THE ISLE ROYALE *FOLKEFISKERISAMFUNN: FAMILIER SOM LEVDE AV FISKE*

An Ethnohistory of the Scandinavian Folk Fishermen of Isle Royale National Park



Prepared for

The National Park Service Midwest Regional Office
and
Isle Royale National Park

By

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Preface

The title *Folkefiskerisamfunn:Familier som levde av fiske* is Norwegian for Folk Fishing Community: Families who had Fishing as their Livelihood. Translations in Swedish and Finnish are similar; the use of the Norwegian translation was a matter of accessibility and is not intended to imply a Norwegian over Scandinavian culture.

Acknowledgements

The UofA team would like to acknowledge the tremendous support provided by members of the National Park Service at the regional and park levels. Special thanks go the late Superintendent Douglas Barnard without whose support this study could not have occurred. We would like to thank the Contractor Officer's Representative for the project, Dr. Michael Evans, who helped design the study in response to data needs expressed by the park, and who monitored the research progress on a month-by-month basis. Our point of contact in Isle Royale National Park is Elizabeth Valencia. Liz's knowledge of and interest in this study have been instrumental for defining key ideas and pointing out key information sources on Scandinavian fishermen and their lives. Liz also provided extensive help with mainland and island logistics that proved essential to the success of the field research.

At Mott Island, in-field assistance was provided by Elizabeth Campbell, photo intern, and Danica Bloom, Resource Center VIP. In the West District, we would like to thank Dena Hicks, interpreter; Amy Tholen, Student Conservation Association; Valerie Campbell, interpreter, and Peter Houpt, maintenance worker. Useful insights were provided by North Shore park ranger John Milner.

The families and friends of the original Isle Royale[1] commercial fishers were instrumental in assuring that high quality data of various types were collected and transformed into useful information. We are indebted to each person who suggested names of people who could be interviewed, assisted with travel and housing arrangements, welcomed us in their homesteads, and helped us understand how the fishing culture is viewed by the people who created it. The names of the informants are

[1] The term Isle Royale is written out, rather than abbreviated, throughout this document at the request of the informants.

withheld at their request and as part of an NPS contract specification regarding the protection of informant confidentiality.

Informants provided comments and corrections on the final draft of this report, as did several NPS reviewers. Most of the comments were addressed in the revision of the final draft, however, a few questions were raised that indicate directions for future research and could not be addressed as revisions. We greatly appreciate the contributions of these individuals to the completion of this document.

CHAPTER ONE
STUDY OVERVIEW

The Bureau of Applied Research in Anthropology (BARA)-University of Arizona ethnographic team (UofA team) contracted with the National Park Service (NPS) Midwest Regional Office in 1998 under Solicitation #1443RQ600098025 to conduct an ethnographic and ethnohistoric study of commercial fishing activities at Isle Royale National Park (IRNP). The UofA team, having no connection with Isle Royale National Park, the commercial fishermen or their families who are the focus of this study, provides this report as an independent study of the ethnography and ethnohistory of commercial fishing at Isle Royale.

The purpose of this study is to document and analyze historic and contemporary commercial fishing in the immediate vicinity of ISLE ROYALE including the identification of specific ethnic or social groups who have both traditional and contemporary ties to this fishery. By identifying resource use areas and concerns that may affect NPS management responsibilities, the results of this study will aid managers to anticipate resource protection issues that may affect Isle Royale National Park. The ability to anticipate such issues will place managers in a better position to understand and deal with such issues specifically as these pertain to the development of further cultural and natural resource studies, interpretative programs, and management decisions. The Scope of Work for this study identified five specific objectives:

- Descriptions of commercial fishing activities, and the significance of historical resources and physical environmental features on Isle Royale (ISRO) associated with these activities;

- Descriptions of environmental knowledge of the commercial fishermen as it pertains to their fishing activities and historical use of the environment in the area of Isle Royale National Park;

- A current bibliography of ethnographic and ethnohistorical information on commercial fishing and Isle Royale National Park;

- A list of any ethnographic resources to be considered for inclusion in the Ethnographic Resources Inventory, and considered for nomination to the National Register as Traditional Cultural Properties; and

- A list of potential interpretive topics.

List of Participants

Several people assisted the UofA team by participating in interviews at various locations on Isle Royale (Table 1.1). Potential consultants were identified from previously published lists of commercial fishers and oral history interviews. Several of these people suggested other potential consultants when they were contacted. The consultants were chosen based on three criteria: (1) they were commercial fishers at Isle Royale; (2) they are direct descendants or close relatives of Isle Royale commercial fishers; and (3) they were or are directly associated with the fishery industry at Isle Royale. The consultants provided detailed information about family, landscapes, and specific sites during 48 interviews (Table 1.2).

Table 1.1 Consultants
Alvera Anderson Pierson
Betty Sivertson Strom
Frank Johnson
Gene Skadberg
Sue Skadberg Johnson
James Purdy
James R. Anderson
John Henry Skadberg
Karen Holte
Louis Mattson
Mark Rude
Milford Johnson
Monica Johnson
Ronald Dwayne Johnson
Stuart Sivertson
Tom Eckel

Table 1.2 Interviews by Type and Gender				
	Family	Landscape	Site	Total
Male	10	8	19	37
Female	4	4	3	11
Total	14	12	22	48

Schedule of Activities

The UofA team developed a schedule of activities for the consultant interviews (Table 1.3). The schedule reflects those activities as these actually occurred rather than those originally planned since some consultants were unable to participate and weather conditions altered the original plans.

Structure of the Research

The UofA team completed the objectives in the Scope of Work through four steps of research. The first step involved a review of archival data and documents relative to commercial fishing and Isle Royale. The second step was a review of oral history tapes and transcripts made by NPS and the Northeast Minnesota Historical Center Library (NE-MNHC). At this point, the UofA team ascertained a need for contemporary data and determined the context for this report.

The third step of research, consequently, consisted of on-site visits with former Isle Royale commercial fishermen and descendants of Isle Royale commercial fishermen. The fourth step involved compiling archival and field data to identify the extant and extinct aspects of Isle Royale commercial fishing. These activities are summarized below and detailed further in Chapter Two: Research Methods.

Archival Review

The purpose of the archival review was to compiling an ethnohistory and bibliography of historic and contemporary commercial fishing resource use in and around Isle Royale National Park. The information collected included published and unpublished sources of print, audio, and photographic materials. From this collection of information, the UofA team determined the need for a contemporary perspective of Isle Royale commercial fishing.

Table 1.3 Schedule of Field Activities by Who, What, Where			
DAY/DATE	**WHO**	**TASK**	**LOCATION**
Day 1, Sun. 7/11	UofA Team	Depart AZ	Tucson to Duluth
	UofA Team	Drive to North Shore	Duluth to Grand Portage
Day 2, Mon. 7/12	UofA Team	Arrive at Park, Setup	Windigo, ISRO
Day 3, Tues. 7/13	UofA Team	Prep, Interviews	Windigo, ISRO
	Fishers 1	Arrive, Setup	Windigo, ISRO
Day 4, Wed. 7/14	UofA Team	Southern Route Interviews	From Windigo, ISRO to Fisherman's Home
	Fishers 1	Southern Route Interviews	From Windigo, ISRO to Fisherman's Home
Day 5, Thurs. 7/15	UofA Team	Northern Route Interviews	From Windigo, ISRO to Washington Island
	Fishers 1	Northern Route Interviews	From Windigo, ISRO to Washington Island
Day 6, Fri. 7/16	UofA Team	Transition	Windigo, ISRO
	Fishers 1	Depart	Windigo, ISRO
	Fishers 2	Arrive	Windigo, ISRO
Day 7, Sat. 7/17	UofA Team	Southern Route Interviews	From Windigo, ISRO to Hay Bay
	Fishers 2	Southern Route Interviews	From Windigo, ISRO to Hay Bay
Day 8, Sun. 7/18	UofA Team	Southern Route Interviews	From Windigo, ISRO to Hay Bay
	Fishers 2	Southern Route Interviews	From Windigo, ISRO to Hay Bay
Day 9, Mon. 7/19	UofA Team	Transition, travel	Windigo to Rock Harbor
	Fishers 2	Depart	Windigo
	Fishers 3	Arrive	Rock Harbor
Day 10, Tues. 7/20	UofA Team	Southern Route Interviews	From Rock Harbor to Chippewa Harbor
	Fishers 3	Southern Route Interviews	From Rock Harbor to Chippewa Harbor
Day 11, Wed. 7/21	UofA Team	Northern Route Interviews	From Rock Harbor to Amygdaloid area
	Fishers 3	Northern Route Interviews	From Rock Harbor to Amygdaloid area
Day 12, Thurs. 7/22	UofA Team	Southern Route Interviews	From Rock Harbor to Wright's Island
	Fishers 3	Depart	Rock Harbor
	Fishers 4	Arrive, Interview	From Rock Harbor to Wright's Island
Day 13, Fri. 7/23	UofA Team	Data/archive, Interviews	Rock Harbor
		Interviews (N. Zedeno)	North Shore
Day 14, Sat. 7/24	UofA Team	Data/archive	Rock Harbor
Day 15, Sun. 7/25	UofA Team	Transition/depart	Rock Harbor to Grand
		Interviews on boat	Portage
Day 16, Mon. 7/26	UofA Team	Museum, Interviews	Grand Portage to Duluth to
		Depart MN	Tucson

The UofA team approached this data need through an examination of a large collection of oral histories provided by NPS and the NE-MNHC and on-site visits for personal interviews with former Isle Royale commercial fishermen and descendants of former fishermen. Preparation for these next steps of the research involved coding data from the oral histories (Appendix A) and identifying and contacting individuals for interviews.

Oral Histories

Beginning in 1965 and continuing sporadically through 1994, various individuals with universities or the NPS conducted taped interviews with older commercial fishermen, their wives, and summer residents. These interviews focused on commercial fishing, vernacular boats, tourism, and historic events. The interviews about commercial fishing were the focus of topical coding (Appendix A). The coding provided guidance for the development of interview questions and the previous interviews provided perspectives of commercial fishing from generations older than those interviewed on-site.

In addition to the NPS oral histories, eleven commercial fishing oral histories taped in 1977 were obtained from NE-MNHC. Full transcripts of these histories were obtained from NPS and NE-MNHC so that they could be included in Appendix A and in the development of questions for the on-site visits.

Context of the Report

Based on the results of the reviews of archival material and the oral histories, the UofA team identified three aspects of commercial fishing that support the framing of this report as a folk fishing history. The first parameter is the primary time period emphasized in this report, which represents a dramatic increase in the industry followed by the longest sustained occupation of fishing at Isle Royale. The temporal nature of this report, consequently, emphasizes commercial fishing during the 120-year period from 1880 to the present.

The second parameter, reflecting significant ethnic and demographic changes between 1880 and 1885, is the dominance of Scandinavian fishermen at Isle Royale. As part of the increasing immigration from many European nations, Scandinavian

immigrants flooded the Lake Superior area, particularly along the North Shore of Minnesota. Numerous ethnic groups were involved with commercial fishing prior to this time, however, most of these groups found more desirable work with the mines, timber companies, and railroads developing in Minnesota. Continuing into the early part of the 20th century, Scandinavian immigration resulted in a folk fisher culture that operated successfully at Isle Royale until the 1950s when the sea lamprey, an exotic fish, reached Lake Superior and began to decimate the lake trout population.

