is used to designate lands which support land use practices incompatible with park objectives. Other zones are the Historic-Cultural Zone and the Zone of Recuperation, which is composed of lands that had been altered from

⁸ Food and Agriculture Organization of the United Nations (FAO), ed. *National Parks Planning*, (Rome: FAO Publications Division, 1976), p. 11.

⁹ Ibid., p. 12.

their natural condition by human impact.⁹

In the United States the National Park Service uses only four different management zones, but they approximate those described by the FAO. The four zones are Natural, Historic, Park Development, and Special Use.¹⁰ It is stated that park lands shall be zoned to designate where various strategies for management and use will best fulfill management objectives and achieve the purpose of the park. The zoning has to be developed in consideration of capability of the land to support identified uses.¹⁰ All zoning regulations are contained in the so-called General Management Plan (formerly Master Plan) of the individual national park, which is the conceptual planning document that establishes the guidelines for purpose, use, preservation, management, and development of the area.

In the U.S. national park lands and waters in the Natural Zone are to be managed to ensure that natural resources and processes remain largely unaltered by human activity. Therefore, physical development will be absent or limited to dispersed recreational and management facilities, such as picnic areas, interpretive displays, etc.¹¹

In the Historic Zone all lands are managed to preserve cultural resources or to commemorate historical subjects. Activities in this zone generally are limited to sightseeing and study of the cultural features.¹¹ Not all U.S. national parks have historic or cultural values that are worth being protected in this zone. The best example is Mesa Verde National Park in

¹⁰U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. II-3.

¹¹Ibid., p. II-4.

Colorado, which is famous because of old Indian cliff dwellings.

The Park Development Zone contains lands managed to support nonhistoric park development and intensive public use which substantially alter the natural environment. This zone is restricted to the smallest area necessary to accommodate required major development and intensive use. It contains parking lots, public use roads, aggregations of buildings, and park utilities.¹²

The fourth and last zone, the Special Use Zone, is almost identical with the same zone named by the FAO and mentioned earlier. Special Use Zones in U.S. national parks include lands and waters to be used by other agencies or interests for purposes not permitted in natural, historic, or development zones. These purposes are reservoirs, private development, non-federal open space, and areas supporting or proposed for mining, ranching, or lumbering.¹² An example is the reservoir in Hetch Hetchy Valley in Yosemite National Park in California.

The described management zones can easily be recognized in the larger national parks like Yellowstone and Grand Canyon, where the lodges and other visitor facilities are concentrated in a few relatively small areas.

In West Germany there are no general guidelines for zoning in the national parks. Each of the two existing parks has zones that fit the physical situation and stated goals best. Because both zoning systems differ from the U.S. methods of zoning, both will be explained in the following discussion.

¹²U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. II-4.

As pointed out earlier, Bavarian Forest National Park is adjacent to the Czechoslovakian border and was established in 1969. It is still in an early stage of development toward being a national park according to the international definitions that were mentioned in Chapter I. Its relatively small size (32,125 acres) and its high number of visitors make necessary regulating methods like zoning. To fulfill the sometimes contradictory tasks of a national park, three zones were established. These are the Strict Nature Preservation Zone, the Rest and Hiking Zone, and the Recreation Zone.¹³

The Strict Nature Preservation Zone (Reservatbereich) covers about 40% of the area of the park and is located in relatively high elevation along the border with Czechoslovakia. In this zone the forest is managed to preserve or reestablish natural conditions. Natural preservation has total priority. Visitors are restricted to marked trails. The Strict Nature Preservation Zone is also designated for the renaturalization of rare animals and plants that were formerly native to the region. This task is facilitated by the fact that the adjacent area in Czechoslovakia has the character of a strict nature preserve too, so that the total area is much larger.¹⁴

The second zone, the Rest and Hiking Zone (Ruhe und Wanderbereich), amounts to about one half of the park and is located downstream of the Strict Nature Preservation Zone. This zone is composed of formerly intensively used forests and is designated for visitors in search of rest and hikes. Therefore, it is endowed with a dense network of marked trails.

¹³H. Weinzierl, H. Bibelriether, and G. Sperber, Nationalpark Bayerischer Wald (Grafenau: Verlag Morsak, 1972), pp. 90-93.

¹⁴Ibid., pp. 90-93.

Benches for rest and shelter huts complete the facilities. It is further planned to establish natural trails that give reference to phenomena of nature.¹⁴

The purpose of the Recreation Zone (Erholungs- oder Schwerpunktbesucherzone), which is located at the border of the park along the public roads, is to provide all sorts of recreational facilities. The attractions of this zone keep many visitors out of the other zones and thus have a regulating effect. The recreation Zone contains the visitor center, educational facilities, and zoological gardens with rare animals like wolf, lynx, and bison. These facilities have a pure touristic character and do not represent the main task of a national park, which is nature conservation.¹⁵

