Sociology Studies Program 1970 – 1976



National Park Service Cooperative Park Studies Unit College of Forest Resourses University of Washington Seattle, Wa. 98195

PREFACE

This is the first in what we hope will become a series of publications summarizing the activities and research of our sociology group at the University of Washington.

Our purpose is to present information to a broad audience of managers, planners, interpreters and researchers so that our research program may be of use to any and all. We intend to present both published and unpublished reports and data, and to include a selected list of references which may serve as an initial bibliography for those interested in the sociology of leisure, sociology of natural resources, social impact assessment and behavioral research in interpretation.

Shirley a. Scott
SHIRLEY A. SCOTT

Editor, Research Publications College of Forest Resources/CPSU University of Washington

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INTRODUCTION

The Cooperative Park Studies Unit, University of Washington, since its inception in 1970 has developed and sustained active research programs in a number of problem areas pertinent to park management. Now in our sixth year of operation we would like to share some of the results that have emerged from the Sociology Studies Program. It is exciting to look back over our accomplishments in these six years. We have met some of our objectives and continue to work on others.

Our program can be divided into three broad categories: 1) baseline studies, 2) park-based studies, and 3) application of research to resource management. On the accompanying chart you will find a diagram of our work program.

Baseline studies are regional studies designed to promote the understanding of human leisure behavior and the participation patterns of people in selected recreational activities. Our emphasis has generally been on water-based recreation, and participation patterns associated with public parks, both urban and rural, national and regional. Currently we are gathering data from park visitors throughout the State of Washington, in a cooperative effort with two state agencies, The State of Washington Water Resources Center and the Interagency Committee for Outdoor Recreation.

Our original major data base comes from the North Pacific Border Study which was begun in 1971. Data were gathered by telephone interview from over 2,000 heads of household residing in a geographic area extending from the Canadian Border on the north to San Francisco in the south, and from the Pacific Ocean on the west to the Cascades and Sierra Madres on the east. The primary data source concerns park-going patterns among west coast residents. Reports have been presented at Superintendent Conferences in the Southwest, West and Northwest, and at Albright Training Academy and Mather Training Center. Currently, these reports are being consolidated into a single volume which will be published in the Spring. Analysis of these data has resulted in several individual publications, and continues to provide information for new research directions and training workshops.

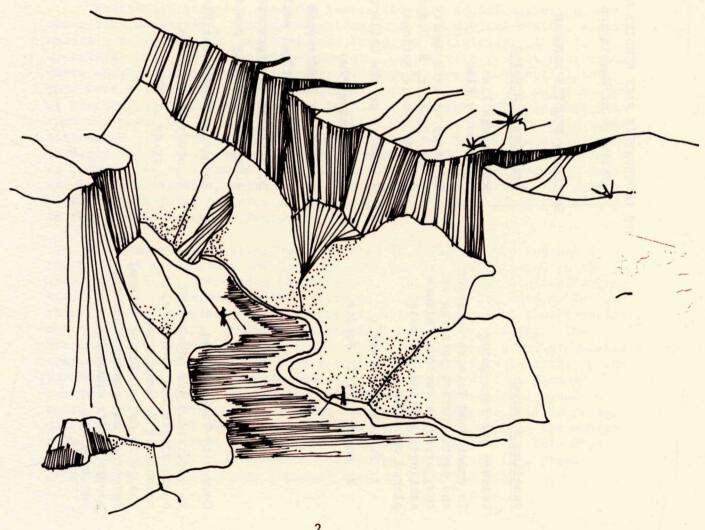
In a second category of baseline studies are the Community-Park Studies designed to explain the process of human adaptation to changes in a human/resource system introduced by a new, large federal installation.

<u>Park-based</u> <u>studies</u> include a wide variety of research problems concerned with the needs and behavior of people in parks. A broad study of backcountry users undertaken in 1972 has produced valuable information for park managers.

A second group of studies in the Park-based category is directed toward interpretive planning. An assumption made is that an examination of specific user groups and their unique problems can be incorporated as an information base within the plan.

Lastly, our contribution to resources management plans in two instances includes in-depth studies of two communities which are rapidly altering their social structures in response to the establishment of two new National Parks.

Application of sociology to resource management. We consider our service to management to be of primary importance. The application of research findings to management is an essential component of our program. Specific examples follow on page 9,



NPS COOPERATIVE PARK STUDIES UNIT University of Washington

SOCIOLOGY STUDIES PROGRAM

Baseline Studies

Leisure and Park-going

To understand leisure behavior and participation patterns as they arise in various leisure settings; special emphasis placed on parks

- 1. Statewide Survey
- 2. North Pacific Border

Community-Park Studies

To understand the process of human adaptation to natural resources; To understand change in definition of natural resources and consequences for people, their communities and resource use

Park-based Studies

Wilderness Plan/ Backcountry Plan

- study of backcountry users Mt. Rainier, N. Cascades and Olympic National Parks
- 2. hikers on the Chilkoot Trail

Interpretive Plan

- 1. study of handicapped
- 2. study of retired adults
- 3. study of interpreters
- 4. study of family camping

Resources Management Plan

- 1. study of Concrete
- 2. study of Skagway

Application to Resource Management

Backcountry permit analysis

Interpretive Report Services Interpretive Program Analysis Discovery Books

Computerized Bibliographies

Research Reports

Framework for Assessing Social Impacts - Social Indicators

4

BASELINE STUDIES

The North Pacific Border Study is an on-going regional investigation of leisure behavior with special emphasis placed upon park-going patterns in local, regional and National Park Service areas. The purpose of the study is 1) to provide a set of socio-demographic profiles of visitors to parks in the Northwest and, 2) to examine park-going along with other leisure opportunities in terms of leisure lifestyles, and in terms of factors associated with leisure participation, contrasting park-going with nonpark-going recreational activities. This approach allows us to increase our understanding of park-going as a phenomenon, as well as to provide additional insights into the role of parks in society. The investigation emerges from a belief that many methodological approaches to the study of leisure have been incomplete in the past.

Traditional activity research has relied upon social aggregate variables like occupation, income, education, age, and marital status, almost entirely as a basis to predict demand for given activities. This is especially true for many studies completed on specific recreational sites where only participants are considered. However, once non-participants have been eliminated from consideration in the analysis, the major source of statistical difference measured by social aggregate variables has been removed, resulting in the failure of these variables alone to explain participation. We have proposed an analysis strategy in which a social group variable may be employed in conjunction with social aggregate variables to enhance the measurement of participation in leisure activities. Emphasis has been placed upon utilizing this new analysis approach for understanding park-going patterns and participation in water-based recreation in the Pacific Northwest Region.