The third parameter, a result of the first two, is semantic, yet critical for an accurate portrayal of this fishing culture. The UofA team has determined that 'Scandinavian *folk fishers'* or *'folk fishermen'* are better descriptors of the Isle Royale fishermen of this era than 'commercial fishermen,' which suppresses the regional distinctiveness of this cultural group and generates negative connotations with the general public. Several aspects of folklife support these individuals as *folk fishers* and their way of life as a *folk fishing culture* or *folk fishery* (Cochrane 1982; Fieldwork 1999; Franks and Alanen 1999; Gale and Gale 1995; Karamanski, Cochrane, and Zeitlin 1991; Kaups 1975; Oikarinen 1979; Oral History tapes):

- Many of the Scandinavian immigrants were fishermen in their homelands. They adapted their fishing knowledge and technology, particularly gill nets, set lines, and mackinaw boats, to the conditions at Isle Royale. Only adaptations that worked at Isle Royale were made. The landscape above and below the waterline, for example, did not accommodate larger boats; Isle Royale, consequently, reinforced the fishing style and folk fishery.
- Living traditions were passed on from generation to generation including fishing. Fishermen were related by marriage, occupation, and ethnicity. Children contributed through odd jobs for both parents including equipment care and fishing.
- Fishing territories were generally first-come, first-served, respected through a gentleman's agreement, and enforced by pulling the trespasser's nets.

- Individual fishermen and 'company store' characterized Isle Royale fishery. The Booth Company was one of several Scandinavian fish marketers; its development ran concurrent to the late 19th century wave of Scandinavian immigration and the consequent development of the herring fishery. The Booth Company established a shipping pattern along the North Shore to Isle Royale because there was less threat from storms. These factors, combined with the concentration of Scandinavian communities along the North Shore and Isle Royale, resulted in a mutually-reinforcing relationship that sustained the Scandinavian culture.
- They followed a calendrical routine: gathering food for six to eight months and getting equipment ready in February and March in preparation for the island; celebrating on the eve of departure; once on island, chopping and storing ice and wood, getting buildings in shape, starting fishing; celebrating the Fourth of July; mostly shore-based work during slow fishing of July and August; fall fishing and collecting spawn to send to the fish hatchery (since the 1890s); and returning to the mainland in October or November.
- Sense of community as a result of the calendrical routine including shared work, such as chopping and storing ice, and celebrations, such as the Fourth of July.
- Shared values such as self-sufficiency. Marriage was within the Scandinavian fishing communities.
- Not accepted in non-fishing societies on mainland, such as railroad towns.
- The Washington Harbor wives had a weekly domestic and social schedule.
- Contemporary identity and pride in ethnicity sustained through shared memories and resistance to change.
- Material culture including the architecture of the fisheries, clothing/attire, boats, and nets. Folk culture characteristics of navigational techniques, weather and lake lore, fisher-folk biology, customs of coffee, picnics, boat days, Fourth of July, wildlife stories, shipwreck stories, family stories,

place names, place-name legends, and local character anecdotes such as Stan Sivertson's "You had to fish Scandinavian" (Cochrane 1982:35).

- Place names such as the Swedish Domen (death) and Doden (doom).
- Maintaining a biography of boats through tracing ownerships; fishermen had personal relationships with their boats.
- Music with accordions, violins, guitars to accompany Scandinavian songs.

In terms of everyday life and the routines of the fishermen and their families, the folk culture was characterized by relationships and activities (Fieldwork 1999):

> *That [women visiting] was kind of a Thursday thing because Monday they washed, Tuesday they ironed, and Wednesday they mended and Thursday they visited and, they had to do some baking on Wednesday because the ladies were out visiting on Thursday. And of course, they had to have a cake that's this high and you know the women judged each other, how white your clothes are, how high your cake is. They always clean on Fridays. Saturday and Sunday, usually Saturday and Sunday didn't make a whole lot of difference. I suppose they probably caught up with what they hadn't gotten done. Saturday night they went down to the dance hall. Down at the end of Singer Island, or Washington Island, was a bowling alley. My uncle played a concertina. One man played a violin and they would play for dancing...They used the term 'hired men' and I know that is not derogatory, that was a loving, 'cause they were like a family, they sat at the same table and my mother washed their long underwear and their wool socks and, by hand, you know, the whole thing. They were like uncles but we just called 'em hired men. Some of them had a hired girl to help with the children ... the hired girl was often the tutor and one gal they had taught Sunday school. My grandmother thought that a woman belongs with her husband. The children can go stay somewhere else. So a couple of years, they boarded us out, they called it. -----'s mother and -----'s mother sent them in every fall and they stayed with their husbands. That*

was the way it was. You know, these houses really didn't belong to anybody. But someone needed a house, they lived in it, you know. ----- needed a house, she had a house. When she didn't need this house, when they worked for someone on Booth Island, they got a house on Booth Island but nobody moved any furniture. It just kind of stayed there. I guess it was a different lifestyle. I didn't know until they told me, that we were different. We're all, everybody that ever lived here is still hanging in the same thing, you know, we haven't advanced into today. We're still living way behind."

While the folk fishery is all but gone physically, one assessment fishing permit remains. Several descendants of fisher families continue to use their homes under special use permits or volunteer agreements, and some descendants work in ventures that service the Park, such as ferry, charter, and informal interpretive services. Many cultural elements have been lost or destroyed and those remaining are in danger of being lost. The uniqueness of the folk fishery is discussed further in Chapter Three: The History of Commercial Fishing at Isle Royale.

In addition to framing the overall report, the three parameters – 1880 to the present, *folk fishers* and *folk fishery*, and a Scandinavian folk fisher culture – frame the discussion of recommendations for future management and interpretive strategies (Chapter Six). In this chapter, the UofA team addresses the potential for preservation and interpretation of the Scandinavian folk fisher culture through such strategies as traditional cultural properties and cultural landscapes.

On-site Visits

Preparing for the on-site visits was the identification of former Isle Royale commercial fishermen and descendants of Isle Royale commercial fishermen. This effort began with the assistance of NPS and expanded as those individuals were contacted. In addition to names and telephone numbers for other fishermen and their descendants, who subsequently were contacted, they provided information, advice, and suggestions that greatly aided preparations for a two-week stay on the Island. As people were contacted,

the purpose of the study and the proposed on-site visits were discussed with them. An interview schedule was arranged with those individuals who were interested in sharing their knowledge of commercial fishing and available for interviews.

Questions were developed to guide the interviews and were organized to address three categories: a general overview of families' commercial fishing history, landscapes, and specific places. Interviews were scheduled with forty-one individuals who were provided a formal, on-site introduction to the study with an informed consent document that explained the purpose of the study, the interviews, and confidentiality of the interviews. The information gathered during the interviews was coded into an ACCESS database separate from the oral history database. While these data sets are separate, the database system allows a comprehensive analysis of both sets.

Analysis and Write-Up

The three parameters that set the context for this report - time period of the 1880s to the present, folk fishers versus commercial fishermen, and the uniqueness of this Scandinavian folk fishing culture - and two relevant concepts - ecosystem and cultural landscape - provide a framework for this report. The concepts of ecosystem and cultural landscape are part of the framework for analysis because they contribute to our understanding of how humans view their world and provide a conceptual and practical bridge between federal management principles and human land and resource use practices.

In Chapter Two the research methods are discussed in detail. Chapter Three: The History of "Commercial" Fishing at Isle Royale reveals the reasoning behind our framework of the time period, the use of the term "folk fishers," and the uniqueness of the Scandinavian period. Chapter Four: Knowledge and Use of the Environment by Scandinavian Folk Fishermen at Isle Royale. Chapter Five: Cultural Places of Scandinavian Folk Fishers of Isle Royale and Chapter Six: Cultural Landscapes of Scandinavian Folk Fishers of Isle Royale illustrate the relationship between ecosystems and cultural landscapes. The report concludes with Chapter Seven: Recommendations for the Future of Scandinavian Folk Fishing at Isle Royale National Park, which is guided also by the framework described above.

CHAPTER TWO
RESEARCH METHODS

Many studies have been conducted over the years about various aspects of Isle Royale. Wildlife, history, archaeology, and maritime topics are some of the more common areas of research and personal account writings that have been undertaken. Commercial fishing, one of the popular areas of interest, has been approached predominantly from ecological and economic perspectives. While some folklorist accounts have been written that begin to address the lifestyle of Scandinavian folk fishing, a cultural context has yet to be fully developed.

The research methods for this report yielded a wealth of information that allows further development and explanation of the folk fishing period on Isle Royale. This chapter discusses the four steps of research that led to the collection of this data: (1) the archival review, (2) the oral history database, (3) the on-site interviews, and (4) analysis and write-up.

Archival Review

In addition to compiling an ethnohistory and bibliography of historic and contemporary commercial fishing on Isle Royale, a purpose of the archival review was to identify any gaps in that history that could be pursued through contemporary interviews. The first review effort involved travel to the Isle Royale National Park Headquarters in Houghton, Michigan by UofA team member Rebecca Toupal. Elizabeth Valencia, the NPS contact for the UofA team, provided a stack of some of the most pertinent material in the NPS files and library as a starting point. Toupal also examined numerous articles, both published and unpublished, publications from previous research efforts, photographs, legal documents, permittee and life lease records, fish catch records,

technical reports, and audio tapes and transcriptions of oral histories made with now-deceased folk fishermen.

The archival review continued at the University of Arizona primarily through electronic searches for material. Internet searches, telephone, email, and postal contact was made with libraries, museums, and universities in Minnesota and Michigan, and by email with the Midwest Archaeological Center in Lincoln, Nebraska. Books, theses, dissertations, articles, and maps were located at libraries in Tucson, Arizona, Duluth, Minnesota, Grand Marais, Minnesota, and Houghton, Michigan. These materials were obtained for review through interlibrary loans and copies donated by these sources.

Additional material was identified and obtained during the field trip to Isle Royale in July 1999. Some of the participants identified books by or about Isle Royale folk fishermen that were obtained later. Other historic and legal material was found in the NPS library on Mott Island, Isle Royale.

Oral History Coding

Beginning in 1965 and continuing sporadically through 1994, various individuals with universities or the NPS conducted taped interviews with older commercial fishermen, their wives, and summer residents. These interviews focused on commercial fishing, vernacular boats, tourism, and historic events. The interviews about commercial fishing were the focus of topical coding (Appendix A), which provided guidance for the development of interview questions, and provided perspectives of commercial fishing from generations older than those interviewed on-site. Toupal listened to several tapes during the visit to Houghton, Michigan and determined more time was needed to review the material. Ms. Valencia arranged for the loan of the tapes to the UofA team for coding purposes.

In addition to the NPS oral histories, twelve commercial fishing oral histories taped in 1977 were located at NE-MNHC. Full transcripts of ten of these histories were obtained from NPS; of the two remaining, NE-MNHC was able to provide only one as the folk fisherman of the remaining transcript would not release it for public access. A copy of the eleventh transcript was sent to NPS for inclusion with their set of ten.

Codes were identified through listening to the commercial fishing tapes, reviewing hand-written remarks NPS had for some of the tapes, and reviewing the codes used in the NE-MNHC oral histories. The resulting Appendix A provides a research aid by allowing identification of specific topics and pertinent oral histories that address those topics. The list, while not exclusive, provides a diversity of discussions on given topics.

On-Site Visits

The UofA team identified the need for a variety of contemporary information about Isle Royale folk fishing based on the reviews of archival material and oral histories. Having determined that the collection of this information was necessary to address three of the objectives in the Scope of Work adequately (#1 - commercial fishing, natural and cultural resources, #2 - environmental knowledge, and #4 - ethnographic resources), the UofA team planned on-site visits with former Isle Royale folk fishermen and descendants of folk fishermen. A two-week time frame was developed and later modified as required by field conditions (Table 3, Chapter 1).

The planning process involved the identification, contact, and scheduling of potential interview candidates, the identification of places to inquire about and/or visit, the scheduling of travel and overnight accommodations, and obtaining clearance for boat captains to transport the UofA team and for consultants of park visitor fees. The majority of the planning was done by telephone and email communication.