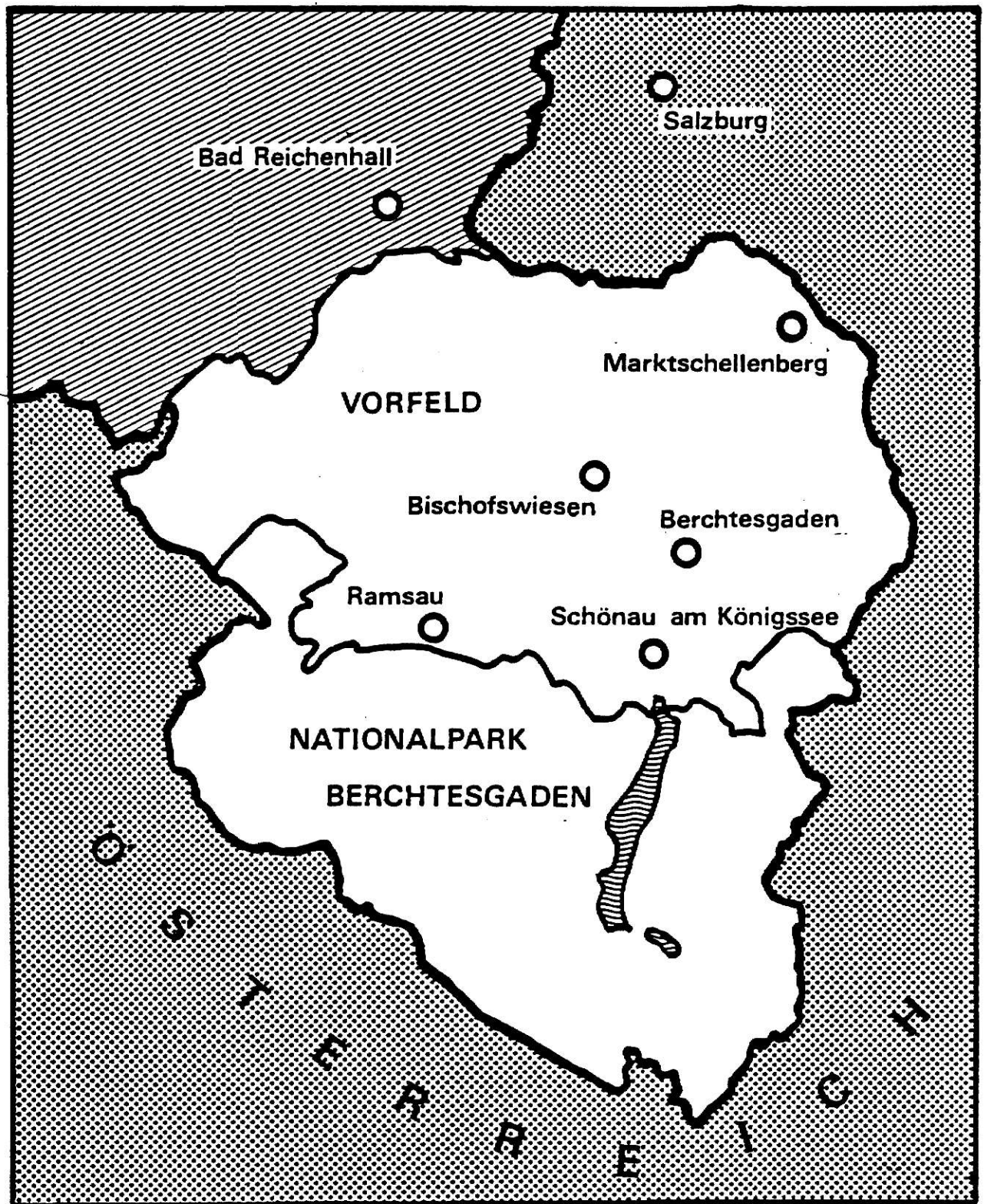
The approaches (= adjacent area surrounding the park) of the Bavarian Forest National Park form a planning unit together with the national park. So comprehensive planning is guaranteed within the goals of the Nationalparkamt (National Park Administration Office). This is necessary, because touristic and other development in the approaches has always an impact on the national park too.

Berchtesgaden National Park is located in the southeast corner of Bavaria and is surrounded by Austria on three sides. (See Figure 3) The spatial position of the Berchtesgaden district at the edge of Bavaria encouraged plans to divide the whole area into zones of different uses. In 1973, an expert report of the Bund Naturschutz in Bayern e.V.¹⁶

¹⁵H. Weinzierl, H. Bibelriether, and G. Sperber, Nationalpark Bayerischer Wald (Grafenau: Verlag Morsak, 1972), p. 93.

¹⁶Bund Naturschutz in Bayern e.V., Gutachtliche Stellungnahme zur Frage der Errichtung eines Alpennationalparks im Berchtesgadener Land, München, 1973.

Figure 3. Berchtesgaden National Park and Alpenpark



Source: Nationalparkverwaltung Berchtesgaden

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(Association for Nature Preservation in Bavaria) dealing with the establishment of a national park proposed to make the whole area an "Alpen-Nationalpark" (Alps National Park). The report suggested three zones of use. In the south 67,000 acres of the overall 111,000 acres should become the Core Zone (Kernbereich) of the national park with absolute nature preservation which could almost be compared with wilderness areas in the U.S. national parks. The adjacent Rest or Neutral Zone (Ruhe- oder neutrale Zone) of 24,500 acres was to contain educational facilities for the visitors, but no motorized traffic and lodges. It would serve as a buffer for the Recreation Zone (Erschliessungszone). The Recreation Zone was proposed to have 19,500 acres and to include already existing settlements, lodges, and all other touristic facilities.¹⁷

The idea of a comprehensive plan for the whole area to solve the conflict between nature preservation and recreation became so strong that the Alpenpark Berchtesgaden was created by the Bavarian state government by the act of July 18, 1977.¹⁸ The concept of the Alpenpark (113,700 acres) involves subdividing the area into two parts, Berchtesgaden National Park (51,900 acres) and the so-called Vorfeld (Approaches, 61,800 acres) as shown in Figure 3. The only forms of recreation offered in the national park are hiking, mountain climbing, and crosscountry skiing.¹⁹ Driving, camping, and other activities are prohibited, except for lodging in a few shelter huts for mountain climbers. The created national park corresponds

¹⁷Bund Naturschutz in Bayern e.V., Gutachtliche Stellungnahme zur Frage der Errichtung eines Alpennationalparks im Berchtesgadener Land (München 1973), pp. 6-8.

¹⁸Bayerisches Gesetz- und Verordnungsblatt Nr. 18/1978, Verordnung über den Alpen- und Nationalpark Berchtesgaden vom 18.7.1978, München, 1978.

¹⁹Hubert Zierl, "National Park Berchtesgaden," Nature and National Parks, No. 70 (1980), pp. 10-12.

almost completely with the proposed core zone of the Association for Nature Preservation in Bavaria in regard to size, site, and uses and restrictions. The proposed rest or neutral zone and the recreation zone became the Vorfeld (Approaches). This zone contains all recreational facilities not permitted in the national park such as lodges and campgrounds.

Planning always covers the whole Alpenpark, so that possible impact of development in the Vorfeld can be avoided without consulting another planning authority. This method of zoning renders possible effective nature preservation and tourism with all its recreational needs within the same region. Tourism has been an important economic factor for this region for a long time, and only this concept to link tourism and nature preservation without too much impact on the latter has permitted the Berchtesgaden National Park to come into existence.

Wilderness Preservation

A special zoning technique is the establishment of Wilderness Areas within national parks. The legal background for wilderness preservation in the United States is the Wilderness Act of September 3, 1964, which was discussed in Chapter II. In the United States, the concept of wilderness preservation has been an integral part of the national park management philosophy from the earliest beginnings of the national park system.²⁰ Nearly all of the older U.S. parks were wilderness at the time they were created.²¹ Later on, human impact endangered the original wilderness character of the areas.

²⁰U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. VI-1.

²¹F. Fraser Darling and Noel D. Eichhorn, Man & Nature in the National Parks. Reflections on Policy, (Washington, D.C.: The Conservation Foundation, 1969), p. 77.