A second baseline study was initiated in 1975. At the request of the State of Washington, the National Park Service participated in the 1975 - 1976 State Recreation Demand Study. The Sociology Studies Program staff served as advisors to the Interagency Committee for Outdoor Recreation (IAC) and provided technical expertise in the areas of questionnaire construction, coding, computer programming and data processing. The National Park Service interest in the study focuses upon a set of questions related to the visitation of people to National Park Service areas in the Northwest. This joint research effort is the second of four planned between the National Park Service and other state and federal agencies which require information on various recreation clientele. It is recognized among several public agencies that recreational publics are shared between them, and that site specific studies fail to provide data which can be utilized for understanding the recreation picture in a given geographical region. These regional studies fill this void.

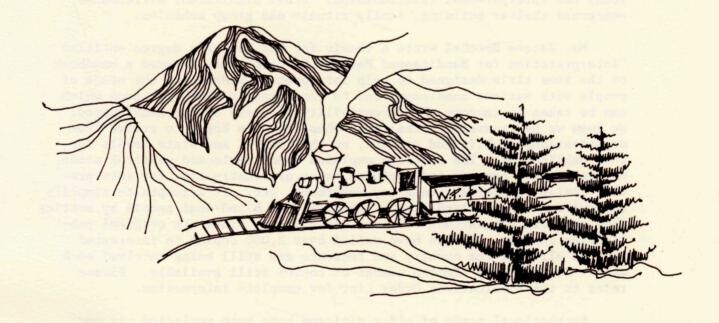
The first of our community studies was conceived by Don Field and Joe O'Leary. A broad investigation of the community of Concrete, Washington was undertaken when the economic base of the town was modified. Land adjacent to Concrete came under the jurisdiction of the National Park Service after many years of U. S. Forest Service administration. Many of the townspeople had earned their living in the logging industry, and these people in turn had supported a wide variety of tradespeople in Concrete. An additional disrupting influence on the community was the advent of the North Cascades Highway which bipassed the town. The land of some community members was separated from the center of commerce and made the commercial and social center accessible only with difficulty. attempted to demonstrate the impact of the new installations and the dynamics of community change in his doctoral dissertation: "Community Conflict and Adaptation: An Examination of Community Response to Change in Natural Resource Management and Policy Strategies." Joe found that "As contemporary definitions in the use of natural resources emerged, as in the case of recreation, the community found its traditional service role seriously questioned." Federal, state and county agencies responding to the potential of recreation use expressed optimism as to the future role of it for the community, but failed to provide a climate of communication and coordination that facilitates a community role in recreation development. The implications of Joe's study are obvious: that failing to properly prepare a community for the impact of sudden, drastic change can create conflict between the community and the agencies involved which may take many years to be resolved. Adequate groundwork before the fact would serve the process of communication and lessen the negative impact concomitant with change.

Together with Steve Wells, Don Field developed a research plan to assess and document community status and attitudes of the people in the town of Skagway, Alaska <u>before</u> the installation of the Klondike International Historic Park begins. The results should allow the National Park Service to open healthy communication with the community and, hopefully, reduce some of the difficulties associated with the inevitable changes the city will undergo.

A field team began work in Skagway during the summer of 1974. A report on the economic status of Skagway was submitted to the Park Service by Ken Casavant and Jim Barron of Washington State University. Steve Wells has worked in Skagway two summers now. He will return this fall to complete the field work after which. Steve and Don Field will turn to the analysis of all material, and to drawing up management options. Steve's doctoral dissertation will be written, using his field observations, his extensive search of historical records of Skagway, and the literature. A final report will be submitted to the National Park Service after Steve completes his dissertation in 1977. It is our hope that it will become possible to measure the extent and quality of community change due directly and indirectly to the advent of the park. This kind of measurement can

be important in the development of yardsticks by which certain changes in any community may be predicted.

An allied study has been undertaken by Peter Womble and Wendy Wolf, who have spent the summer season on the Chilkoot Trail, the historic Gold Rush route from Skagway into the interior. Their purpose is to assess the nature of hikers of the Trail, what kinds of people are attracted to it, and what are the hikers expectations. We are gratified by the response to our questionnaire thus far, which shows a very high level of interest in the Trail and its history and preservation. Within the year, with the help of Dave Webb, Peter and Don Field will have analyzed the summer's work and presented suggestions to the Park Service and to Parks Canada for development and management of the Trail.



PARK-BASED STUDIES

Park-based studies are undertaken in response to a request by management and, as the name implies, are site specific. Each National Park Service area has a resource or historical management plan. These plans identify management objectives, policies, actions and research needs. Thus, information about people and visitor publics are often data requirements identified within a plan. Each resource or historical plan, when appropriate, includes several sub-plans which deal specifically with a program area of the park. Examples of such sub-plans are a fire management plan, backcountry plan and interpretive plan. The Sociology Studies Program has concentrated upon providing information on the human resources for two plans, the backcountry and interpretive plans.

Several studies have been undertaken in support of the interpretive plan. Gary Machlis focused on one type of social group, namely the family, to understand how different types of families adapt to administrative facilities and park resources. Gary subdivided families into four types, 1) nuclear, 2) multiple, 3) extended and 4) partial families (within the context of family camping). He found that each type differed in its family maintenance, activities, protection of the young and interpersonal relationships. Other significant differences concerned shelter building, family rituals and group cohesion.

Ms. Jacque Beechel wrote a thesis for her Master's degree entitled "Interpretation for Handicapped Persons." Later she prepared a handbook of the same title designed to help interpreters understand the needs of people with various handicaps, and to recommend to planners steps which can be taken to improve the accessibility of parks to the handicapped. We knew we had answered a real need when requests began to arrive from organizations, public and private, on the federal and state levels for this publication. The handbook explains some overlooked physical needs of handicapped persons and includes types of construction for interpretive trails, drinking fountains, restrooms, etc. It attempts to simplify communication with blind, deaf, retarded, and blind-deaf people by setting down specific suggestions for each disability. Since its original publication in July, 1975 we have mailed over 2,000 copies to interested parties all over the country and requests are still being received each week. We do have a limited number of copies still available. Please refer to the Publications Order List for complete information.