Two goals of these visits were to collect contemporary information face-to-face with former members of the Isle Royale folk fishing community and to examine as many former fish camps as possible. Three categories of information was sought: family history with Isle Royale and folk fishing, places, and landscapes. Based on previously tested methods, places and landscapes were treated separately as explained below.

The questions developed by the UofA team to guide the interviews were based on the coding of the oral histories. They were designed to address the three categories of data as well as three of the objectives in the Scope of Work: #1 - commercial fishing, natural and cultural resources, #2 - environmental knowledge, and #4 - ethnographic resources. Contemporary ethnographic studies and legal references provided additional guidance for developing questions about ethnographic resources.

The term ethnographic resource refers to a wide range of natural and cultural resources that are part of the traditions of a cultural group. Such resources are not limited to material items and, as defined by NPS, may include practices, values, beliefs, history, and/or ethnic identity that are associated with natural and cultural features, structures, places, and materials of the cultural group (Parker and King 1992; Secretary of the Interior 1997). The ethnographic resources inventory for this study, consequently, includes such resources that were found to be associated with the commercial fishing culture of Isle Royale.

A systematic approach of guiding questions, developed by the UofA team in previous ethnographic projects involving Native American ethnographic resources, was employed to identify the ethnographic resources of Isle Royale commercial fishermen in order to enhance previous archaeological, historical, and folklorist studies on Isle Royale and commercial fishing. This approach provided data from which the UofA team developed a cultural context of the resources and linkages between those resources, the people who use them, the places where they use them, and the ways in which they use them.

Method for Place Studies

Contemporary information about places was collected at sites identified in the archival review as important former fish camps. The UofA team has found this strategy to be effective in improving the quality and quantity of site-specific data, a knowledge-enhancing technique described also by Bourassa (1991) in his discourse on landscape aesthetics.

While consultants preferred to discuss their families' former fish camps, many of them were able to discuss other sites as well. At each site, the set of place questions (Appendix E) was asked of the consultant. In some cases, two consultants participated in the discussion of a site. The discussions centered on the activities and uses of resources at each place.

As part of the discussions, each consultant was asked to draw the boundaries of the site. These mapping efforts have been compiled and analyzed as part of the cultural landscape of the Scandinavian folk fishermen of Isle Royale.

Method for Cultural Landscapes Studies

Contemporary information about the island as a landscape was collected from consultants at a variety of locations. These discussions were held on-site in terms of being somewhere on Isle Royale but they did not require, nor could they be held at, more site-specific settings.

The set of landscape questions (Appendix D) centered on use areas and connections to other places. Each discussion was held with one or two consultants. Part of these discussions included mapping of use areas around the island and in the waters surrounding the island, and mapping connected places throughout the Lake Superior region.

Analysis and Write-Up

The context of the Scandinavian folk fishing period from the 1880s to the present provides the framework for analysis and write-up of this report. Data from the archival review, the oral history database, the field interviews, and the field maps are used throughout the report to provide an in-depth understanding of this period of the history of Isle Royale National Park.

The analysis consisted of queries and comparisons of the oral history database and the fieldwork database to provide both a historic and a contemporary perspective of folk fishing at Isle Royale. While place and landscape data were compiled, analyzed, and discussed separately, graphic accounts of places and landscapes are compiled to provide illustration of relationships and connections between the two concepts of space.

An ethnohistory of commercial fishing at Isle Royale is detailed in Chapter Three. This history is discussed in relevant time periods identified during the archival review. In Chapter Four, we discuss the fishermen's knowledge and use of the environment based on the Oral History interviews and the 1999 fieldwork. Discussions of extant and extinct aspects of Isle Royale folk fishing comprise Chapters Five and Six, which emphasize cultural places and cultural landscapes associated with the Scandinavian folk fishers. Chapter Seven addresses recommendations for the future of the fishing culture at Isle Royale including an inventory of ethnographic resources and resource use areas, a list of

potential interpretive topics, and potential Traditional Cultural Properties and Cultural Landscapes. A bibliography and appendices conclude this report. Appendices are provided for the Oral History coding, kinship charts, and the three sets of interview questions.

CHAPTER THREE
THE HISTORY OF "COMMERCIAL" FISHING AT ISLE ROYALE

Of all the natural resource-based economic ventures on Isle Royale, commercial fishing has been the most productive, longest-lived, and least harmful to the environment (Franks and Alanen 1999; Kaups 1975). The historic abundance of the Great Lakes fisheries attracted both Native Americans and Euro-Americans. The first commercial fishing endeavors were launched in the early 1830s when companies like American Fur, North West Fur, and Hudson's Bay needed food supplies for their trading post employees (Franks and Alanen 1999). While over-fishing has been documented for Lake Superior in general, the Isle Royale fisheries have tended to maintain viable, healthy fish populations. It was not until the late 1940s and 1950s when the predatory sea lamprey finally reached these waters that the lake trout and whitefish populations of the Island experienced severe declines.

Some historians (Kaups 1978) and researchers (Goodier 1984; Jensen 1978) attribute the severity of the sea lamprey impact to stressed, over-fished populations. Lake Superior as a whole experienced an increase in exploitation as fishermen from other lakes already decimated by the sea lamprey invaded Lake Superior. Not all of the Lake Superior fisheries, however, had stressed populations, the Isle Royale fisheries being some of the most successful. That success may be attributed to the ideal combination of deep water, rock reefs, warm, shallow bays, and streams from the Island.

Historic accounts of commercial fishing at Isle Royale focus on Lake Superior fisheries (Goodier 1984; Jensen 1976, 1978; Karamanski, Zeitlin, and Derose 1988), historic structures of the Island (Franks and Alanen 1999), and folklore (Cochrane 1987a, 1987b; Holte 1984; Oikarinen 1979). In this chapter, these earlier accounts provide background to our emphasis on the Scandinavian fishing period that began in the 1880s. Although the history overview questions that guided the 1999 field work was divided into

four periods – 1880s to 1931; 1931 to 1965; 1965 to present; and the future – the resulting data, combined with historic documentation, suggest different time frames for this chapter.

The first section covers pre-history to 1880 with a focus on the Euro-American settlement period. The second section, 1880 to 1940, describes the establishment of the Scandinavian folk fishery of Isle Royale. The third section, 1940 to the present, covers three significant changes – establishment of Isle Royale National Park, impacts from exotic species, and changes in Michigan DNR assessment regulations – to the Scandinavian folk fishery and the people who managed it. The future of the fishery is discussed in the final chapter that addresses management recommendations.

Pre-history to 1880

Although commercial fishing efforts in Lake Superior struggled in the early years, as other ventures did, failed efforts were more often a result of social and economic conditions rather than problems or shortages in the natural resource base. From the earliest records of the Lake fisheries, the high quality and quantities of fish were known and it was only a matter of time before the industry was well established.

Both migratory and non-migratory fish species comprised the marketable component of the Lake Superior fishery. Non-migratory species included sucker, walleye, perch, and sturgeon, while the migratory species included lake trout, whitefish, and herring. While the non-migratory species experienced dramatic population failures, few declines were noted in the migratory species. Early journal accounts of fish populations gave no indication of depletion of the migratory species that could be attributed to commercial fishing, with the exception of areas along the south shore of Lake Superior (Goodier 1984, 1995). Even when a significant increase in fishing pressure for migratory species occurred in 1839, no population changes were recorded. It seems unlikely that any declines would go unrecorded since the lake trout, the most widely marketed species even through many social, political, and biological changes, is extremely selective of its spawning sites. This species tends to form discrete breeding stocks so population changes most likely would be noticed and documented (Goodier 1984).

Prior to commercial fishing in Lake Superior and at Isle Royale, archaeological evidence suggests that Native Americans relied on gill netting as early as the Middle Woodland period to the extent that Martin (1989:603) refers to it as "a brick in the structure of the regional adaptation." Frequent use of generalized localities further suggests that permanent multi-seasonal settlements were scattered along the lake edge. These areas, as the better fishing places, continue to be used by the commercial and sport fishing industries today in spite of environmental changes, periodic depletion, exhaustion of the fisheries, and radical shifts in technology (Figure 3.1) (Martin 1989).

The Ojibway traveled to and from their traditional fishing camps on Isle Royale, what they called Minong or their "good place," from Thunder Bay. The dangers of crossing Lake Superior often hindered access to Isle Royale, however, the Ojibway were skilled at traveling the waters and did not find the dangers a barrier to the Island and its resources. The abundance of animal resources, both terrestrial (caribou, beaver) and aquatic (siskowit, sturgeon), also provided significant motivation to make the journey (Cochrane 1989).

The Ojibway, as did later fishermen, sought whitefish, siskowit, and sturgeon as primary components of their diet. Influenced by weather and fish behavior, their pattern of use included early summer (late May to mid-August) when the Lake was calmer. They targeted fishing grounds in such areas as Grace Island, McCargoe's Cove, Belle Isle, Rock Harbor, and possibly Siskiwit Bay. Occasionally, some would stay through the winter months. After the early summer fish run, they returned in the fall to fish for siskowit, whitefish, and trout with gill nets, then dried or frozen the catch for winter use. In addition to their gill nets, the Ojibway used fish spears, often at night with torch lights, fish traps and seines, and trolled with bone and wooden hooks from canoes (Cochrane 1989; Densmore 1929).

The combination of abundant resources and limited access resulted in healthy, viable populations. During population declines elsewhere in the region, the Island, consequently, was a source for repopulation as well as a haven for traditional hunters and fishermen. Isle Royale was not large enough or remote enough, however, for the Ojibway to avoid contact with the Europeans who came to the Island seeking mineral and fur resources (Cochrane 1989).