The situation is quite different in West Germany. When the lands were set aside for preservation, almost the whole area of the national parks had been used for lumbering, grazing, and other activities for centuries. Only some relatively small parts of the parks in natural or almost natural condition were wilderness. Therefore, the task of the German national parks is to reestablish wilderness conditions. It will take decades before this goal is achieved and true wilderness preservation can begin.

The U.S. Wilderness Areas have many restrictions on visitor use. Motorized equipment as well as mechanical transport is not allowed. There are no permanent roads, only narrow, unpaved foot and horse trails are permitted. All equipment brought into the Wilderness Area must be taken out at the end of each wilderness trip. In the management of wilderness resources, the National Park Service uses the minimum tool necessary in order to minimize wilderness degradation.²² Only backcountry campsites with limits on the number of users are permitted in some of the larger Wilderness Areas in the national parks. In 1979, there were 12 national parks in the United States with designated Wilderness Areas, varying in size from 8,100 acres in Mesa Verde National Park to 1,296,500 acres in Everglades National Park.²³

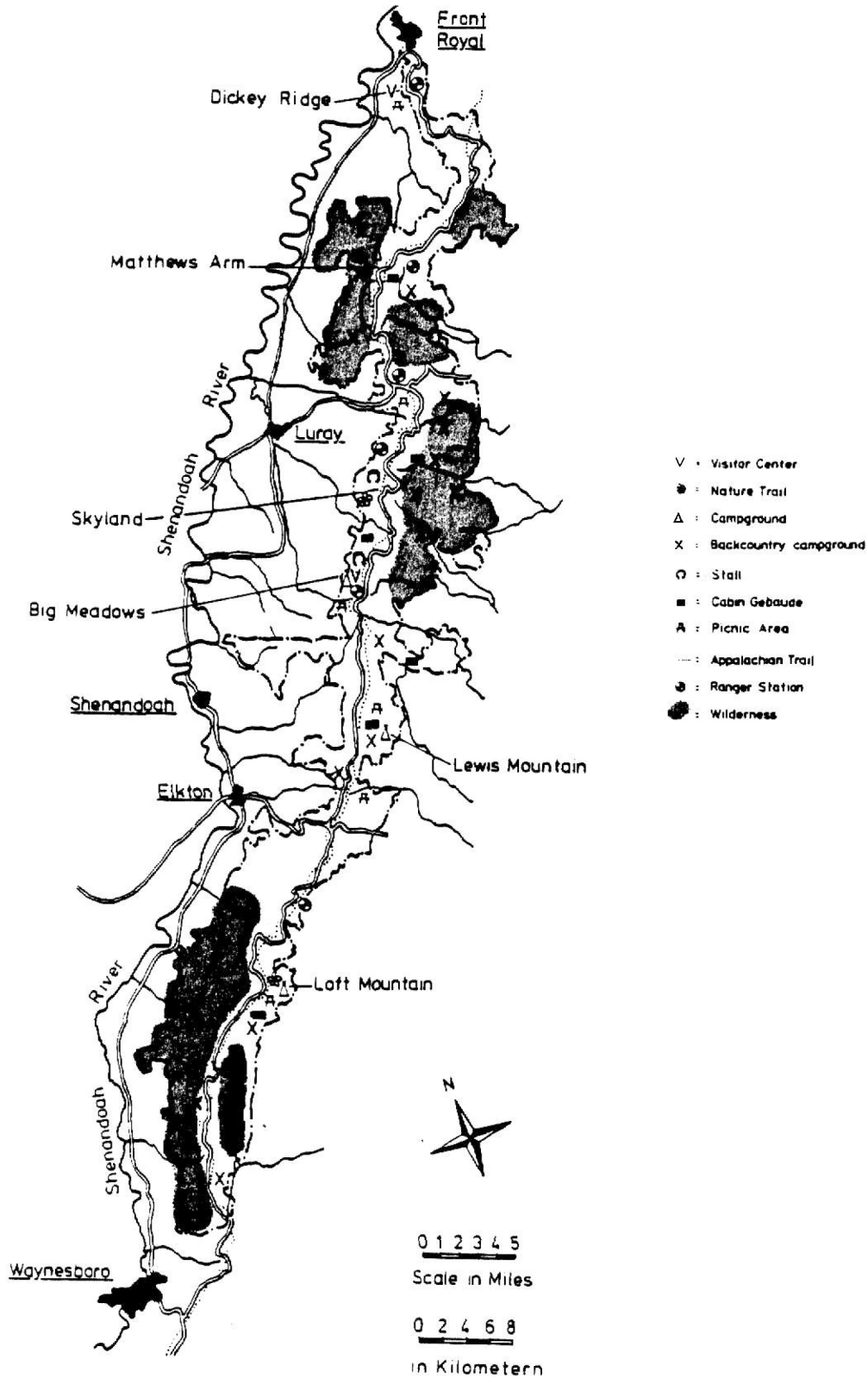
Figure 4 shows the Wilderness Area in Shenandoah National Park in Virginia. 79,000 acres of the overall 194,300 acres are designated as wilderness.²⁴ This figure also demonstrates that backcountry campsites

²²U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), pp. VI-6-9.

²³U.S. Department of the Interior National Park Service, Index 1979: National Park System and Related Areas, (Washington, D.C.: U.S. Government Printing Office), 1979.

²⁴*Ibid.*, p. 60.

Figure 4. Shenandoah National Park



Source: Dirk Van Acken, "Geplante 'Wildnis' - Der Shenandoah National Park in Virginia, USA," Landschaft + Stadt, No. 1 (1974), p. 45.

are the only facilities allowed in Wilderness Areas. The German parks have no designated Wilderness Areas.

Natural Resource Management

The purpose of natural resource management of the U.S. National Park Service, as well as of the German national park authorities, is to reestablish, maintain, and perpetuate the inherent integrity of the natural resources which include vegetation, animal life, and water and geological features. In order to achieve this goal, both countries employ a whole collection of management policies. The following discussion will compare some of these policies and problems related to them.

In the United States, as a general policy, the National Park Service does not allow consumptive utilization of renewable or non-renewable park resources. But there are some rights for uses like lumbering within the national parks of the United States and West Germany that are based on old laws which permit consumptive use and oppose the national park goals in both countries. The national park authorities try to eliminate or at least limit these activities.