Recreational needs of older citizens have been neglected in our society and rarely studied. We believed a contribution could be made by identifying some of those needs. Renee Renninger undertook the

job and has recently completed the research. We plan to assemble the information in handbook form and make it available in the near future. Renee proposes to "make recommendations regarding the use of interpretive, human and natural resources so that the most optimum and satisfying park experience" for retirees can be had. Her information was gathered in Mt. Rainier, Olympic and North Cascades National Parks, and from professionals in gerentology, The National Council on Aging, and from older people themselves.

The Sociology Studies Program has conducted several studies in support of the backcountry management plan. Our first effort was directed at the preparation of an extensive literature review on backcountry research. Completed in 1974, this review helped to provide a summary of what is known about backcountry use patterns and to identify gaps in available information. An initial study supported by Mt. Rainier, Olympic, North Cascades and Mt. McKinley National Parks resulted from the review. While our program has provided computer services on backcountry use permits to these parks for three years, systematic analysis of the potential information generated from the permits was not begun until 1976. A report on alternative data presentation formats, with analysis options will be completed in June of 1977.

A second study contributing toward backcountry management plans is the Chilkoot Trail study, mentioned earlier.

APPLICATION OF SOCIOLOGY TO RESOURCE MANAGEMENT

Bob Flewelling, Marisue Wells, Jim Ludden and Marg Suenaga have all worked at various times to establish an information system for backcountry planners. Today, four years after its inception, backcountry use permits are sent to us from the four major parks of the Pacific Northwest Region, are coded, and returned to the park of origin within a comparatively short time. Various tables and information are generated to give concrete answers to the questions managers ask. We are continually working with managers to make this service more useful and to keep current with the needs of planners and managers.

We extended the use of our computer services by assisting the Biology Program, Cooperative Park Studies Unit, University of Washington, in the development of bibliographies for National Parks of our region. At this time Marg Suenaga has completed the computer programming for bibliographies for Olympic and North Cascades National Parks. Ed Schreiner and Dick Weisbrod, of our Biology Program, worked together in the extensive search for literature on all subjects pertaining to the parks. We believe that park biologists will benefit greatly from this effort, and hope they will be stimulated to publish discoveries and results of their own work in the parks. Now that the bibliographies are computerized, it will be a simple matter to keep them updated.

Gary and Sally Machlis have published a series of activity books designed to educate and, at the same time, to entertain young people. Protecting our natural environment is the central theme of these "Discovery Books." Basic information on the history of specific sites is also included, of course, Booklets in this series have been completed for Fort Vancouver National Historic Site and Craters of the Moon National Monument. A booklet entitled "Life Cycle of the Salmon" may be used by interpreters, teachers or librarians to inform young children. The Machlises have designed a complimentary children's game called "Splash! (A Fish Game) in which the life cycle of the salmon is depicted graphically and delightfully. Each salmon (player) begins in the "spawning pool" and, with luck returns to it, but only after "swimming" past various obstacles: a bear, the nets of a fishing boat, a sports-fisherman, a killer whale and industrial pollution. A children's map for Oregon Caves National Monument and a guide for interpreters called "Creative Design for Bulletin Boards" are additional booklets in this series. One final booklet produced for children by Larry Waldron and Leslie Williams of Whitman Mission National Historic Site is called "Life in Old Oregon: Two Paths." It is a variation of the format used by the Machiises.

A 32 page booklet describing fascinating aspects of plant and animal life on the Olympic National Park Seashore has been prepared by Forrest Blau for that park, and is available to the public in limited quantities. Designed for the general public, it could be used as a field guide to the Pacific seashore from Baja California to Alaska. Forrest worked two years to do both text and illustrations for this unique guide. You will find the information and illustrations useful and instructive and be stimulated to discover the great beauty of our natural shoreline.

Kathryn Sharpe came to our program about two years ago. She had graduated from the University of Washington and was interested in making films. Funding was available from the National Park Service, Sociology Studies Program to do a film which could be used by interpreters at Whitman Mission National Historic Site in Walla Walla, Washington. The main goal was to produce an unbiased portrayal of both Indian and White culture and the viewpoints which caused the conflict that eventually led to the death of the Whitmans and the abandonment of the site. Kathy undertook the job and in six months of hard work and travel, produced a very fine, 15 minute, color film. Gathering visual information for the film was a difficult task. Most paintings or photographs of historical events and people involved in the drama of Whitman Mission are scattered over the states of Washington, Idaho and Oregon in private collections and small museums. Kathy discovered some excellent tapes of authentic Plateau Indian music for the sound track. The use of these tapes adds considerable authenticity to the film. Charles Kurault, the well known news commentator, saw the film and praised its factual presentation but, even more importantly, Larry Waldron, Chief Interpreter at the Mission, says the film will greatly enrich the visitors' experience.

The systematic utilization of information for park management routinely collected by a park staff has often been ignored. Yet, if properly processed, a wealth of information exists by which managers can more effectively evaluate programs and management policy. The back-country use permits and subsequent analysis of information contained on the permit is a case in point. This past summer, a program of data collection was developed for interpreters so that they could analyze information on visitor participation in interpretive activities. This will allow an assessment of the role of interpretation in park operations. An interpretive analysis inventory card was developed by Jim Gramman and Don Field for Mt. Rainier National Park and was tested during the summer of 1976. The card will be modified and tested one additional summer before recommendations are made for its adoption as a management tool.

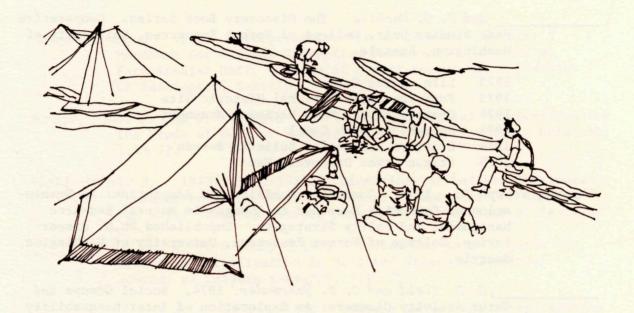
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STUDY ABSTRACTS

PROJECT: North Pacific Border Study: Water-based Recreation, Part I INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

This project was designed as a baseline study to identify essential sociological dimensions of participation in water-based activities. Several objectives were established for the study. They were:

To identify social groups participating in water-based recreation, as well as the social and economic characteristics of user-nonuser populations;