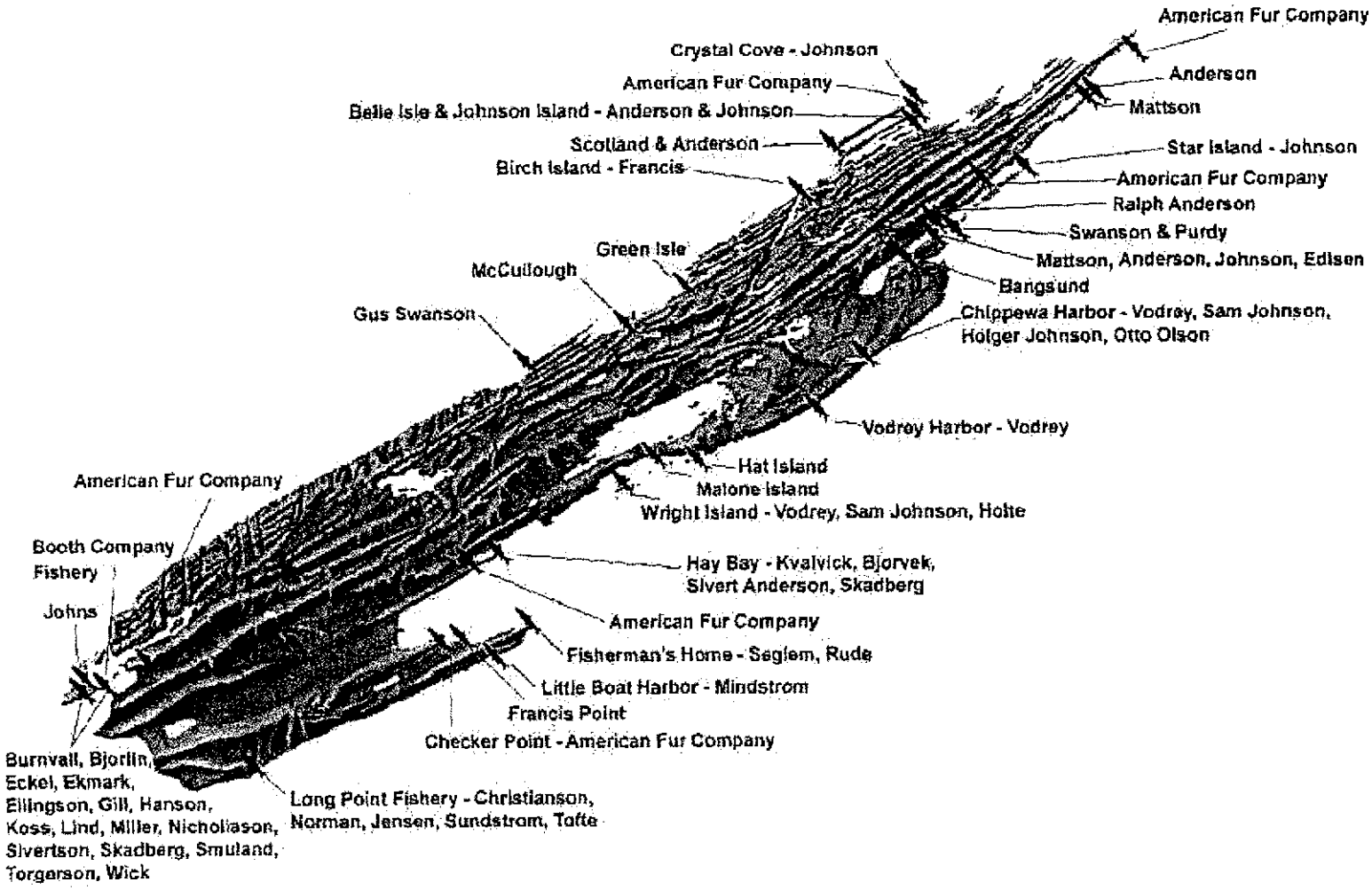


Figure 3.1 Historic fish camps of Isle Royale (Franks and Alanen 1999; Clark 1995; Martin 1989).

The Ojibway continued their traditional fishing ways during the fur trade era until the American Fur Company began establishing fishing stations at Grand Portage and Isle Royale. While some traditional fishing continued at a reduced level, other Ojibway became wage-earning fishermen for the American Fur Company which relied heavily upon Ojibway labor and knowledge of the Lake Superior fisheries (Cochrane 1989).

Ojibway use of their traditional fisheries continued to decline during the 1800s. Even after the Ojibway lost ISRO to mismanagement and misinterpretations of treaty settlements, they continued to visit the Island, particularly during the starvation years of the late 1840s and early 1850s (Cochrane 1989).

Scandinavian fishermen began commercial fishing in the waters of Isle Royale during the early 1800s. They established operational bases on the Island and fished first from sail boats, and much later small trawlers with pound and trap nets (Wallis 1960).

Commercial fishing started as a subsidiary enterprise of the American Fur Company as it used its extensive financial resources to expand into new ventures. Although different dates have been given as the beginning of AFC's fishing enterprises (Franks and Alanen 1999; Rakestraw 1967a, 1968; Karamanski, Zeitlin, and Derose 1988), American Fur Company Papers, housed at the New York Historical Society library, indicate that such activities commenced in 1835 (Nute 1926).

The American Fur Company (AFC) split in 1834 when John Jacob Astor and his son withdrew from the company and organized a new firm under the same name. Ramsay Crooks, president of the new AFC, immediately relocated the inland headquarters from Mackinac to La Pointe in order to build a vessel on Lake Superior – a schooner – to get away from the expense of numerous boatmen needed for the Mackinac boats. Realizing the 65 men who would be displaced would go to work for his competitors, Crooks decided to employ them to catch fish for the schooner to transport along with furs and provisions (Nute 1926).

Crooks first announced the company's intent to go into the fishing industry in December of 1834, when he wrote a confidential letter to General Charles Gratiot in Washington. Exploration of Lake Superior and the establishment of fishing stations would not begin until 1835. Being unfamiliar with the U.S.-Canada boundary and aware

that the Northwest Company caught its winter supply of fish in the waters of Isle Royale, he had concerns about taxation of the catches made by his company (Nute 1926).

He asked Gratiot to get an opinion from the Secretary of the Treasury as to whether any duty would apply to catches taken in Canadian jurisdiction by American citizens and transported in American vessels. Crooks' letter also indicated that he had not identified specific fishing locations since he was unfamiliar with the Lake Superior fishing grounds (Nute 1926).

In 1835, Crooks asked William A. Aitken, the trader at Fond du Lac, to explore the North Shore as far north as Grand Portage and Isle Royale. He had special interest in Isle Royale because of reports that it was a famous fishing ground with abundant resources, good harbors, reefs and islands harboring the best known siskowit, and the largest whitefish to be caught in Lake Superior (Cochrane 1989). Aitken, consequently, was directed to explore the entire perimeter of the Island and to note potential sites for permanent fishing stations based on 2 features: safe harbor for the schooner and good fishing grounds (Nute 1926).

Following Aitken's explorations, Crooks established a fishing station at Grand Portage in the fall of 1836. This was a desirable location since the prevailing winds seldom hit the North Shore and infrequently disrupted the fishing operations. This station was run by an Ojibway-Frenchman, Pierre Cotté, who directed operations there between 1836 and 1840. The workers at this station included coopers who made the barrels to ship fish, fishermen, boatmen, and Native American fishermen. Targeting whitefish and trout primarily, they fished the waters extending 45 miles southwest along the North Shore to Grand Marais, 5-6 miles northeast along the shore to Pidgeon River, and 18-20 miles east to Isle Royale. The fishing venture got off to a slow start that first year because the crew was small and just learning about the fisheries (Nute 1926).

The company built on Ojibway fishing knowledge with a variety of new technologies including net materials (twine and cotton), sailing schooners, docks, fish houses, salt preservation, and commercial shipping and marketing. AFC's reliance on Ojibway labor and their knowledge of fish species and fishing grounds extended to the development of small, interactive complexes. AFC fishing stations and Ojibway camps co-existed at several sites including the Card Point Station and Grace Island camp in

Washington Harbor, and the Francis Point Station and several small camps in Siskiwit Bay (Cochrane 1989).

Crooks established a fishing station at Isle Royale the following summer in 1837. Over the next two years, the Island's fisheries became some of the most extensive of all the company's fishing operations. By 1839, five stations were located at Siskiwit Bay, the chain of islands southeast of the Bay (what are now called Menagerie, Long, Castle, Paul, and Siskiwit Islands), Rock Harbor, Five Finger Bay, and Washington Harbor (Nute 1926).

Twenty-eight men worked and fished from these stations and 5 freemen fished two additional locations: 5-6 miles southwest of Siskiwit Bay (the McCormick Reef area) and halfway between Rock Harbor and Five Finger Bay (the Tobin Harbor area) (Nute 1926). Rock Harbor became a pickup point the stations since it was in a central location, and the safest and most accessible for a schooner. To deal with the rocky shoreline, a small pier was built that allowed the schooner to stay in the deeper waters of the harbor (Franchére 1839).

During the fishing season from mid-June to mid-November, the fishing crews used gill nets, 6' wide and 600' long, with lead sinkers and wooden floats to catch lake trout, siskowit trout, and whitefish. The average catch for the season was upwards of two thousand barrels. Herring were also part of the catch. After AFC expanded its fishing operations at La Pointe and around the Apostle Islands, the fish from Grand Portage and Isle Royale were shipped there for inspection and marketing (Nute 1926).

In 1839, Gabriel Franchere, an officer in charge of inspecting the fishing stations, suggested that most of the fishermen be sent from Grand Portage and Isle Royale to La Pointe, Wisconsin for the fall fishing season because over-wintering costs were compromising the company's fishing profits. An annual rotation pattern was established that started with spring fishing at Fond du Lac, then early-summer through early fall fishing at Grand Portage and Isle Royale, and then La Pointe for late fall fishing (Nute 1926).

AFC later established several smaller fisheries in the Lake Superior area including along the North Shore, at Keweenaw Point, the Montreal River, White Fish Point, and Grand Island. The company eventually ran three schooners and a scow to transport its

fish, first to La Point and from there to the Sault Ste. Marie station, which transported the fish to Detroit. By 1838, the company was doing so well with its fisheries that it came to rely on that income as the fur market declined (Nute 1926).

The large catches of 1838 and 1839 prompted an attempt to expand the market for Lake Superior fish beyond Detroit and throughout the United States. Shipments of fish to Ohio, the Mississippi Valley, and Texas, however, were slow to sell. In 1841, the company decided to postpone their fishing operations until sales improved. With the exception of a few boats at Isle Royale, AFC dropped fishing altogether that year. The company never resumed its fishing operations, however, because it folded in 1842 as a result of depression, attempts to monopolize the fur market, and emigration into the better fur-bearing areas (Nute 1926).

Rival commercial fishing efforts, spawned by AFC's start, began appearing through circulars in 1837. The Northern Lake Company of Cleveland, Ohio launched a vessel on Lake Superior at the close of 1839 and provided some competition to AFC the following season. A Detroit company also made a start on the lake in 1840 (Kaups 1978; Nute 1926).

Between 1840 and 1870, several developments associated with increasing European immigrations affected the growth of commercial fishing on Lake Superior including at Isle Royale. Awareness of the unexploited fish resources along the North Shore grew. Transportation facilities, particularly the railroads, made more markets available. New immigrants were seeking land and employment. This combination of factors enhanced the development of the Lake Superior fisheries (Kaups 1978).

The South Shore was developed before the North Shore primarily as a result of access. During the 1840s, several small, independent ventures started up at the south end of the lake and along the south shore. The rocky North Shore had few harbors and no water routes to the interior continent. Fur traders, often the first European explorers of these northern lands, sought inward passage elsewhere and the settlers who came later followed the routes they established (Kaups 1978).

Fond du Lac was one of the most active settlements in terms of commercial fishing ventures. As more people came to the area, news of the productive fisheries spread by word-of-mouth, through travel books, and through government reports.

Politicians and land speculators used this information to enhance their efforts to attract new immigrants to the lake states. Minnesota had an abundance of natural resources upon which the growth and future prosperity of the territory depended but lacked the population to develop them (Kaups 1978).

Several factors contributed to the slow development of the North Shore fisheries. First was the small regional market that the southern fisheries were able to supply. The second factor was the lack of a transportation system that would expand that market and make room for more commercial fishermen. The third problem was the ownership of the North Shore which the Ojibway still held. As these problems were resolved, opportunities for expanding commercial fishing along the North Shore grew (Kaups 1978).

In 1856, a fishing station was established at the southern end of the Grand Portage fishing ground, what is now Grand Marais. Another fishery was set up at Encampment. With the extended runs of the steamers and schooners on the lake, the fishermen at these remote sites had access to the markets. Although the population along the North Shore ws growing, most of the new immigrants were copper prospectors, land speculators, and settlers. This growth was short-lived, however, when the panic of 1857 caused many of the newcomers, and some of the fishermen, to leave the North Shore (Kaups 1978).

Fishermen began to return to the North Shore as the economy improved during the next decade, particularly after the Civil War. The most significant result of the economic expansion that followed the war was the completion of the Lake Superior and Mississippi Railroad at Duluth in 1870. Local and regional markets were now available to the commercial fishermen (Kaups 1978).

A few individual fishermen began to fish further up the North Shore from Duluth, establishing the future character of the North Shore commercial fishery. These individuals were geographically dispersed, owned their boats and gear, which were of rather basic technology, and neither had nor needed much investment to get started. Many of the fishermen established themselves by squatting or homesteading on land adjacent to good fishing grounds. They typically fished seasonally and subsistence farmed for their own needs. Credit was available from the fish dealers who often supplied the fishermen with equipment and some provisions (Kaups 1978).