Agricultural uses are not permitted in the Natural Zones of the U.S. parks. In the other zones agricultural uses require special permits based on strict regulations and issued only as rare exceptions.²⁵ Agriculture is not allowed in the West German parks, but lumbering is still a problem. In both German parks some lumbering is permitted under old rights. This is one of the main problems of the parks and the park

²⁵U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. IV-4.

authorities are working to totally repeal these rights. Some lumbering is promoted by the park authorities because it facilitates the reestablishment of natural conditions in the park forests. Parts of former commercial, uniform forests that are composed of trees of the same age and species have to be cut to make place for healthy and mixed natural vegetation. The American Shenandoah National Park faced similar problems with former commercially used forest and followed the same policy with regard to reestablishing natural conditions.

Commercial grazing is not permitted in U.S. parks where it is detrimental to the primary purpose for which the park was established. Grazing and raising of livestock are allowed in historic zones where they are desirable to perpetuate and interpret the historic scene.²⁷ In the German Berchtesgaden National Park grazing is still found on mountain pastures and is reason for heated controversy. Some argue that grazing has been a tradition for centuries and therefore it is part of the historical heritage and should be permitted. There are two sorts of grazing in Berchtesgaden National Park. Seventeen hundred acres of range land and 9,200 acres of forest are approved for grazing. Fortunately, not all of these authorized areas is actually used.²⁸ Grazing in the forest, especially, has a tremendous impact on the vegetation. The results are degradation of trees and shrinking diversity of tree species. If the

²⁶ Peter Wörnle, Landschaftsanalyse Alpenpark Berchtesgaden, (Ramsau: Berchtesgadener Anzeiger, 1981), p. 119.

²⁷ U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), pp. IV-5-6.

²⁸ Peter Wörnle, Landschaftsanalyse Alpenpark Berchtesgaden, (Ramsau: Berchtesgadener Anzeiger, 1981), pp. 95-108.

declared purpose of national parks, which is nature preservation under natural conditions, is to be assured, at least grazing in the forest must be stopped as soon as possible. The policy of the Berchtesgaden National Park Administration Office pursues this goal.

Another important factor in natural resource management is the management of animal populations. The U.S. National Park Service states that one of its goals is to maintain the natural abundance, behavior, diversity, and ecological integrity of native animals in natural portions of the parks as part of the parks' ecosystems. It is further the policy that natural processes shall be relied upon to regulate populations of native species, but unnatural concentrations of native species, caused by human activities, may be regulated if those activities cannot be controlled.²⁹ The declared policy of the German national parks is quite similar, yet the problems differ.

The American Yellowstone National Park faces an overpopulation of elk caused by a decimation of wolves. Every year, many elk have to be killed to reduce their impact on the vegetation.³⁰ In the Hawaiian national parks the non-native goat population grows so fast that hunting of goats has had to be initiated.³⁰ Both German national parks regulate the red deer population because without natural enemies the natural increase would be too high, resulting in enormous degradation of the trees.³¹ An expert report for Berchtesgaden National Park proposes to stop the feeding of red deer in winter in order to be able to stop hunting and to achieve a

²⁹U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), pp. IV-6-7.

³⁰F. Fraser Darling and Noel D. Eichhorn, Man & Nature in the National Parks. Reflections on Policy, (Washington, D.C.: The Conservation Foundation, 1969), pp. 58-67.

population harmonizing with the natural conditions of the area.³² The reintroduction of native plants and animals is promoted by national park authorities in the United States as well as in West Germany.

In the United States fishing has been traditionally permitted in the national park system since the establishment of Yellowstone. If necessary, waters may be closed to fishing to protect rare plant and animal species.³³ In West Germany the national park authorities control and regulate the fish population. The Königssee in Berchtesgaden National Park has one professional fisherman that is entitled to fish.³⁴

All in all the problems with natural resource management are greater in the German national parks, because there has been human impact on the natural resources for centuries and it will take a long time to reestablish natural conditions.

Limitation of Visitor Use

Limitation of visitor use has become a necessary management policy in the U.S. as well as in the German national parks since the number of park visitations has been growing until today and is predicted to keep on increasing.

³¹G. Sperber, "Das Schalenwild und sein Einfluss auf die Waldentwicklung im Nationalpark," Nationalpark Bayerischer Wald, ed. H. Weinzierl et al. (Verlag Morsak, Grafenau, 1972), pp. 115-127.

³²Wolfgang Schröder, Gutachten zur Behandlung der Wildtiere im Bereich des Nationalparks Berchtesgaden, (München: Forstliche Forschungsanstalt, 1977), p. 64.

³³U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. IV-8.

³⁴Peter Wörnle, Landschaftsanalyse Alpenpark Berchtesgaden, (Ramsau: Berchtesgadener Anzeiger, 1981), p. 136.

Zoning is an effective tool to limit visitor use and can form the basis for all other methods. In the management policies for the U.S. parks it is stated that the National Park Service will, whenever necessary, regulate the amount and kind, and time and place, of visitor use in the parks. This is done to provide an enjoyable park experience for the visitors and to preserve the scenery, the natural and historic objects, and the wildlife.³⁵ Limitations on visitor use in the German national parks are mainly formulated in the acts that created the parks. Important regulations are the prohibition of camping, swimming, and fires within the parks.

The establishment of trails in park areas designated for recreational uses also helps restrict visitors through guiding them and keeping them out of other areas.³⁶ In Bavarian Forest National Park a dense network of marked trails in the Recreation and the Rest and Hiking Zone was created for that purpose. In the Strict Nature Preservation Zone are some areas where the visitors are not allowed to leave the trails in order to minimize human impact on nature. So-called Besucherschwerpunkte (Visitor Main Points) in the Recreation Zone are an indirect method of limiting visitor use. The attractions such as visitor centers, zoological gardens, geological trails, forest recreation grounds, and other facilities, keep visitors out of the other zones of the park. Some ecologically fragile areas of the park have the status of game preserves. Access is totally

³⁵U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. VII-1.

³⁶Hans Bibelriether, "Erholung im Nationalpark - wichtigste Voraussetzung ist die Lenkung der Besucherströme," Allgemeine Forst Zeitung, 33 (1978), p. 310.

prohibited from November 1 to May 15. Berchtesgaden National Park has established a network of marked hiking and climbing trails to control and guide the routes of the visitors as shown in Figure 5. Limitation and guidance of visitors with marked trails and special attractions is also a policy of the U.S. National Park Service. Scientific studies have shown that the overwhelming majority of visitors accept the trails and leave them, if at all, for only a short distance.