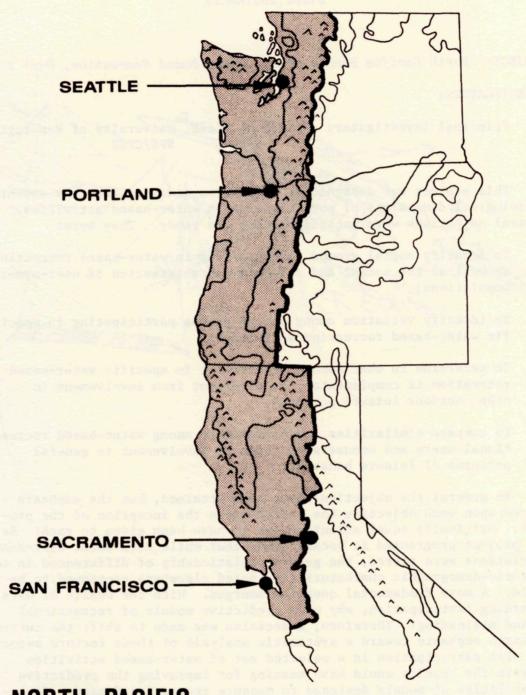
To identify variation among social groups participating in specific water-based recreation activities;

To determine in what manner involvement in specific water-based recreation is complementary or divergent from involvement in other outdoor leisure pursuits;

To compare similarities and differences among water-based recreational users and nonusers in terms of involvement in general patterns of leisure behavior.

In general the objectives have been attained, but the emphasis placed upon each objective has varied since the inception of the project. Originally equal attention was to have been given to each. As the project progressed it became clear that while data about user-nonuser populations were scarce, the general relationship of differences in terms of socio-demographic characteristics noted elsewhere continued to be valid. A more fundamental question emerged. With the wealth of data regarding participation, why were predictive models of recreational demand misleading? Therefore, a decision was made to shift the current research emphasis toward a systematic analysis of those factors associated with participation in a selected set of water-based activities wherein the results would have meaning for improving the predictive capabilities of models designed to measure recreation demand. Consequently, the latter approach is more methodological in nature, focusing on particular aspects of original objectives.

We suggested in our project proposal that much of the work undertaken in recreational activity research was incomplete. Assessments of who participates through an examination of social, economic or demographic characteristics is commonplace. The same may be said for much research focusing on the relationship between participants and water-



NORTH PACIFIC BORDER STUDY

NATIONAL PARK SERVICE SOCIOLOGICAL STUDIES

based recreation. Yet, these factors by themselves are insufficient to delineate several key dimensions associated with participation.

Traditional demand studies, so popular with state agencies responsible for recreational planning, have this format. Area specific analyses predominate as another type of study relying on characteristics of the population, the collation of which yields fragmental and sketchy conclusions. Unfortunately the predictive capabilities have been less than desired partly because of an underlying assumption that activities are place specific and/or facilities are conducive to a limited range of human involvement. Avoidance of such error has guided our theoretical and methodological approach in this study.

We have placed research emphasis upon one sociological variable throughout the study, namely the social group. Participation in leisure occurs most often with others, not alone. Therefore, the human action which occurs in leisure settings is reflective of membership in a social group. In terms of participation we argue it is more important to know how people organize themselves to play, rather than to know the activity in which participation takes place. Recreation activities facilitate leisure participation; they are not the basis for participation. These points have been ignored in the bulk of recreation research reports in the past.

By focusing on the social group we do not mean to imply that this variable is the only one which should be added to customary sociodemographic characteristics when attempting to improve the predictability and reliability of recreation-demand models. Investigation of the role of the social group in determining leisure behavior is only a beginning. Other sociological variables must be considered in the future. In the context of this study what we have done is to demonstrate statistically the viability of the social group variable, in conjunction with alternative methodological approaches for assessing differential participation in a common set of water-based recreation activities.

PROJECT: Sociological Dimensions of Leisure Participation in Water-based Recreation, Part II

INVESTIGATOR: Donald R. Field, University of Washington, NPS/CPSU

The present project is an extension of an earlier funded study by OWRR. The purpose of the present effort is to extend our knowledge about participation in water-based recreation activities, variations in patterns within the State of Washington and identification of sociological factors associated with leisure choice and the substitution and interchangeability among activities.

With the information collected it will be possible to assess planning efforts for water resource development given user patterns. The current research effort is central to the IAC planning effort and should contribute to baseline information needs for the State Outdoor Recreation Plan.

The specific objectives are to describe water-based recreation opportunities for user and non-user populations, distinguishing between the two groupings factors which account for differences, to assess differential participation among groups and the association between recreation place and factors determining leisure choice, and finally, to further expand our knowledge of factors associated with substitution among leisure activities and interchangeability among leisure activities.

As a joint effort among three agencies the current project maximizes cost sharing, information, and coordination of the research activity. In this regard the current year has been devoted to the development and implementation of interviewing instruments, coding of data obtained and preparation of computer tapes. Ten thousand interviews have been obtained for the summer season, May 15, 1976 to September 15, 1976 and will comprise the sample or data set for the Water Center supported study.

The data have been coded and were on computer by January 30. At that time information obtained through telephone interviews was meshed with questionnaire data. Dummy tables are being prepared and completion of Objective 1 is anticipated by August 1, 1976.

Several goals were established for the water-based recreation study during the initial year of funding. These goals were: 1) to plan, undertake and complete data collection, and 2) to prepare data for analysis, i.e., code, keypunch and establish computer program procedures. Our first year's goal will be reached by March or April.

PROJECT: North Pacific Border Study: Park-going Patterns in the Northwest

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

The North Pacific Border Study is the first regionwide assessment of park-going patterns undertaken within the Sociology Studies Program of the National Park Service. It's purpose is to provide a perspective on the distribution and kind of park-going patterns which exist in a given geographic area. The North Pacific Border is a physiographic region covering an area bounded on the north by the Canadian border, on the south by San Francisco, on the east by the Cascades, and on the west by the Pacific Ocean. The universe for the study included the adult population 18 years of age and older residing in this designated region.

Analysis is underway on the relationships between social characteristic variables (such as age, occupation, education, marital status, income, family size and population of the area where the respondent lives) and variables which indicate park visiting behavior (such as frequency of visits, type of areas visited, with whom, etc.).

Additional programming support is being provided for two research projects: 1) a comparison of park-visiting patterns of residents of Marin County and of the Olympic Peninsula which represent respectively, a high income, suburban population and a largely rural, low income population, 2) a re-analysis of general park-going patterns in the Northwest.