Most of the fishermen used the Mackinaw or Norwegian Northland boat called *Nordlandsbaade* and skiffs. Gill nets and setlines made up the bulk of fishing gear, though seines were used also at Minnesota Point. The Norwegian fishermen introduced vertically adjustable setlines and gill nets, a technology[1] that is credited as a major contributor to the success of commercial fishing during the late 1800s and into the 1900s. A few fishermen used pound nets. These required sandy areas to drive the posts for the nets and were expensive. The rocky shoreline of the North Shore and a lack of money prevented most fishermen from using these devices (Kaups 1978).

It would take a combination of factors in the 1880s to accelerate the development of the North Shore commercial fisheries in both the U.S. and the Scandinavian countries. The settlement of the North Shore, however, was beginning and it would be the commercial fishermen who played the greatest role in the development of it and its fisheries (Kaups 1978).

1880 to 1940: Establishing a Scandinavian Folk Fishery

Scandinavian emigration to America was motivated by several factors beginning with a rapidly increasing population. Norway, for example, with a population of less than one million people at the beginning of the 19th century, grew threefold by the 20th century. Between 1836 to 1900, Norwegian emigration alone exceeded a half million people and by 1915, more than three-quarter of a million people had emigrated from that country (Blegen 1931). In addition to the population pressures, many Scandinavians struggled with economic, political, and social issues. The conditions in the fishing grounds of Norway, an economic depression, political, social, and religious unrest, and a lack of resources, particularly fertile land to hand down to sons, provided most of the motivation to emigrate (Flom 1909; Blegen 1925, 1931; Federal Writers' Project 1954; Qualey 1931; Qualey and Gjerde 1981; Swanson 1927). As people came to America and found an abundance of resources and opportunities, many letters were written to family members and friends in Norway and Sweden encouraging them to emigrate as well.

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[1] For more details on this technology, see Kaups, Matti E. "Norwegian Immigrants and the Development of Commercial Fisheries along the North Shore of Lake Superior, 1870-1895." In *Norwegian Influence on the Upper Midwest*, ed. Harald Naess, 21-34. Duluth: University of Minnesota-Duluth, 1976.

Scandinavian fishermen faced many challenges throughout the 19th century. The Scandinavian fishing grounds, in particular, were overcrowded and, in Norway's case, regulated by a series of new laws enacted after Norway regained independence from Denmark in 1814. New fisheries rules established under the Law of Order, for example, were imposed in 1816 to regulate the use of fishing gear, such as gill nets and long lines in certain fishing grounds.

The Law of Order was intended to alleviate the conflicts associated with the overuse and concentration of the same type of gear. It resulted, however, in the privatization of many fishing grounds and a feudal-like industry. New conflicts escalated over limited access to the fishing grounds and the inability of most fishing crews to buy prime lots. Those who had access enforced the law when they were at sea, effectively blocking newcomers. Many fishermen, consequently, found the new law to be ineffective and overly restrictive, providing virtually no chance of obtaining adequate fishing grounds.

The Law of Order remained in effect until debates over it resulted in the Free Law of 1857 (Jentoft and Kristoffersen 1989). This law provided fishermen with access to any waters. The result was bigger and better-equipped boats, the neglect of the needs and rights of the smaller fisher crews, and new turmoil. In an attempt to remedy these problems, the government insisted that waters be partitioned into plots and that the fishermen register with the superintendent of each plot. While this eliminated the necessity of reporting to the *vareier* (owner), it caused fierce competition among the fishermen for the available plots. The resulting anarchy led to new legislation in 1897. The Lofoten Law, a new concept in management, enabled democratic planning of the fishery through active participation by the fishers. This folk management of the Lofoten fishery proved to be quite successful and remains in effect today (Jentoft and Kristoffersen 1989).

The period of turmoil in the Scandinavian fishing industry was accompanied by an economic depression in Norway, political, social, and religious unrest in Sweden, and a lack of resources in both countries. In the early 1840s, many of the emigrants came from three of the poorest, rural Norwegian districts – North Bergenus, Buskerud, and Bratsberg – which were heavily populated and subdivided. These emigrants were seeking

a better livelihood than what was available in their homelands as well as relief from political institutions (Blegen 1925).

The Norwegian government indicated its support for those seeking better livelihoods stating "that Norway in physical respects puts obstacles in the way of (the peoples') attempt to win a good livelihood without extreme difficulty and trouble" (Blegen 1925:123). Yet in 1843, and with only 841 immigrants passing through the Norwegian-Swedish consul at Havre, the Norwegian government assigned a commission to look into the possibility of developing a general regulatory law on emigration. The government stated its primary concerns as being with those people who were fleeing creditors and epidemics of typhus on the ships. The effort failed, however, when an individual by the name of Nicolaysen made a successful motion to table the proposed law. The ease with which the motion succeeded may have been due to the commission not attributing the matter to problems within the various political institutions of the homelands. Eighteen years later, however, a similar law was proposed and passed in response to another mass exodus of emigrants (Blegen 1925).

Although fertile land was becoming scarce in Norway, two-thirds of the total population made their living from agriculture, cattle farming, and forestry (Flom 1909). Employment opportunities in other industries were limited, particularly in the tumultuous fishing industry where only 5.1 percent of the population was involved in fishing or fish processing by 1865 (Blegen 1931)

The majority of the land-based workforce was made up of independent land holders who were usually the heads of households. Although it was not a wealthy title for most, and it involved adverse conditions on little arable land, it was a prominent and sentimental position to maintain. As the land resource shrank, however, it became common for most sons to be faced with landlessness, which, consequently, threatened their independent lifestyle and family stability (Blegen 1931). By the late 1860s, the "combination of overpopulation, food shortages, mechanization and changing market structures led to farm foreclosures," starvation, and major life changes (Qualey and Gjerde 1981:220).

In Sweden, the story was similar. Political, social, and religious unrest was behind the majority of emigrations from that country in addition to the lack of resources (Federal

Writers' Project 1954; Swanson 1927). The Quaker sect, for example, immigrated for reasons of religious freedom (Blegen 1925). Most immigrants, however, wanted to provide their children with a decent living that could not be had in Sweden. Living conditions there were so bad that many could not pay their taxes or save any money (Swanson 1927).

Concurrent with the motivations to leave their Scandinavian homelands, many Norwegians and Swedes found sources of motivation to come to America and to the Midwest in particular. Word of boundless expanses of rich lands that could be had cheaply, if not freely, offered great prospects of economic independence and political and social equality. Since upwards of 78% of emigrating Norwegians were from rural districts, this motivation alone was of particular consequence (Qualey 1931).

Minnesota, as did other states, worked with the railroads to attract immigrating Scandinavians through concerted advertising and transportation offers. Minnesota State representatives, who happened to be Scandinavian, went so far as to pass legislation in order to organize their efforts (Qualey 1931).

The primary motivation came, however, from family members already in America who wrote letters encouraging their friends and relatives to join them. Letters from respected Scandinavians, who were promoting the movement from their American homes, also brought new immigrants. While some letters were pessimistic in tone, the majority of them were very optimistic (Qualey 1931). Similar news was sent back to Sweden portraying America as a "veritable land of Canaan" where democracy was the rule and the restrictive caste lines of Sweden did not exist (Federal Writers' Project 1954:77). Many Swedes remained attached to their homeland, however, and harbored no resentment toward their country's inability to provide adequate resources for everyone (Swanson 1927).

The combination of motivating factors in the Scandinavian countries and in America resulted in a push/pull effect. The poor economic conditions and lack of resources and opportunities in Norway and Sweden balanced against the abundance of opportunities and resources, and the support of family and friends already in America became responsible for as much as 87% of Scandinavian emigration between 1865 and 1915 (Lovoll 1984).

Scandinavian emigration figures show a steady increase of migrants during the 1800s, although the movement was highlighted by three significant waves (Figure 3.2) – 1865-1873, 1880-1893, and 1900-1914 – and a significant decline in the 1870s (Lovoll 1984). The first wave coincides with the problems stated above in the homelands. The second wave was in response to the promotional efforts of states to attract immigrants as well as a depression in Norway (Central Bureau of Statistics 1969). The third wave was due to a lack of profitable employment in Norway in spite of an improved economy (Lovoll 1984). A significant decline occurred between the first two waves as a result of two factors – the panic of 1873 in America and its resultant depression, and grasshopper plagues that decimated crops from 1873 to 1876 (Qualey 1931).

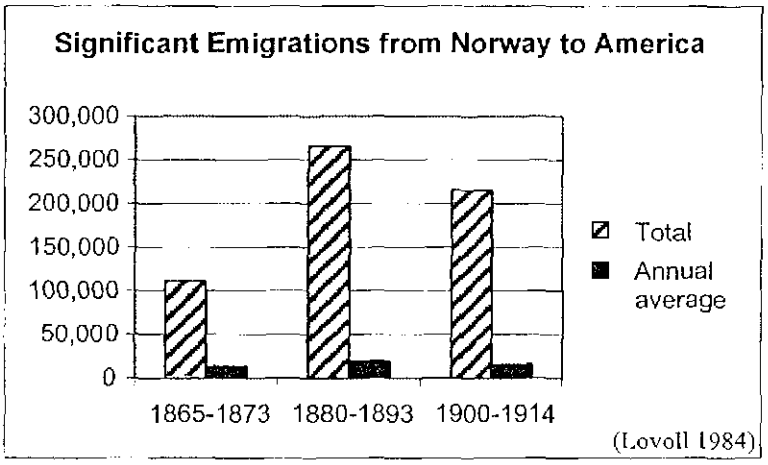


Figure 3.2 Scandinavian Emigration Waves.

The Scandinavian migrations were directed heavily toward America with approximately 95.6% of the Norwegians, 97.6% of the Swedes, 93% of the Finns, and 89.1% of the Danes targeting America between 1869-1914 (Nugent 1992). The majority of emigrants, however, was overwhelmingly from Norway and Sweden (Figure 3.3) and tended to develop settlements of their respective ethnic groups (Gibson and Lennon 1999). The Norwegians, in particular, had a tendency to form ethnic clusters where they settled, maintaining their memories and customs, and writing letters to family and friends to encourage them to come to America. These letters offered emotional and material

support and prompted a chain migration response that continued for several decades (Gjerde 1991).

The western Upper Midwest became home to the bulk of Scandinavian migrants. They spread from northern Illinois northwestward into Wisconsin, Minnesota, the Dakotas, and eastern Montana. They also spread westward to Iowa and northeast Nebraska (Nelson 1981). The Minnesota settlement pattern was concentrated in the southeast part of the state and extended northwestward and westward. The North Shore settlements began much later. In 1875, only two non-Indian settlements – both Scandinavian – were established along the North Shore and these were in the Duluth area (Qualey 1931).