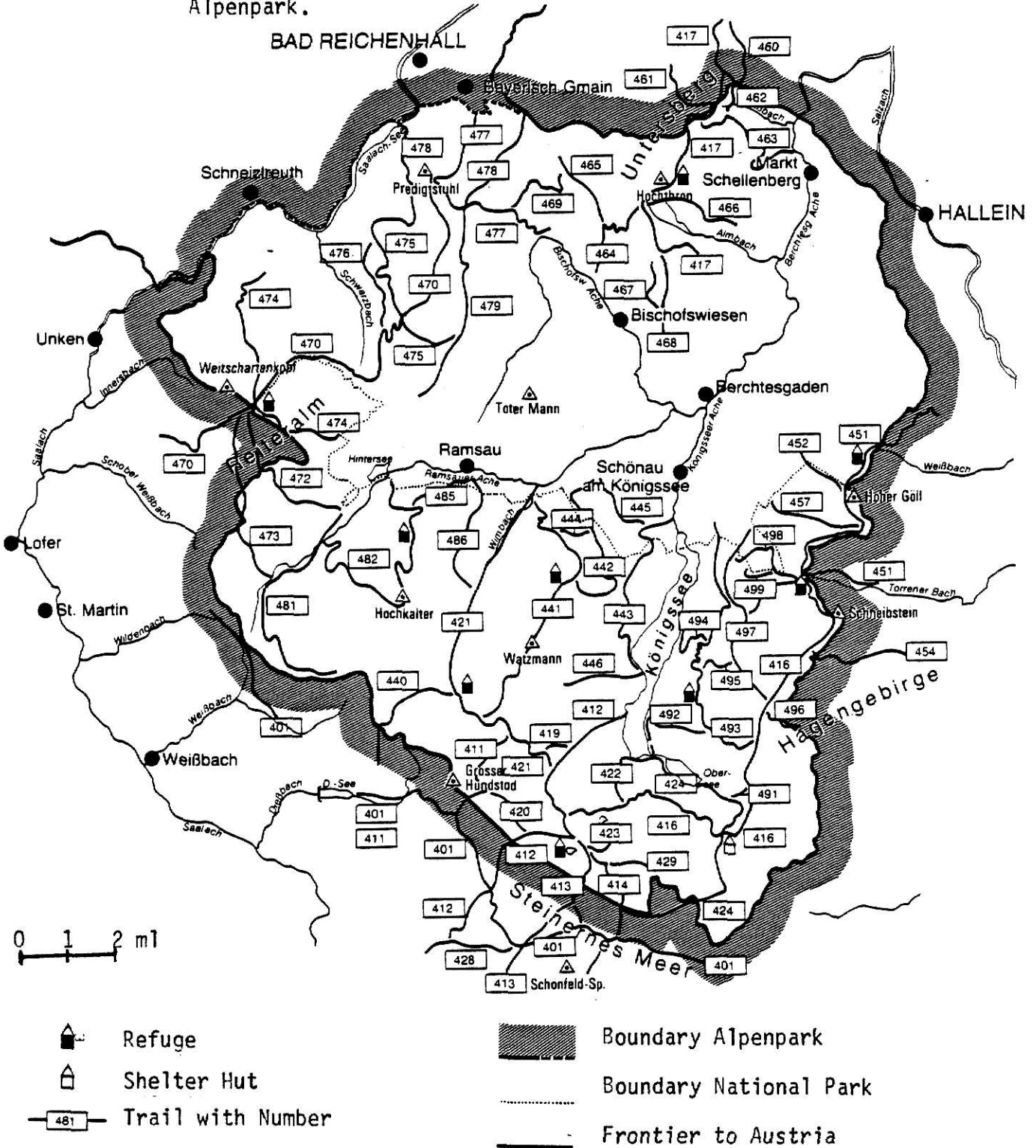
Another method used by the U.S. National Park Service is not to provide facilities. New lodges and campgrounds are not constructed and those already existing are not enlarged within the boundaries of some parks. Sometimes new lodges and campgrounds are not permitted at all, or permitted only outside the national parks. These limitations are supported by the right of the National Park Service to institute campground reservation systems when the demand for camping periodically or chronically exceeds the number of campsites.³⁷ For example, Grand Canyon National Park employs this regulating method in some of its campgrounds. Shenandoah National Park controls visitor use with the designation of some areas as wilderness areas with special permits for camping and a limited number of campsites (see Figure 4).

Visitor Facilities and Concessions Management

There are some significant differences in management policies with regard to visitor facilities and concessions management of the U.S. and German national parks. In general, in the German parks overnight accomo-

³⁷U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. VII-13.

Figure 5. Trails and Facilities in Berchtesgaden National Park and Alpenpark.



Source: Peter Wörnle, Landschaftsanalyse Alpenpark Berchtesgaden, (Ramsau: Berchtesgadener Anzeiger, 1981), p. 155.

modations and campgrounds within the parks are not permitted. The visitors, except for a few mountain climbers that are allowed to stay overnight in shelter huts in Berchtesgaden National Park, have to lodge or camp outside the park and only come in for day visits. This is possible, because the distances in the parks are relatively small compared with those in the United States. The enormous dimensions of many U.S. parks prevent reaching the main attractions with a day hike from outside of the park. Therefore, overnight accommodations in the form of hostels, comfort stations, group campgrounds, and backcountry campsites had to be established within the parks. Most of these facilities are run by private concessioners. The Department of the Interior grants to private companies or individuals the privileges of providing facilities and services which are considered necessary for the accommodation and convenience of park visitors.³⁸

Transportation to and from the accommodations requires a network of roads which are sometimes so highly frequented that even traffic lights have to be used. Of course, this results in strong human impact in some areas, but on the other hand the roads are an effective tool to guide and control the visitors. The roads that lead to the main attractions keep the visitors out of other park areas that thus can remain in wilderness condition. The German national parks have public roads only at their edges, and the declared policy is to minimize the number of cars. Parking lots are found in the parks of both countries, but in general they are much larger in the U.S. parks.

³⁸U.S. Department of the Interior, National Park Service, Visitor Accommodations, Facilities and Services, (Washington, D.C.: U.S. Government Printing Office, 1976), p. 1.

An interesting innovation is a visitor transportation service which is an alternative to the auto in the U.S. parks. Cars are recognized as the reason for many threats to the parks, and a visitor transportation service offers new and improved interpretive opportunities, reduced traffic congestion, reduced noise and air pollution, and less waste of energy. This all results in better resource protection.³⁹ In 1970, the U.S. National Park Service started with a free transportation system, using propane-powered shuttlebuses in certain parts of Yosemite National Park. Later, free or low-fee alternate transit systems were established in other national parks like Mesa Verde, Everglades, Mount McKinley, and Grand Canyon. In addition to public transportation within the parks the National Park Service has joined with major private bus and rail concerns in an effort to coordinate schedules and routes to parks and to stimulate the use of mass transit.⁴⁰ The importance of trails has been discussed earlier in this chapter.