PROJECT: North Pacific Border Study: A Comparison of Parkgoing Patterns Between Marin County and the Olympic Peninsula

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington, NPS/CPSU

Research Assistant: John S. Burch, University of Washington

When the North Pacific Border Study was originally designed, it had as a central thrust the collection of information on visitation to parks from a regional perspective. Since local parkgoing patterns often vary from regional patterns, two subsamples reflecting localities were selected for examination. They were subsample 1, Marin County - 370 interviews, and subsample 2, residents of a four county area on the Olympic Peninsula - 370 interviews. Both sample areas contain residential lands surrounding a National Park Service area. In subsample 1, Pt. Reyes National Seashore is located within Marin County. In subsample 2, Olympic National Park is located within the four counties under investigation.

Study Objectives:

- To identify users and non-users of National Parks from the two sample areas,
- 2) To assess leisure choice as an expression of social environment,
- 3) To measure differences in leisure choice among various kinds of publics.

PROJECT: Visitation Patterns by Washington State Residents to National Park Service Areas in the Northwest

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

The National Park Service at the request of the State of Washington (Interagency Committee for Outdoor Recreation) participated in the 1975-76 Washington statewide recreation demand study. The Sociology Studies Program served as an advisor to the IAC and provided technical services in the areas of questionnaire construction, coding, computer programming and data processing. The National Park Service's interest in the study focuses upon a set of questions related to the visitation to National Park Service areas in the Northwest by residents of the State of Washington. This twelve month survey is not complete. Data are currently on tape and data tapes will be delivered to the National Park Service in mid-October. For a detailed discussion of research design see "Sociological Dimensions of Leisure Participation in Water-based Recreation, Part II."

Objectives for the park visitation study include:

- 1. a description of Washington residents who visit NPS areas in the Northwest,
- 2 to assess clientele differences in visitation to historic versus natural areas among state residents, and
- 3. to assess sub-regional variations in visitation to NPS areas.

PROJECT: Community Conflict and Adaptation: An Examination of Community Response to Change in Natural Resource Policy and Management Strategies

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

Research Assistant: Joseph T. O'Leary, University of Washington

The introduction of a National Park is generally associated with a variety of claims that assert a wide assortment of impacts on local communities nearby. Economic impact studies prepared for the National Park Service have generally indicated the creation of positive effects. But studies detailing the social consequences of introduction have been sorely lacking. Studies of the impact of large installations and the small community in transition in the sociological literature have suggested a more complex web of interactions develop as a result of the change, many of which initiate or reinforce institutional inadequacies in the proximate communities. Since the National Park Service has expressed significant interest in maintaining close liaison with the local communities for planning and development integration, a fuller knowledge of both social and economic consequences is essential.

In 1968 the North Cascades National Park was formed. It is surrounded by a number of small communities whose employment base is related to commercial timber production and recreation, and who tended to view the introduction negatively. Previous studies of large installation impact have indicated that the period from five to seven years after introduction appears to characterize a time span when many of the constraints for the future of the community environment are established. Therefore, an investigation of a community close by the park seemed especially appropriate and necessary at this time to gather information on the social dimensions of change and the consequences for local institutions created.

In November, 1972, a search was initiated to choose a community for investigation near the Park. By March, 1973 the community had been chosen. At this point, the Graduate Research Assistant moved into the community for a six-month period, to begin examination to discover how the town and its members were affected by the park introduction.

Using participant observation, a mail questionnaire and a survey of historical information, data collection was completed by the end of October, 1973. Data analysis and a preparation of written material was begun in November, 1973 and has now been compiled.

It seems clear at this stage that redefinitions associated with the use of natural resources are dealt with differentially within the community. To the extent that institutional inadequacies appear stemming from a park introduction, this has a potential to create problems for both local and non-local (tourists) participants in the town, and for the Park Service that has a growing need to interact closely with these local areas. It is hoped that the results of this research will define some of these problem areas, and provide useful guidelines for future changes that may occur.

(Ph.D. Dissertation, Spring, 1974)

PROJECT: Interpretation for the Handicapped

INVESTIGATORS:

Principal Investigators: Donald R. Field, University of Washington

NPS/CPSU

Grant W. Sharpe, University of Washington

Research Assistant: Jacque Beechel, University of Washington

During 1973 Ms. Beechel investigated interpretive trails designed for use by people who are deaf, blind, mentally retarded, or who have ambulatory limitations. The objectives of the investigation are: a) to determine the needs of handicapped persons, b) to determine what has been done in the area of interpretive trails for handicapped persons, c) to determine the successes and/or failures of such trails, d) to develop design guidelines for such trails, and e) to compile a directory of interpretive trails in the United States that accommodate handicapped persons.

The investigation has consisted of: a literature review, consultations with handicapped persons, consultations with people involved in the rehabilitation of handicapped persons, development and administration of a questionnaire for managers of existing interpretive trails in the United States to view, firsthand, a representative sample of such trails.

Results of the investigation indicate: a) interest in what interpretive trails can provide is the same in the handicapped portion of the U.S. population as it is in the non-handicapped portion, but disproportionately few efforts have been made to provide accommodations for handicapped persons which result in trails being provided that are often unsatisfactory for, and sometimes even boycotted by handicapped persons but no guidelines are available.

Ms. Beechel has completed her Master's thesis incorporating the previously stated objectives, and has published a widely received handbook for interpreters. PROJECT: Survey on Desirable Preparation and Career Development of Interpretive Personnel

INVESTIGATORS:

Principal Investigators: J. Alan Wagar, Donald R. Field, U. of Wash.

Research Assistant: Juan Victor Oltremari, University of Washington

The objectives of the current study were to prepare a socio-demographic profile, identify characteristics of college education, type of in-service training and work experience of the currently recruited interpretive personnel. An eleven page questionnaire was distributed between July and August of 1973 to all personnel (permanent and seasonal) working in areas of the Pacific Northwest Region of the National Park Service, and to personnel from all regions (nine) of the U.S. Forest Service.

Response to the questionnaire reached 73.7 percent in the National Park Service and 85.6 percent in the Forest Service by the end of October, 1973.

Among the many individual items, respondents were asked to identify degrees obtained at college, number of courses taken in pertinent disciplines, desired college preparation, type of in-service training, media used for recruitment, chronology of positions in resource management organizations, experiences they consider important for interpretation, and motivation of interpretive work.

The data obtained was computer processed during November and December, 1973. The findings have been summarized in a final report written in the Spring of 1974.