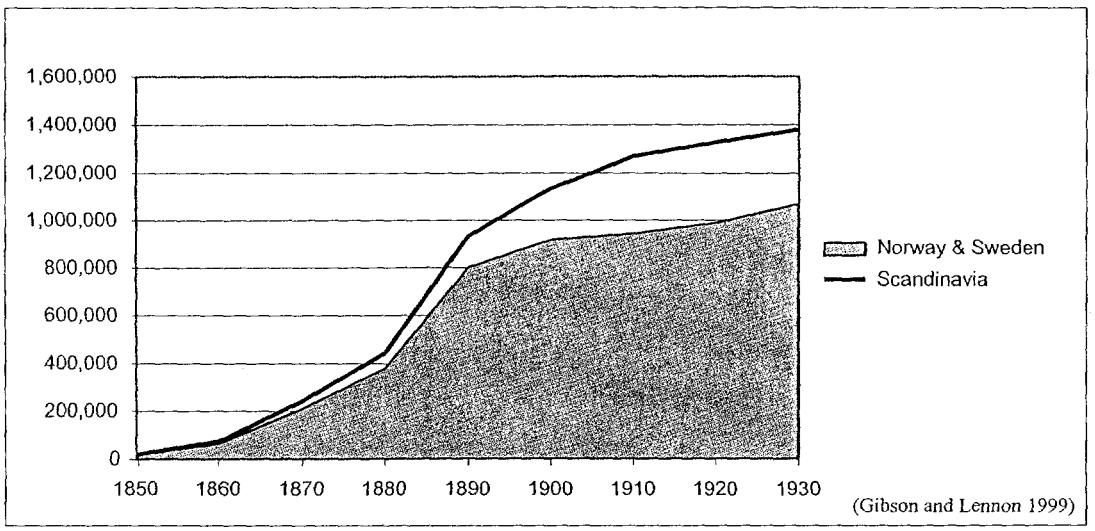


Figure 3.3 Comparison of Cumulative Emigration to the U.S., 1850-1930: the Norwegian and Swedish Component.

Frederika Bremer (1851:1:56-57) had prophesied that Minnesota would become the new Scandinavia when she wrote "What a glorious new Scandinavia might not Minnesota become! Here would the Swede find again his clear, romantic lakes, the plains of Scania rich in corn, and the vallies of Norrland; here would the Norwegian find his rapid rivers, his lofty mountains, for I include the Rocky Mountains and Oregon in the new kingdom; and both nations, their hunting fields and their fisheries. The climate, the situation, the character of the scenery agrees with our people better than that of any other of the American States..."

The letters from family members who were already in Minnesota provided the greatest influence to fulfill Bremer's prophecy. The common message was one of great opportunities for homesteading and for land ownership in that state with a virtual guarantee of success. Following the pattern of chain migration, those who came to Minnesota settled near other family members. As land and space were occupied, migrants moved on to available lands creating new settlements and expanding their ethnic communities (Qualey 1931).

All five Scandinavian groups – Norwegians, Swedes, Finns, Danes, and Icelanders – built settlements in Minnesota resulting in a population of approximately 700,000 by the 1920s, more than any other state (Christensen 1927). These communities continued to remain distinct by nationality well into the 20th century. The Norwegians, for example, were not particularly friendly toward the Swedes and did not recognize a commonality of being Scandinavian (Federal Writers' Project 1954; Swanson 1927).

The North Shore was some of the last land to be settled in Minnesota (Qualey 1931). Many of the migrants who came there still sought land to farm but the most productive soils, found from the southeast part of the state toward the west and northwest, were well-occupied by 1875 (Figure 3.4. Prime Farmland). The fisheries around Duluth were overcrowded and the fish populations were declining. Where fishermen had gone out between five and fifteen miles for their catch in 1870, they had to go out forty to fifty miles by 1880.

The Lake Superior fishery continued to develop beyond Duluth, however, and many recent migrants found the lake environment of the North Shore similar enough to the marine habitats of Norway that they could apply familiar fishing methods there (Kaups 1975). These fishermen-settlers were known for their industriousness and resourcefulness, characteristics that were necessary for the isolated life on the North Shore, and were accustomed to labor-intensive livelihoods of part-time fishing and farming. These individuals found the North Shore to be conducive to this lifestyle which they preferred to the "novel urban existence in Duluth" (Kaups 1975:26).

While the Lake Superior fishery expanded physically, it shrank ethnically. Prior to 1885, the fishermen from Duluth were of German, Irish, English, French-Canadian, Chippewa, and American backgrounds (Karamanski, Zeitlin, and Derose 1988). By 1890,

most of the fishermen were Scandinavian as a result of the new wave of immigrants and a purposeful avoidance of urban life that reflected a Norwegian resistance to assimilation (Karamanski 1988; Kaups 1975; Lovoll 1984). This change has been noted in other historic accounts of the period but no clear explanation of why other ethnic groups left the fishery has emerged. Growth in other industries, such as iron mining, the railroad, and timber, coupled with the natures of both the fishery and the Scandinavians suggest that other ethnic groups found fishing more arduous and less profitable than other available work (Lund 1993). As these groups were finding employment in the other resource industries, a new wave of Scandinavian immigrants arrived, many Norwegian, who were eager to join families and friends in the North Shore fisheries. This change helped fulfill both Bremer's (1851) prediction of a New Scandinavia and an 1868 prediction that the North Shore would become "occupied by industrious, hardy, and intelligent Scandinavians" (Kaups 1975:26).

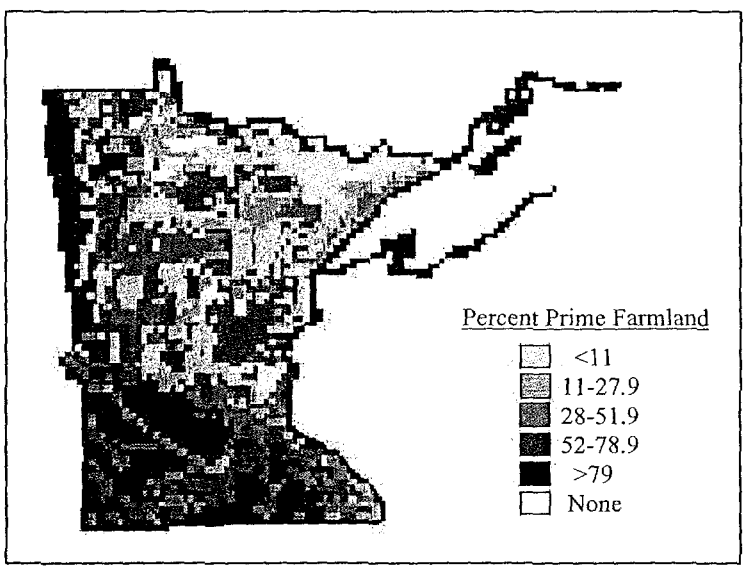


Figure 3.4. Prime Farmland of Minnesota
(Natural Resources Conservation Service 1999).

The settlement of the North Shore was concentrated between 1879 and 1895 (Figure 3.5)(Kaups 1975). One of the early and more extensive Norwegian settlements, Hovland, was located approximately halfway between Grand Marais and Grand Portage, Minnesota providing easy access to many local fisheries including Isle Royale. Although settlement was focused along the North Shore, Isle Royale became an extension of the

North Shore fisheries and was used by the fishermen in the same seasonal pattern. By 1985, over 60% of the fishermen residing along the North Shore were Norwegian and another 20% were from other Scandinavian countries (Kaups 1975). The dominance of Scandinavians along the shoreline, on Isle Royale, and in the fisheries continued well into the 20th century (Lovoll 1984).

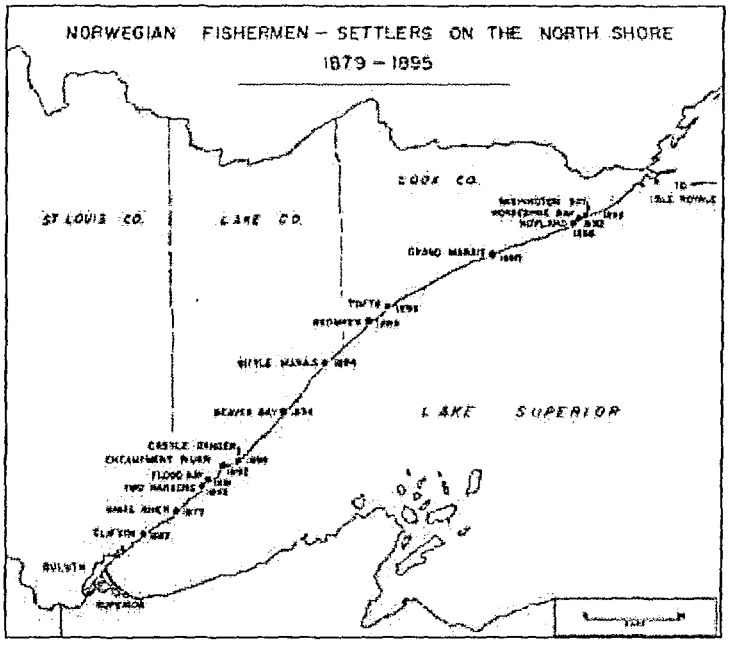


Figure 3.5 Early Scandinavian settlements along the North Shore of Minnesota (Kaups 1975:25).

The pattern of chain migration from the Scandinavian countries set the stage for the formation of a Scandinavian folk culture particularly for the Norwegians who, more so than other Scandinavians, concentrated their settlements into ethnic communities (Federal Writers' Project 1954; Swanson 1927). The various Scandinavian communities were not immune to assimilating influences although the Norwegians were more resistant that others. Enough assimilation was occurring within the Norwegian communities between 1870 and 1900 that the Norwegian Lutheran churches began to encourage resistance to conversion to the Catholic church while promoting cultural revitalization (Nelson 1981). An example of the persistence of the Norwegian culture was the high rate of endogenous marriages. In 1910, at least 70% of the Norwegian men were married to Norwegian women (Lovoll 1984).

The folk culture was expressed through the adaptation of homeland fishing aspects to the North Shore and Isle Royale. Fish camps were located in coastal indentations where the adjoining headlands offered protection from the northeast-to-southwest wind and waves. Smaller coves with gravely or sandy beaches where fishing boats could be landed also were desirable sites. The fishermen homesteaded or squatted along the sparsely inhabited shoreline to acquire land and, consequently, permanent access to the lake and its fish resources. They lived in shanties, or *rorbuer*, and fished individually with gill nets and skiffs for herring that they delivered to the tugs sent by the fish dealers (Kaups 1975).

Fishing territories and individual fishing rights were never established officially and were not recognized by the state of Minnesota. The Scandinavian fishermen, however, recognized the concept informally in the spirit of the gentlemen's agreement. The generally accepted width of an individual's fishing grounds extended about a ½mile to either side of his home and a few miles out into the lake to the approximate outer limit of the herring fishery. The uninhabited shores were open to anyone so as more settlers came to the area, the fishing territories shrank. It remained improper, however, to fish in the waters in front of someone's home (Kaups 1975).

Fishing was a part-time occupation and many fishermen held other occupations such as boat building and timbering. They supported themselves with subsistence farming which was important enough to interfere with fishing occasionally. Farming included some tillage and clearing of land for potatoes and hay, a cow or two, a few pigs, and fowl (Kaups 1975).

The North Shore and Isle Royale fisheries were not the only aspect of the lake fishing industry influenced by the Scandinavians. As rail lines were constructed between Duluth and Chicago, and more people moved into Minnesota, the market demand expanded both locally and regionally. Since many of the Scandinavian immigrants were a part of that movement, much of the local demand for fish was the result of their food preferences. The Scandinavian dominance of the commercial fishing industry expanded to include both supply of and demand for Lake Superior fish including the early fish merchants of Duluth (Kaups 1975).

Jacob Hector, the first of a long line of Norwegian fish merchants in Duluth, established the J.F. Hector and Company Fish Dealers and Shippers in the early 1870s. By 1877, his company, the second largest of the three Duluth fish houses, owned and operated three fishing boats and twenty miles of gill nets. Hector merged with the Cooley Fish Company in 1879 but the partnership was dissolved in 1880. Other Norwegian fish merchants attempted starts in Duluth during the 1870s but most of these were short-lived (Kaups 1975).