Interpretive facilities are provided by the park authorities in both countries for informational, interpretive, and visitor use programs in order to help the visitor to appreciate the park's significance.⁴¹ In U.S. parks these facilities take the form of visitor centers, amphitheaters, and wayside exhibitions. The German Bavarian Forest National Park has a modern visitor center with audiovisual and other facilities besides many wayside exhibitions inside the park. Berchtesgaden National Park is still in an early stage of development, but soon comprehensive facilities

³⁹U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. III-3.

⁴⁰Andrew D. Gilman, "In and Around the National Parks: Alternatives to the Auto," National Parks and Conservation Magazine, No. 7 (1976), pp. 4-5.

⁴¹U.S. Department of the Interior, National Park Service, Management Policies, (Washington, D.C.: U.S. Government Printing Office, 1978), p. III-3.

will be opened. Guided tours and lectures complete the visitor information programs in both countries.

Other visitor facilities like zoological gardens, forest recreation grounds, and geological trails are found in national parks of both countries and were discussed earlier. Berchtesgaden National Park has 21 electric motor-boats that are run by a state agency and carry 700,000 to 800,000 persons a year.⁴² Some American parks allow boats on their waters and even private fishing is common in many lakes, such as Yellowstone Lake. Concessions are more numerous in the U.S. parks as shown by the five lodging complexes in Yellowstone National Park. The German parks have only concessions for a few shelter huts.

To summarize, the amount and diversity of visitor facilities is much higher in the American national parks as shown in Figure 4 for Shenandoah National Park. The higher number of facilities inside the U.S. parks is mainly caused by the larger size of these areas.

Functions of the National Parks

Determining the functions of national parks in the United States and West Germany would not appear to be difficult, because the purpose of the parks was formulated in laws and acts in both countries. But to find out the actual functions of the parks in both countries requires an analysis of the accomplishment of the stated goals. Another method to express the functions of the parks is to look at the importance of the parks in regard to visitor use. Both analysis of accomplishment of stated goals and importance of the parks in terms of recreational and other uses will be presented in the following discussion.

⁴²Peter Wörnle, Landschaftsanalyse Alpenpark Berchtesgaden, (Ramsau; Berchtesgadener Anzeiger, 1981), pp. 158-159.

Accomplishment of Stated Goals

As already mentioned under "General Policies" at the beginning of this chapter, there are four main goals of national parks in the United States and West Germany. These are preservation of nature, recreation, education of visitors, and scientific research. A look at the accomplishment of these stated goals in the national parks of both countries helps to define their functions.

The main purpose of national parks is nature preservation and was formulated as early as the Yellowstone Act of 1872. This task of the parks faces the most problems and threats. In the United States preservation of nature within the parks is endangered by a great variety of threats caused by human activity. It is not only overuse by an increasing number of visitors; other factors are important too. In several parks some hunting is done because special animal populations like elk and red deer grow so fast without natural enemies that park authorities reduce their number in order to limit the degradation of the vegetation. Another problem of many U.S. parks is that some park lands are still in private ownership and cannot be controlled by the National Park Service. Lumbering, hunting, and private development do not fit the preservation purpose of national parks. The introduction of some exotic plants and animals, and individual problems of the parks like the construction of a water reservoir in Hetch Hetchy Valley in Yosemite National Park and the very small size of Hot Springs National Park in Arkansas, are minor threats compared with overuse problems. Human use is the number one enemy of the national parks, but also one of the purposes. Human impact, especially in the form of many visitations, on fragile ecosystems endangers and sometimes hinders effective preservation of nature. The growing number of visitors requires strict regulations to minimize the impact.

This goal has not been achieved in parts of some of the most frequented U.S. parks like Shenandoah National Park in Virginia, but most park lands are adequately protected.

In the German national parks the accomplishment of the nature preservation goal is even worse. First of all, most of the areas had been used during the last centuries and thus natural conditions have to be reestablished before nature preservation can actually start. Besides that fundamental fact, Bavarian Forest National Park has two other main problems that prevent the accomplishment of effective nature preservation. There is still some lumbering occurring inside the national park, and hunting is done to regulate the populations of some animal species. Another problem is that three smaller settlements are located within Bavarian Forest National Park. They are not part of the park, but are completely surrounded by it. Fortunately, these settlements are close to the park boundary. In Berchtesgaden National Park it is not only lumbering and hunting, grazing on mountain pastures also degrades nature. These human activities that cannot be reconciled with the original idea of national parks, and heavy visitor overuse led Hubert Weinzierl, President of the Association for the Preservation of Nature in Bavaria, to conclude that it is inaccurate to label Bavarian Forest and Berchtesgaden as national parks. It would be more honest to speak of well-equipped nature parks, unless the mentioned threats have been banned.⁴³

Another goal of the national parks is to be open for people to recreate as long as the first goal, nature preservation, is not seriously affected. The slogan "Parks are for People" in the meaning of "pleasuring-

⁴³Hubert Weinzierl, "Das Ende der Nationalparkidee?" Kosmos, 73 (1977), pp. 307-312.

ground" as stated in the Yellowstone Act came up. The purpose to provide recreation has been largely fulfilled by the national parks of the United States as well as of those in West Germany. Darling and Eichhorn mention that 5% of the Yellowstone National Park is already taken up by development, primarily facilities which prepare the park for the ordinary, nearly car-bound tourist, and have an impact on an even much larger area of the park.⁴⁴ Visitor numbers will be given and analyzed under "Importance of the National Parks" at the end of this chapter.

The third goal of national parks, information and education of visitors to improve their knowledge and understanding of ecological processes and the necessity of nature preservation, has been fulfilled in the U.S. parks as far as such a goal can be reached at all. Bavarian Forest National Park also provides good facilities and programs for visitor education and Berchtesgaden National Park will achieve this in the near future.

Scientific research has been conducted according to the purpose of the national parks in both countries. The specific goal of Bavarian Forest National Park to promote touristic development in this remote region of Bavaria has been fulfilled and will be subject to a discussion later on.

To summarize, the stated goals recreation, visitor education, and scientific research have been more or less achieved in the national parks of the United States and West Germany. The most serious problems regard nature preservation. There are numerous threats for the U.S. parks in regard to this goal, but the overall situation is by far better than in

⁴⁴F. Fraser Darling, and Noel D. Eichhorn, Man & Nature in the National Parks. Reflections on Policy, (Washington, D.C.: Conservation Foundation, 1969), p. 37.

the German parks because of larger size of the U.S. national parks and real wilderness condition at the time of the establishment of most of them. The relatively young German parks are still in an early stage of development and therefore it was expected that not all problems could yet be solved. This discussion of the accomplishment of stated goals looked at the purpose of the national parks in a domestic light and how expressed in laws and acts on a national level.