Results will be of greatest use within the National Park Service, the Forest Service, and to the educational units preparing people for employment as interpreters.

(Master's thesis, Spring, 1974)

PROJECT: Social and Economic Impacts of the Proposed Klondike Gold Rush National Historic Park, Part I - Social

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

Research Assistant: Stephen Wells, University of Washington

The Skagway sociological study includes two closely related but conceptually distinct inquiries. The first is an investigation of the social impact on Skagway of the proposed Klondike Park. This inquiry asks if one can predict changes in Skagway's social life resulting from the Park and if those changes can be evaluated in terms of local values and/or societal norms. Given our chosen study design, the second inquiry is a precondition for the first, for here we are conducting a more conventional community study which seeks to fit Skagway into a typology of communities and to relate this typology to a more abstract theory of community ecology. Simply stated we are seeking to understand how Skagway, as a community, works, how it functions from day to day, and how it adapts to changes.

If the community study is successful we should be able to predict or forecast what Skagway would be like in the future if the Park were never established (observation 1 in figure). We also should be able to anticipate what aspects of the way Skagway works will be sensitive to the establishment of the Park and finally, once the Park is established and its effects have become apparent, it will be possible to restudy Skagway (observation 2 in figure) and compare the known community with the forecasted image of the community. To the degree that the forecast is reasonable and realistic and that all other factors are equal, one can attribute the differences between the two $(0_1 - 0_2)$ to the social impact of the Park

The community study uses several different research methods. These include observation, on-going interviews with key informants, formal structured interviews with a sample of the community, photographic records of community behavior, and content analysis of the abundant archival material in Skagway. To date, each method except formal survey work has been used, and the formal survey is scheduled for Fall, 1976. It is hoped that computer simulation will be used to forecast the needed future image of the community.

FIGURE: DESIGN OF SKAGWAY SOCIOLOGICAL STUDY

1897
$$\longrightarrow$$
 1974-76 \longrightarrow forecast \longrightarrow Observation 1

1974-76 \longrightarrow park
established \longrightarrow Observation 2

Fieldwork Calendar:

June - July 1974 Observation Unstructured Interviewing Photographic Recording June - Sept., 1975 Observation Unstructured Interviewing Photographic Recording Inventory of Archives April - June 1976 Development of Interview Schedule Observation Informant Interviews June - August 1976 Analysis of Archives - U. of W. Library Interviews in Seattle of Former Skagway Residents August - Dec. 1976 Structured Interviewing Jan. - June 1977 Analysis

PROJECT: Social and Economic Impacts of the Proposed Klondike Gold Rush National Historic Park, Part II - Economics

INVESTIGATORS:

Principal Investigators: James Barron, Kenneth Casavant, Washington State Univ.

The purpose of this study is to show the economic effects of the park on the community of Skagway and to provide a framework for continued evaluation of those effects by the National Park Service. More specifically, the objectives are:

- 1. To describe the economic structure of Skagway.
- 2. To estimate the impacts of the park on population, employment, tourism, retail sales, and public finances.
- 3. To analyze the interrelationships between the park and transportation services to Skagway.
- 4. To provide a model for continual evaluation of economic impacts of the park.

Skagway is a special case when it comes to economic structure. Virtually the entire economy is based on exports and imports with very little internal interrelationships. Exports are tourism and transportation services, while imports include all the goods and many of the services required by residents of the community.

One way of looking at a regional economy is to separate its economic base from the local service sector of the region. The economic base of a region is what it sells outside the region; in other words, the products it exports to other regions. The income from exports is what is available for purchasing goods and services from other regions, i.e., imports. Along with the economic base portion there is generally a local service sector which provides goods and services within the region so that the economic base can be maintained or expanded. There is no standard ratio between the base and local service sectors of a regional economy, although in general the larger the region, the larger the local service portion becomes. Consider the extremes in terms of economic units. A single individual is the smallest possible economic unit, and in a modern society his labor and intelligence are his economic base which he must "export" in order to purchase "imports." Thus, the individual as an economic unit is entirely economic base. At the other extreme the largest conceivable economic unit is the world and there are obviously no exports at all; thus it is entirely composed of local service.

Skagway is almost entirely economic base. For a community of 700 people it has a remarkably low portion of local service even though no one commutes outside the region for employment. All of this is because of a special set of economic circumstances which provide the raison d'etre for Skagway. Not only is Skagway nearly all economic base, it does not export a single physical product. One hundred percent of its exports are in the form of services.

Tourism is a major export commodity from May to September, but falls to virtually nothing during the winter. Housing, feeding, transporting, and retailing to tourists is a set of services Skagway exports. The earnings from these exports provide exchange with which to purchase the goods and services required to serve the tourists, i.e., food, alcohol, curios, art objects, labor, etc.

The other (larger) export commodity is transportation services, almost entirely by the White Pass and Yukon railroad. Ore is mined in Canada and shipped out through Skagway while supplies and fuel are shipped into Canada through Skagway. The economic role for Skagway in this system is the provision of transportation services.

The local service sector is quite small. There is no agriculture or food processing, so all food must be imported with the minor exception of home garden produce. There is no manufacturing or mining and only limited services. The bulk of local service is accounted for by retail trade, one bank, electric and phone utilities, a television station, and a few personal and business services. All other services and all physical products must be imported.

The principal work during the summer of 1974 was the collecting of economic data and identifying the economic structure of the city of Skagway. The work has identified the pre-park structure and the impacts on the city caused by the park. The final report has been completed.

In the future, a framework for monitoring economic changes induced by park activities will be developed. Skagway serves as the principal case study for the formulation of the framework now. In the future, Skagway may be examined as to specifying 1) how well the framework of impact study worked, and 2) modifying the framework as needed. Alternatively, other communities might serve as appropriate study areas to refine the model.

Managers will find the procedure useful because it can delineate those factors or elements in a community's economic structure which will receive most impacts from the park's activities. This will allow a more complete planning horizon for the manager as well as the ability to be "sensitive" to short run effects of his park's activities on the citizens, both local and national.

PROJECT: Study of Hikers on the Chilkoot Trail

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

Research Assistant: Peter Womble, University of Washington

Purpose:

1) To produce and analyze information on those persons who hike the Chilkoot Trail.

2) Insofar as the Chilkoot Trail is a <u>backcountry</u> trail, to further our knowledge of backcountry users.