The settling of the North Shore and Isle Royale by Scandinavian fishermen brought the first significant change to the Lake Superior commercial fishing industry. The second consequential event occurred in 1886 when the A. Booth and Company of Chicago decided to locate in Duluth (Kaups 1975). The company also established a fishery at Washington harbor that year (Franks and Alanen 1999). Jacob Hector, after relinquishing his fish business, joined the Booth Company and captained its steamer *Dixon* along the North Shore and to Isle Royale (Kaups 1975). Booth had several vessels, including the large-capacity *America* (Franks and Alanen 1999), that led to the company's dominance of both the Isle Royale fisheries and the passenger business until the 1920s (Gale and Gale 1995).

Booth dominated the fish business in Duluth into the 1890s by which time the Norwegian fishermen had developed the herring industry. The resulting trade in fresh herring allowed the Norwegian fish merchants to gain control of a larger share of Duluth's wholesale trade. These merchants, as Booth did, advanced credit to experienced Norwegian fishermen who came to Minnesota to settle and fish for herring, often in response to encouragement from family members already settled there (Rakestraw 1967). By the 1920s, as a result of the financial assistance, between 80% and 90% of the North Shore fishermen were Norwegian (Kaups 1975). Booth and H. Christiansen and Sons remained the predominant fish companies, although, as tourism to the Island increased, they companies diversified to accommodate both passenger and market transport. The increase of sport fishermen, however, was not a significant part of the tourism and did not become a problem for the Norwegian fishermen for several decades.

In 1894, approximately 100 fishermen operating 40 boats made use of the Isle Royale fisheries. Their ventures were successful enough to encourage others to come to

the Island and, between 1915 and 1925, approximately 75 families fished there seasonally (Franks and Alanen 1999; Gale and Gale 1995). As the Cornish, English, and French fishermen turned to other occupations, the Scandinavian fishermen took their places. Some of them were seasonal fishermen while others were year-round residents. The physical environment of Isle Royale being reminiscent of their homelands and coupled with the opportunity of a familiar occupation attracted the Scandinavians were fishermen and their families (Rakestraw 1967). Many of the Isle Royale fishing families came to be connected by marriage, although, the practice declined after the park was established (ORHI 17). Scandinavian dominance of the commercial fishing industry at Isle Royale continued well into the 1950s, however, several significant changes occurred that eventually brought about its demise: the establishment of Isle Royale National Park, the introduction of non-native fish species, and allotment regulation by the Michigan Department of Natural Resources.

1940 to the Present: Political and Biological Impacts

The Scandinavian fishermen of Isle Royale survived numerous social and economic changes during the years prior to 1940. The establishment of Isle Royale National Park in 1941 culminated a decade of political maneuvering to protect the natural resources of the Island. Shortly after establishment, exotic fish species – the sea lamprey in particular – appeared in Lake Superior. The lamprey would have a devastating impact on both lake trout and whitefish while the smelt and alewife would impact the herring fishery. The consequent regulatory responses of the Michigan Department of Natural Resources (MI DNR) dealt the final blow to the Scandinavian fishermen of the Island.

Establishment of Isle Royale National Park

The first efforts to make Isle Royale a national park began during the Depression when, in 1931, Congress passed the Isle Royale National Park Enabling Act. Final establishment, consequently, did not occur until 1940 when funds were finally procured. During the negotiations prior to establishing the park, officials gave the future of the Scandinavian fishermen considerable thought. A policy was established that allowed

fishermen to continue their operations on the Island under a special permit system[2] whereby the families based on the Island at the time could continue to occupy and use their fish camps (Wallis 1960). In a memo to the Regional Director, acting Director Hillory A. Tolson wrote:

> *Commercial fishing at Isle Royale is not open to any commercial fisherman who cares to take advantage of its resources. On the contrary, it is a privilege accorded to specific individuals who were established at Isle Royale before the creation of the National Park. This privilege will terminate with the decease or removal of these individuals.* (Wallis 1960:6)

Several aspects of the fishermen's lives on Isle Royale were affected by policy. The greatest change was in the standing of their properties some of which were bought, and all of which were regulated, by the NPS. Those fishermen who held title to their fish camps were given the opportunity to accept life leases from the NPS that would allow them to continue to operate from their Island homes until they passed away or retired.

Along with the loss of the right to transfer title of their property, the fishermen were restricted from using natural materials on the Island for equipment. They could no longer cut trees for even routine purposes of yard maintenance. The fishermen also were expected to keep their places in good repair at their own expense but the restrictions took a toll on their motivation and maintenance became drudgery (Franks and Alanen 1999).

As the fishermen gave up their fishing operations and left the Island, some abandoned buildings were burned by the NPS in an effort to return the Island to a pristine "wilderness" state it had not known for thousands of years. Some abandoned buildings were dismantled or moved to active fisheries or life lease sites. Other buildings were burned also including the Island House hotel, Washington Harbor communal icehouse, and the fishing structures at Booth Island (Franks and Alanen 1999).

[2] Exceptions to this were two families, the Mattsons of Tobin Harbor and the Andersons of Belle Isle, who obtained life leases and, consequently, did not have to interact with NPS for special use permits.

Some of the NPS policies concerning the Scandinavian fishermen were conflicting. On one hand, the fishermen were to be tolerated and managed until the life leasees were gone. On the other hand, they were credited with having maintained and protected the Island to a great extent, and the continuance of their livelihoods was perceived as viable economically – "I rather believe that twelve to fifteen families might well be maintained there as commercial fishermen during the off season and guides during the park season." (Baggley 1942) – and as a means of preserving history.

In a 1955 policy report, Director Conrad Wirth indicated a desire and commitment to continue commercial fishing activity on a modest but representative scale because of its historic significance on Isle Royale." The report stated further that "The National Park Service will encourage the continuance of small commercial fishing operations..." at twelve bases (Table 3.1) even when fishing proved uneconomical. Most bases were expected to be abandoned eventually, since permits were limited to individuals, members of their families, or employees of theirs who were engaged in commercial fishing activities on the island in 1955. In spite of Wirth's preservationist desires, such attrition was not to be avoided entirely. His policy emphasized two sites, however, for which "every effort will be made to maintain the proper type of small fishing operation as a permanent exhibit of significance in the Isle Royale scene" – Washington Harbor (Bert Nicoliasen base) and the Old Light House at Rock Harbor (Peter Edisen base) (1955:3).

Table 3.1. Fish Camps Prioritized for Continued Use, 1955.
1) Belle Isle (Emil Anderson base)
2) Tobins Harbor (Art Mattson base)
3) Wright Island (Ed Holte base)
4) Fishermans Home (Sam Rude base)
5) Washington Island (Art Sivertson base)
6) Washington Island (Bert Nicoliasen base)
7) Washington Island (John H. Torgersen base)
8) Washington Island (Tom Eckel base)
9) Crystal Cove (Robert Johnson base)
10) Hay Bay (John Skadberg base)
11) Star Island, Rock Harbor (Milford Johnson base)
12) Old Lighthouse, Rock Harbor (Peter Edisen base)

With foresight expressed today in the cultural interpretive centers of the NPS, Baggley laid out a plan that would support on-going fishing activities in the interest of the fishermen and the visiting public:

> *The important part commercial fishing played in the history of Isle Royale could be effectively interpreted to park visitors through the preservation of a typical fishing operational base, complete with the sheds, the net drying racks, the dock and typical boats. Selected fishermen might be employed to help interpret the story of commercial fishing and to demonstrate methods and equipment used. With the continued decline of the commercial fishery resources, one would be unrealistic if he failed to recognize the possibility that the decline of the productivity of the commercial fishery may lead to its eventual disbandment on the island within a few years. Economic conditions may bring about such an event; with it could come an abrupt abandonment of visible evidence of this historic story."*(Wallis 1960:12)

Baggley's position, including his emphasis on the Washington Harbor and Rock Harbor Lighthouse sites, was supported in the official policy for commercial fishing operations at Isle Royale approved by Director Conrad L. Wirth on June 16, 1955:

> *The hardy fishermen provided a reliable means of communication from the mainland ports to various points on Isle Royale. Their picturesque bases are a source of enjoyment and interest for park visitors. In view of this it seem desirable to continue commercial fishing activity on a modest but representative scale.*

In spite of the positive aspects of Scandinavian folk fishermen relative to the natural environment, historic preservation, the visiting public, and overall impression of Isle Royale National Park, little action was taken in support of the 1955 policies. With the exception of the Edisen Fishery, now listed on the National Register of Historic Places,

few traces remain of the once thriving folk fishing communities that defined and sustained much of Isle Royale.

Dangerous Exotics: Smelt, Ale Wives, and Sea Lampreys

The commercial lake trout fishery was stable between 1929 and 1953 after which it experienced a steep decline (Jensen 1978). Many parts of the lake trout fishery, however, were becoming overexploited in the 1940s. Occurring about the same time as the appearance of the sea lamprey in Lake Superior, over-fishing was a result of increased pressure by fishermen from other lakes already decimated by the sea lamprey. Although the decline was widespread, the Isle Royale fisheries were still supporting the Scandinavian folk fishermen and a growing sport fishery. In 1942, 60% of the sport fishing overlapped with the Isle Royale folk fishermen. Although this was not seen as a problem at the time, given the considerable increase in inland sport fishing on the Island during the preceding three years, and a policy to issue no new permits to replace the folk fishermen, the folk fishermen were faced with displacement for recreational purposes (Baggley 1942; Wallis 1960; Wirth 1955).

Much of the decline was due to predation by and competition from various exotic species. Rainbow smelt first appeared in Lake Superior in 1923 (Fuller 2000) and soon took its toll on the herring and lake trout populations primarily through competition for food (Franks and Alanen 1999; Fuller 2000). By 1946, the sea lamprey reached Lake Superior (Franks and Alanen 1999; Fuller and Nico 2000; Wallis 1960) and within the next five years decimated much of the lake trout population through parasitic feeding on the trout (Franks and Alanen 1999; Fuller and Nico 2000; Goodier 1984; Jensen 1978). Secondary infections of wounds on the trout that survived attack were responsible for further mortality (Fuller and Nico 2000).

The alewife reached Lake Superior by 1954 (Fuller 2001). While it was not found in the waters around Isle Royale (Merritt 2001), it had indirect impact on the island's fish populations since these were not segregated from other populations in Lake Superior. Although the alewife is a major prey species for trout and salmon, the lamprey-induced population crash of these species allowed the alewife population to explode. Competing with herring, whitefish (Fuller 2001), and lake trout (Franks and Alanen 1999) for the

plankton and other small aquatic organisms these fish fed on, the alewife exerted overwhelming pressures on the weakened populations (Fuller 2001). The fishing industry faced economic disaster and by 1957 the lake trout industry was all but dead (Franks and Alanen 1999; Jensen 1978). The lake fishing industry as a whole was all but gone by 1960 (Franks and Alanen 1999).

It is worth noting that not all of the lake fishery experience declines due to over-exploitation. The crash of the lake fishing industry was due to a combination of activities both on- and off-shore that contributed to fish population problems as well as the impacts of the exotic fish species. The longevity of the Isle Royale fisheries may be attributed to a combination of the location and size of the Island fisheries, local knowledge, and various activities along the Canada, Minnesota, Wisconsin, and Michigan shorelines. As Goodier (1995:44-45) explains:

> *Fishermen, through long experience with Lake Superior from which they derived their livelihood, came to recognize intraspecific varieties of lake trout, whitefish, herring and chub, differing in time of spawning, appearance and abundance, and movements. Strategies of fishing were gauged to the habits of the different varieties; grounds were essentially visited throughout the season, mesh sizes were altered, depth of net sets changed. Some stocks were stressed unduly, notably those in the Thunder Bay area and in southeastern Lake Superior. Hardest hit were certain river-spawning stocks including lake trout, migratory trout, sturgeon, pickerel and pike. They were most susceptible to the agents of environmental change: severe storms, dredging, deforestation, log rafting, and pollution. These, along with factors of overfishing, the parasitic sea lamprey, and interspecific competition drove certain stocks to a precarious state of survival and even to extinction.*

In spite of 1959 being the worst fishing season the twelve remaining fishermen (Table 3.2) could remember, they "returned to the Island because their chosen life work is fishing" (Wallis 1960:8). Many of the Scandinavian fishermen, however, were close to

retirement age. Given the changes made by the NPS and Michigan DNR, many of them felt the lamprey was the final blow to their way of life. Most of them retired leaving only a handful of Isle Royale families to carry on the traditions of their lifestyle. In his 1960 report on the Isle Royale fisheries, Wallis noted that "the very survival of the historic commercial fishery operations on Isle Royale depends upon the adequate control of the lamprey and the eventual recovery of the lake trout" (Wallis 1960:11).