By considering the international definition of national parks as formulated by the International Union for Conservation of Nature and Natural Resources (IUCN) in New Delhi in 1969 (See Chapter I), neither German national park presently fulfills this definition. According to the New Delhi definition, ecosystems within the parks must not be changed by human impact, but lumbering and hunting in both German national parks and grazing on mountain pastures in Berchtesgaden National Park still violate this international guideline.

Very few of the U.S. national parks like hot Springs National Park in Arkansas also do not completely accomplish the strict international definition, because touristic development and recreation are more important than nature preservation in these parks. Nevertheless, the overwhelming majority of U.S. parks reach the high standards required by the New Delhi definition and the U.S. National Park Service has started to take away national park status from areas that do not deserve it. An example is the former Platt National Park in Oklahoma.

Importance of the National Parks

To define the importance of the national parks in the United States and West Germany is a difficult task, because a simple measurement of

importance is impossible and the use of indicators is necessary. The following discussion will be mainly based on publications and visitor statistics.

Mrass reports that it is remarkable that the Americans are really proud of their national parks. They look at the parks as a national heritage and feel obligated to preserve them for future generations. There is something like a personal relationship of the Americans to their national parks.⁴⁵ Interviews came up with the result that many Americans look at a national park visit as the form of recreation with the highest possible quality.⁴⁶ In West Germany the public interest in national parks is, so far, not as high as in the United States. The two national parks are relatively new and information about them has not yet reached all the people. Another factor is that it is difficult to understand for people in a densely populated country like Germany to waive the use of large areas and set aside the lands for nature preservation.

A look at the total area of national park lands shows that there are about 46,687,000 acres in the United States and only 84,000 acres in West Germany. This means that 2.06% of the area of the United States and .14% of West Germany have national park status. The U.S. percentage has been around 1%, but several large national monuments in Alaska received park status in 1980, raising the proportion. All in all, the absolute area of national park lands is more than 500 times larger in the United States than in West Germany.

⁴⁵Walter Mrass, "Gedanken zu den Nationalparks der USA." Natur und Landschaft, 47 (1972), p. 119.

⁴⁶Hans Köpp, "Über das Nationalparkwesen in den USA. Zum 100. Jahrestag der Gründung des Yellowstone-Nationalparks," Landschaft + Stadt, No. 1 (1973), p. 10.

To demonstrate the importance of national parks in the United States, Table 3 shows the tremendous increase in visitation since 1900. The table contains the total number of visits to preserved areas under the administration of the National Park Service. Not all of the areas are national parks, but a good portion of the visitors went to national parks. So 58,220,000 visits were registered in national parks in 1975, that is about one fourth of the total number of visitations. In the Year 2000, about 350,000,000 visitations are expected in all preserved areas under the administration of the National Park Service.⁴⁷ In 1975, Yosemite National Park recorded 1,935,600, Yellowstone National Park 1,292,600, and Grand Canyon National Park 992,800 overnight stays.⁴⁸ In 1975, Shenandoah National Park had 2,686,500 visitors and registered 583,900 overnight stays.⁴⁹ Most of the park visits are concentrated in the summer months and thus aggravate the problems of crowding and overuse.

It is more difficult to register the number of visits to the German national parks, because there are no entrance fees and therefore no registration. In 1978, the estimation for the visitors to Bavarian Forest National Park was 1,200,000.⁵⁰ The recent figure is supposed to be even higher. A comparison with U.S. parks must always be seen in regard to their size. Bavarian Forest National Park was created as an alternative to the establishment of lifts and other recreational facilities to promote

⁴⁷ Hans Köpp, "Über das Nationalparkwesen in den USA. Zum 100. Jahrestag der Gründung des Yellowstone-Nationalparks," Landschaft + Stadt, No. 1 (1973), p. 10.

⁴⁸ U.S. Department of the Interior, National Park Service, Public Use of the National Park System. Calendar Year Report 1975, (Washington, D.C.: Government Printing Office, 1976), p. 13.

⁴⁹ Ibid.

⁵⁰ Franz, Schumertl, "Die Bedeutung des Nationalparks für das Umland," Allgemeine Forst Zeitung, 33 (1978), p. 315.

TABLE 3

Visitation of Preserved Areas under the Administration of
the U.S. National Park Service 1900-1975

Year	Number of Visitors
1900	100,000 ⁺
1916 [#]	500,000 ⁺
1920	1,000,000 ⁺
1940	17,000,000
1954	54,000,000
1962	99,000,000
1966	130,000,000
1970	172,000,000
1975	239,000,000 [*]

+ Estimation

National Park Service established

* U.S. Department of the Interior, National Park Service,
Public Use of the National Park System. Calendar Year
Report 1975, (Washington, D.C.: Government Printing
Office, 1976), p. 13.

Source: Hans Köpp, Über das Nationalparkwesen in den USA. Zum 100.
Jahrestag der Gründung des Yellowstone-Nationalparks,
Landschaft + Stadt, No. 1 (1973), p. 10

touristic development in this remote and under-industrialized region of Bavaria in order to improve the economic situation. To show the effect and importance of Bavarian Forest National Park, Table 4 lists the number of overnight stays in three communities in the park approaches before and after the park was established. Of course, there was a general increase in overnight stays at that time, but a more than four times higher number of overnight stays in St. Oswald and Freyung within only three years cannot be explained by this general trend. The increase was caused primarily by the new attraction, Bavarian Forest National Park.

Berchtesgaden National Park was established at a time, when the area had been visited by many people for decades. Therefore, the purpose of the park was not to promote tourism, but rather, according to the original goal of these preserves, to prohibit or diminish human impact on nature. Nevertheless, Berchtesgaden National Park has several million visitors per year.

TABLE 4

Overnight Stays in the Approaches of Bavarian Forest National Park 1968/1969 and 1971/1972

Community	Overnight Stays	
	1968/1969	1971/1972
Spiegelau	125,000	166,800
St. Oswald	19,200	80,700
Freyung	33,500	146,500

Source: Bayerisches Staatsministerium für Landesentwicklung und Umweltfragen, Hrsg., Regionalbericht Region Donau-Wald, München, 1975.

All in all, national parks are much more important in the United States than in West Germany. In both countries the main purpose of the parks, nature preservation, is endangered and in some cases even hindered by visitor overuse. Scientific research is more important in the U.S. parks according to their larger size and true wilderness character. However, West Germany has a considerable number of other nature preserves (Naturschutzgebiete) where scientific research is also done.