The Chilkoot Trail is the original Gold Rush Trail ("Trail of 98") from Alaska into the Yukon. Today, it is the main hiking and historical trail for the proposed Klondike Gold Rush International Historical Park. It will be managed by both the National Park Service and Parks Canada.

As a newly proposed park, planners and managers from both the National Park Service and Parks Canada need information as to who visits this park and hikes the Chilkopt Trail. In order to provide such, a mail questionnaire will be sent out this fall to all persons who hiked the Chilkopt Trail during the summer of 1976 (June through September). This mail questionnaire will have five information objectives:

- 1) To develop a demographic profile of those who hike the Chilkoot Trail
- 2) To assess the nature of the "hiking event" on the Chilkoot Trail
 - a. Information on hiking the Chilkoot Trail
 - b. Information on how hiking the Trail fits in with travel plans in the Alaska/Yukon area
- 3) To assess the hiking experience of hikers who come to the Trail
- 4) To assess the wilderness values of the hikers; and
- 5) To assess the preferences and opinions of hikers as to planning, management and interpretive options.

This questionnaire will provide baseline data on Chilkoot Trail hikers. The intent here is to repeat this questionnaire on some future date in order to identify trends in the hiking population (i.e., longitudinal study).

The other purpose of this study is to gain greater insight into backcountry use and users. A review of backcountry recreation research literature was undertaken. Two weaknesses were encountered. First, researchers (and managers) have emphasized the quantitative dimensions (i.e., levels of use) of backcountry use at the expense of its qualitative aspects. That is, they have ignored the types of use and the way hikers organize themselves. Secondly, crowding has received much attention in the literature. However, this attention has a limited approach. Crowding has been defined in terms of density of the number of users or interactions. This approach has failed to consider the social context of density or human interactions to explain crowding.

As a result of the literature review, two broad research questions are to be considered:

- 1) What components of the backcountry recreation environment affect the satisfaction of the backcountry user population? What is the relative importance of these environmental components in predicting hiker satisfaction?
- 2) What are the overt behavior patterns of backcountry users? How do these change with changes in the backcountry environment?

Research on these questions will require two distinct methods. The first question will involve a short, on-site questionnaire. Attention will be given to those components of the backcountry environment that are subject to management practices. A distinction will be made between the bio-physical environment and the social environment. The second question is primarily exploratory. It will involve the observation method. The intent is to develop some systematic observation schedules. Possible behavior patterns to be observed will be campsite choice and intergroup interactions.

PROJECT: An Investigation of Retired Visitors in National Parks

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

Research Assistant: E. Renee Renninger, University of Washington

<u>Purpose of Study</u>: To provide insight and information about a special clientele group in national parks: the retirees; and to make recommendations to the National Park Service regarding the use of interpretive, human and natural resources to facilitate the most optimum and satisfying park experience for this particular visitor group.

Accomplished to Date:

1) Literature review under three main headings:

- a. The physical, psychological and sociological aspects of aging;
- Retirement and the meaning of leisure (including the implications of transferring community values to leisure settings);
- c. The retiree in American society: a sociological perspective of the opportunities and limitations in use of time.
- 2) A field investigation of retired visitors in national parks of the Pacific Northwest: Olympic, Rainier, and North Cascades.
 - a. Purpose of field work: To gain maximum exposure to, and familiarity with retired persons and their utilization of time in national parks, including exploration strategies, campsite organization and maintenance, socializing patterns and contact with the National Park Service through personnel, programs and facilities.
 - b. Methodology:
 - 1. photography
 - 2. participant observation
 - a. as a direct observer without revealing identity as a researcher
 - as a participant and interviewer with revealed identity as a researcher
 - 3. use of a daily journal
 - c. Description of field work:

Emphasis was placed on acquisition of qualitative versus quantitative data. Subjects were chosen according to the type of social group in which they were found: 1) as individuals (no persons in this age group were found in the parks by themselves), 2) as couples, 3) in peer groups or with younger adults, 4) in multigenerational groups including children. It was believed that the type of group in which retired persons were found would affect the length of stay and/or types of activities enjoyed. The results indicate this assumption is correct when viewed in an

overall perspective of visitor use. Approximately 100 interviews or informal lengthy discussions were taken during the period of field study, which lasted from July 1, 1975 to September 17, 1975. Although couples were over represented in "extended stay" situations, and multigenerational groups in "day use only" situations, equal numbers of interviews were sought and recorded for each of the social groups outlined above. Systematic observations of retired persons were also recorded in the following areas:

- 1. self directed leisure activities
- 2. agency sponsored interpretive programs
- 3. campsite organization and maintenance including use of personal property and park resources
- 4. miscellaneous contact with the NPS at visitor centers, information booths, in campgrounds, and overlooks, etc.
- 5. socializing among visitors who had not previously been acquainted

3. Other sources of information:

- a. Personal interviews
 - 1. National Park Service
 - 2. Professionals in the field of Gerontology
 - 3. Others personally involved in the field of aging
- b. Information from agncies concerned with the area of aging:
 - 1. National Council on Aging
 - 2. Administration on Aging
 - 3. Department of Social and Health Services, State of Washington
 - 4. National Association of Retired Persons

4. To Be Accomplished:

- a. Continuation of literature review under all three headings
- b. Design and completion of a handbook for the National Park Service which will:
 - relate significant information about this particular user group; i.e., who they are and are not, why they are found in national parks, what expectations have they acquired about their use of time in national park settings and what experiences do they associate with national parks which offer the greatest personal satisfactions
 - 2. other suggestions to the park service which will enable it to utilize interpretive services, human and natural resources to optimize user satisfaction for this particular visitor group
 - 3. This study will be completed in the Spring, 1976

PROJECT: Families in the Parks: An Analysis of Family Organization in a Leisure Setting

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

Research Assistant: Gary Machlis, University of Washington

The objective of this study was to describe the social structure and organizational behavior of families camping within Northwest National Parks. Field study was conducted at Olympic, Mt. Rainier and Crater Lake National Parks during the 1974 summer season.

A variety of methods were used, centering around participant observation at designated campgrounds. Formal and informal interviews, a questionnaire, photography and family diaries were utilized, in addition to extensive observations of family groups.

Variation in social structure and behavior revolved around four types of family groups: 1) nuclear, 2) multiple, 3) extended and 4) partial families. Each type differed in its family maintenance, activities, protection of young and interpersonal relationships. Other significant differences concerned shelter building, family rituals and group cohesion.

PROJECT: Computerized Backcountry Permt Information System

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington NPS/CPSU

Research Assistants: Robert Flewelling, James Ludden, Marisue Wells,
Marg Suenaga, University of Washington

A major project undertaken in 1973 was the computerization of information contained on National Park Service backcountry use permits. Copies of permits issued to people camping in Mt. Rainier and North Cascades National Parks were sent to the University of Washington for data processing. The information was coded in a format suitable for keypunching. The next step required was to convert the data into a form which could be utilized easily in a wide variety of statistical descriptions and procedures. Such a conversion program was developed for both data sets.

The computer information program which was started in 1973-75 by Robert Flewelling was continued in 1975-76 by James Ludden. The computer program was rewritten to make it applicable to any park in the system and in a language which could be transferred to any other computer. The tables were reorganized to make them more useful. Options were added to the program to allow special processing of individual travel zones of trips.

Copies of the computer program were sent to the data processing office of the National Park Service in Washington, D.C. for possible system-wide application. Considerable effort was expended to provide the information necessary to solve management problems as seen by park management. This resulted from frequent communication with managers. Some of the results of this effort have been a reorganization of travel zones by ranger district, redefinition of travel zones, addition of a page of summary information, and a regional summary for all the major parks of the Pacific Northwest Region.

PROJECT: Children's Interpretation: Developing Creative Formats

INVESTIGATORS:

Principal Investigator: Donald R. Field, University of Washington CPSU/NPS

Research Assistants: Gary Machlis, Sally Graves Machlis, University of Washington

Any fruitful approach to Children's Interpretation must be based on a sound conceptual framework of understanding child behavior. We began by asking the broad question: what affects the way children learn?

Next, general approaches to interpretive programs were developed. These approaches involved <u>action</u>, <u>fantasy</u>, and <u>instruction</u>. A series of practical application "The Discovery Book Series" has been created, and are in use in Park Service areas. These include:

The Fort Vancouver Discovery Book Life of the Salmon Splash! Craters of The Moon Discovery Book Children's Map of Oregon Caves Monument

In addition, an interpretive guide, <u>Creative Design for Bulletin Boards</u> and a guide to the development of <u>creative formats</u>, <u>Getting Connected</u>, have been published.

PROJECT: The Whitmans and the Waiilatpus: An Interpretive Film for Children

Principal Investigator: Donald R. Field, University of Washington, CPSU/NPS

Research Assistant: Kathryn Sharpe, University of Washington

Work began on the film in July of 1975 when Larry Waldron, the Chief Interpreter at Whitman Mission National Historic Site, requested a children's film. He was most interested in special interpretation for the many fourth graders who visit the mission (or wish they could) during their studies of Northwest history. The film will be a useful interpretive tool in both the mission visitor center and the schools because it contains information, visual information in particular, which was previously scattered throughout the Northwest.

A wealth of written information was available on Whitman Mission history, but visual information, which is essential for a film, was in short supply. Our first objective was to collect adequate visual material to justify the project. We obtained permission to use a recently completed series of oil paintings of the Whitmans, found people in the Pendleton Roundup Association who were willing to bring oxen to pull the mission's covered wagon, and in various libraries throughout Washington and Oregon located Edward Curtis' and Lee Moorhouse's photographs of the Cayuse and related tribes. Although they antedate the years of the mission, they provide a fairly accurate picture of Native American life just before and after its establishment.

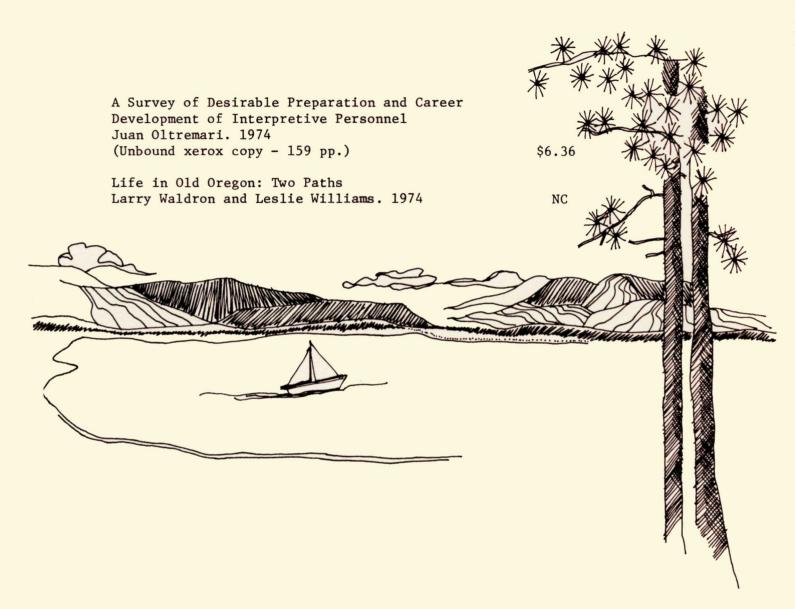
Our second objective was to relate the cultural meeting of the Native Americans and the European-American missionaires in elementary language without bias toward either group's point of view in the visuals, the narration or the soundtrack.

PUBLICATIONS ORDER LIST

Order publications at the following address: National Park Service

Cooperative Park Studies Unit College of Forest Resources University of Washington Seattle, WA 98195

Publication	Price
Interpretation for Handicapped Persons: A Handbook for Outdoor Recreation Personnel Jacque Beechel. 1975	\$1.10
Exploring the Olympic Seashore Forrest Blau. 1976	NC
A Basis for Assessing Differential Participation in Water-based Recreation Donald R. Field, Neil H. Cheek, Jr. 1974	NC
Social Groups as a Basis for Assessing Participation in Selected Water Activities Donald R. Field, Joseph T. O'Leary. 1973	NC
Visitor Groups and Interpretation in Parks and Other Outdoor Leisure Settings Donald R. Field, J. Alan Wagar. 1973	NC
Clams of Garrison Bay Vincent F. Gallucci. 1976 (Instruction booklet about various types of clams in the Bay with guide for ecologically sound digging techniques.)	NC
Interpreting Parks for Kids - Making it Real Gary E. Machlis, Donald R. Field. 1974	NC
The Discovery Book Series (Order by specific name) Gary E. Machlis, Sally Graves Machlis.	
Life of the Salmon	NC
Fort Vancouver National Historic Site	NC
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Oregon Caves Discovery Map	NC
Splash! (A Fish Game)	NC
Creative Design for Bulletin Boards	NC



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