To summarize, the date of establishment of each single park turned out to be the most important factor influencing the park management and the function of the area. Availability of land and population density are factors that are closely linked with the date of establishment of the park and will be of minor interest for further similar studies.

CHAPTER IV

CONCLUSION

The findings of this study substantiate the hypothesis that national park management policies and functions differ between the United States and West Germany. One reason is relatively stronger demand for recreation within the smaller German parks caused by higher population density and less lands available that can be set aside for preservation. However, the most important factor for the different situation of the national parks in both countries appears to be the date of establishment of the preserves. Most American parks were created at a time when the areas were not yet settled and limited demand for uses besides nature preservation existed. The lands were unchanged wilderness and the only task was to preserve this condition. In West Germany centuries of human impact modified the vegetation and wildlife of the areas and the first duty of the relatively new national parks is to eliminate the remnants of previous activities. Only after the accomplishment of this goal can the original purpose of national parks, preservation of natural areas, begin. The German situation is typical for many densely settled developed countries, especially those in Europe.

The problems the U.S. and German parks face are similar. The major threat is overuse caused by too many visitors. The resulting management policies reflect the differences in size and site of the parks. For example, automobiles cannot be totally banned in the larger U.S. parks and play a more important role than in the German parks. The greater dimensions also require more visitor facilities within the parks than in Germany.

This study showed that the actual functions of both national park systems differ. Despite crowding and overuse in some areas of American parks, nature preservation is guaranteed in most of them. Therefore, most U.S. parks accomplish the strict claims of the New Delhi definition as effective protection of the wilderness condition. Both German parks have yet to become true nature preserves and are affected much more by visitor overuse and other threats like lumbering than the U.S. parks.

I learned from this study that the term "national park" does not always mean the same when used in different countries. Especially the comparison of American and German wilderness preservation management showed enormous differences and the label "national park" for both German preserves is misleading by looking at it in an international comparison.

Based on the comparative analysis of this study I have several suggestions as to what each country could do to improve the situation of its national parks with regard to more effective nature preservation by using the other's experience. Although the U.S. national park system is much older and the overall protection of nature far better than in the German parks, there are some possibilities of benefitting from German management policies. Several U.S. parks face development adjacent to the parks that has an impact on the parks themselves. The creation of comprehensive planning units such as the German Alpenpark Berchtesgaden would be a good method to control those activities and to coordinate development in the approaches with the goals of the parks. Often times, the U.S. parks are surrounded by national forests that fulfill the function of a buffer zone, but some like Shenandoah National Park could make use of larger more comprehensive planning units. Problems such as the increasing number of lodges and recreational facilities within the parks could

be diminished by establishing them in adjacent recreation zones or by prohibiting the already existing facilities within the parks. A promising method to reduce air pollution and thus human impact on nature is the promotion of public transportation in the form of buses within the U.S. parks. A positive side effect would be an indirect improvement of control and guidance of the visitors. The National Park Service already started cooperation with private transportation organizations and this attempt came up with interesting results and should be continued.

The main task of the German national parks will be to negate the old rights for lumbering and grazing in the forest. Although a total stop of hunting is impossible, because some species would increase in number so fast that it would result in tremendous degradation of the vegetation, hunting must be strictly controlled and organized by the park authorities based on scientific research and the American experience. As long as these fundamental threats of the parks are not stopped, the term "national park" in its original meaning is not justifiable for Bavarian Forest and Berchtesgaden. The international cooperation with Czechoslovakia and Austria should be intensified to enlarge the total national park areas on the other side of the borders in order to guarantee adequate habitat for the more endangered species within the park boundaries.

Based on this study some general recommendations for national parks can be made. It is important to determine the so-called carrying capacity of each individual park in order to establish how many people can use it before the quality of the user's experience or the health of the ecosystem begins to erode.¹ This task requires intensified efforts in

¹The Conservation Foundation, ed. National Parks for the Future, (Washington, D.C.: The Conservation Foundation, 1972), p. 101.

scientific research. If the visitor use is too high, tighter restrictions are necessary to guarantee real nature preservation. A supporting management policy to accomplish this goal would be to provide more recreational facilities outside the national parks. The attractions of such new recreational areas would reduce the pressure on the national parks. The final goal should be to create a new feeling and visitor attitude towards the national parks. With the help of effective educational programs the visitors should be influenced to look at national parks not mainly as recreation areas, but more as unique nature preserves that have to be protected for the benefit of everyone and future generations. I agree with Zierl that the accomplishment of this goal will take a long time and is very difficult, but the importance of national parks justifies the efforts that will be necessary.²

²Hubert Zierl, "Amerikanische und deutsche Nationalparke im Vergleich," Berichte der Akademie für Naturschutz und Landschaftspflege, No. 3 (1979), p. 33.

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NATIONAL PARK MANAGEMENT POLICIES AND FUNCTIONS
IN THE UNITED STATES AND WEST GERMANY

by

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ABSTRACT

This thesis examines and compares management policies and functions of national parks in the United States and the Federal Republic of Germany. Although the German national parks were established later, based on the American experience, it appears that park management and functions differ significantly between the two countries as a result of differences in population density, availability of land, date of park establishment, and social role of the parks. These factors also lead to differences in terms of accomplishing the general international objectives of national parks.

After presenting background information on the American and West German parks in the form of history of nature preservation, international place of the national park systems, physical and locational aspects, legal background, and institutions and organization of the national parks in both countries, U.S. and German national park management policies and functions are compared. Management policies such as zoning techniques, wilderness preservation, natural resource management, limitation of visitor use, and others of the Bavarian Forest and Berchtesgaden National Parks in Germany are compared with U.S. parks, mainly Shenandoah National Park in Virginia. Shenandoah was chosen for comparison because it has faced similar problems with reestablishing natural conditions after centuries of human impact similar to that experienced in the two German parks. The park functions are determined by the accomplishment of stated goals and the importance of the national parks in both countries.

All in all, the situation of nature preservation, the main goal of national parks, was found to be better in the United States. The relatively new German parks are still on the way to fulfilling the conditions of national parks in the word's original meaning. This study concludes with several

recommendations as to what the U.S. National Park Service should do to maintain and improve nature protection in the parks despite of threats caused by visitor overuse, and what should be done to make the German Bavarian Forest and Berchtesgaden preserves true national parks according to the international definitions. These recommendations are partially based on the other country's experience, because some problems, like visitor overuse, are almost identical in both; only the dimensions vary.