Table 3.2. Special use permittees in 1959	
Pete Edisen	Rock Harbor
John S. Bangsund	Rock Harbor
Edwin C. Holte	Wright Island
John T. Skadberg	Hay Bay
Sam Rude	Fisherman's Home
Stanley Sivertson	Washington Harbor
Nels Wick	Washington Harbor
Carl G. Ekmark	Washington Harbor
John Miller	Washington Harbor
Milford Johnson	Crystal Cove
Emil Anderson*	Belle Harbor
Arthur Mattson*	Tobin Harbor

Lamprey control measures implemented by MI DNR have resulted in some recovery of the lake trout and herring populations throughout the lake fisheries. Increased mortality of stocked lake trout populations through competition and predation, however, have led scientists to recommend management of naturally reproducing stocks as the most effective method of lake trout restoration (Hansen et al. 1994). The tendency of the lake trout to form discrete breeding stocks in their natural lake environment, however, has slowed management recovery efforts of the natural stocks (Goodier 1984).

Michigan DNR Assessment Regulations

The few remaining Isle Royale fishermen experienced another dramatic change in their lifestyle during the 1960s. Although the Michigan DNR closed Isle Royale to trout fishing in 1960, it reopened it by 1967 to limited assessment fishing. Pertinent to lake trout commercial fishing, the assessment regulations restricted fishermen to special fishing permits and grids. The permits required the fishermen to record a variety of data for the Michigan DNR. This requirement added a significant amount of time to the

traditional fishing process in terms of taking measurements and filling out reports. Arrangements were made as well with the NPS so that the fishermen could continue their fishing way of life. Their children, however, some of whom had fished with their fathers, were unable to inherit these permits from their parents (Franks and Alanen 1999).

Today, only Clara Sivertson employs a Special Use Permit to fish the waters of Isle Royale in the fall (Franks and Alanen 1999). Other descendants of folk fishing families continue to use their homes under Special Use Permits and volunteer agreements with the NPS. Some descendants are employed in ventures that service the Park, such as ferry, charter, and informal interpretive services.

While many physical cultural elements have been lost or destroyed, both material and non-material cultural resources remain although these are in danger of being lost. Even though the remaining fishermen and their descendants differ in their evaluations of the recovery of the Isle Royale lake trout populations, several of them believe the Island fisheries could support a few folk fishermen utilizing the traditional methods and technology. Others, including people outside the traditional fishing culture, think it is too late for the fishermen of Isle Royale. It is a bit like the recurrent gatherings of the fishing families around the Sivertson porch to watch the sun set and listen to the concertina. They would sing old Norwegian songs, many of which were sad and reminiscent of the homeland, and watch what Buddie Sivertson once described as a "warm, sad ending to show" (Cochrane 1987a:16). Their descendants today may be watching another "warm, sad ending," as the sun appears to be setting on their way of life.

CHAPTER FOUR

KNOWLEDGE AND USE OF THE ENVIRONMENT BY SCANDINAVIAN FOLK FISHERMEN AT ISLE ROYALE

As attested by our 1999 fieldwork, one can best capture the true spirit of the Isle Royale fisheries by spending time and talking with the local fishermen, and traveling to the Island. Nute (1944) pointed out that the story of the fishermen and the fisheries is so embed with life and appeal that to describe it only in statistical terms is to rob it of its true essence. The significance of this lifestyle originates with Norwegian immigrants who brought commercial fishing, "one of the indigenous maritime enterprises," to the United States in the 19th century (Kaups 1975:21)[1]. Regarded as some of the most successful fishermen, they also were entrepreneurs, establishing many of the fish companies in Duluth (Kaups 1975).

The Norwegians who settle and fished along the North Shore came from two distinct geographical areas: from the fisheries of New England and Lake Michigan, and directly from Norway. Those from Norway brought various concepts, methods, and experiences of commercial fishing. Those from New England brought with them the modifications and adaptations learned from those fisheries (Kaups 1975).

In this chapter, we discuss some of the knowledge Scandinavian fishermen had of the island and lake environments in which they lived and worked. Several factors contributed to their knowledge including the original immigrants who brought with them knowledge of the Scandinavian fisheries, a preference for the labor-intensive lifestyle of part-time fishing and farming (Kaups 1975), and an affinity and tolerance for the

[1] Although the American Fur Company is noted as 'commercial fishing' in the 1830s, Kaups credits Norwegian immigrants with its U.S. establishment in the 19th century, identifying the Atlantic seaboard, the Gulf of Mexico, the Pacific Northwest, Alaska, and the Great Lakes, particularly Lakes Superior and Michigan.

challenging conditions. As Blegens (1931:349) put it, "[fishing] was a way of life that the Norwegians thoroughly understood, and they accepted it – its modest rewards as well as its accompanying hazards of storm, exposure, and peril." The knowledge they brought with them provided a basis for ready success as they modified the ways from their homelands to fit life on the North Shore and Isle Royale (Kaups 1975).

Not only did the knowledge they brought with them provide a basis for success, it provided a basis for adaptation to new and changing environmental conditions. Embedded in this knowledge were the roots of a conservation ethic that resulted in minimal use of terrestrial resources and modifications in use of the marine resources as changes and impacts to those resources were observed. The use of terrestrial resources was limited to what was needed by the family. Storage of these resources, particularly plants and animals, was limited approximately to within a year's time.

The use of marine resources was primarily market-driven, however, changes in equipment types and uses were made when the fishermen determined a need for change that would benefit the fish species. Poundnets, for example, were pulled when fishermen noticed negative impacts to fish populations. Other fishermen would change the size of the net mesh to allow the fish to have a chance to reproduce. Some fishermen would reduce the number of days they fished a particular area to allow more spawning. Several fishermen became involved in hatchery operations by collecting spawn.

Our discussion reflects information from both the Oral History database and the 1999 fieldwork. It is supported by additional material to provide context and clarification. Statements that are based on data from the interviews have the citation 'Fieldwork 1999' in support of the agreement of anonymity with the informants. Statements from the Oral Histories are referenced by the tape number in the format of 'ORHI#.'

The places referred to include Chippewa Harbor/Johnson's Resort, Crystal Cove, Edisen Fishery, Fisherman's Home, Hay Bay, Johnson Island, Little Boat Harbor, Star Island, Tobin Harbor, Vodrey Harbor, Washington Island, and Wright's Island. The information, however, is pertinent to other Isle Royale fish camps in many respects. The places generally are not identified in this discussion due to the anonymity agreement.

The purpose of this chapter is to provide, as identified in the Scope of Work, some substantiation for the cultural significance of the physical environmental features

and historic resources of Isle Royale National Park. We focus on aspects of the fishermen's knowledge and technology by organizing the chapter around the primary resources of the Oral History and fieldwork databases: plants, animals, fish, water, climate/weather, topography/geographic features both surface and subsurface, and evidence of previous use. When we compiled the data from the databases, we found the fishermen's knowledge of the primary resources consistent across the generations. Data from the two databases are combined, consequently, in order to reflect the shared knowledge of successive generations. We conclude the chapter with a discussion of the development of a conservation ethic among the Scandinavian fishermen.

Natural Resources

This section illustrates the relationships between the fishermen and their environments. The ecological knowledge of the fishermen and their families is discussed as well as impacts, condition, and management recommendations. Some of the reasons behind the preserved wilderness character government officials found at the time of Park establishment, consequently, are reflected.

Plants

The fishermen had little impact on the plant communities outside of their small fish camp clearings. Driftwood, trees, and shrubs provided building material, food, and medicine. Food plants were supplemental to domestic foods brought by ship every two weeks. Plants used by various wildlife species were known also, reflecting interactions with the terrestrial environment. The fishermen's relationships with the plants are reflected in such comments as "We were very aware of all the beauty of nature around us," and "Naturally, they'd like familiar surroundings."

Trees

The fishermen recognized a diversity of trees for various uses including spruce, pine (generic), white pine, birch, balsam, cedar, mountain ash, and aspen. Construction materials from cedar corks to logs for buildings was the predominant use fishermen made of trees. The first settlers cut small timber for small slides and dock timbers. Pitch from

pine, balsam, cedar, and spruce was used medicinally for wounds or cuts by "going up to a tree and cutting off a couple of blisters (Fieldwork 1999)."

During the period this report is concerned with, small spruce, balsam, and cedar were used for buoy sticks or pulls, and floats. Tree use was strictly for personal use, for just what was needed, and not for commercial use. Larger trees were used for docks, cabins, and fences. Moss was used to chink the walls of buildings. Sometimes they would use birch that beaver had cut down. The fishermen used planed wood, such as from shipwrecks, when it was available. Pulpwood from log rafts and barges, and driftwood were used for firewood. Some of the families would work together to collect enough pulpwood for the entire season. Even building materials were recycled as needed.

Trees sometimes served as landmarks. One fellow recalled a seven-foot diameter white pine that had been used as a landmark. Another fisherman pointed out a specific tree among several along the shoreline north of Hay Bay. Only the fishermen who had camps in Hay Bay knew of it and used it to avoid a shallow reef near the bay entrance.

The fishermen frequently mentioned beavers' use of trees. Their interactions with these indigenous engineers are discussed further in the section on animals. Moose were noted as loving "ground hemlock," possibly a local referent for the American yew.

Shrubs

Of the variety of berries that grow throughout Isle Royale, blueberries were favored by the fishing families. Families, singularly or with friends or extended family members, would seek out lush patches on the barren ridges of the south slopes of the Island. Raspberries, thimbleberries, currants, gooseberries, and wild strawberries were used as well but did not have the popularity of the blueberries. Thimbleberries were noted as being too seedy. Unlike their Native American predecessors, there is no evidence that the Scandinavian fishermen burned the ridges to promote berry growth.

Favorite locations included the Natural Arch on Amygdaloid Island, along Greenstone Ridge, and at Five Finger Bay. Berry patches were characterized by the fishermen as "extra super," "great," and "the first to ripen." Berries were eaten fresh or, when enough had been gathered, the women would make preserves.

Other Island Plants

The shallow bays were noted for having lots of food plants. Food use was made of a horseradish plant and dandelions. One fisherman recalled his mother making dandelion wine and getting "tipsy." Other plants initially were gathered as they were found and later were sought out. Occasionally, the opportunity to learn different uses of island plants was presented:

> *Adam Roach was 1/4 Indian. His grandmother came over one summer from Grand Marais and taught them how to make baskets (ORHI 65).*

Island plants, however, were supplemental to the gardens fishermen had, and to the supplies brought on by the ships every two weeks. As described by one fisherman, "There was always an abundance of food, first fresh stuff, then dried or canned - steak, chicken, then fish. The fresh stuff came every two weeks."

Gardens

The family gardens were planted with such foods as rhubarb, potatoes, carrots, and "tame" strawberries, the latter of which was mixed occasionally with wild strawberries. In 1917, the fishermen relied more heavily on what they referred to then as their "war gardens." As occurred later in the depression era, these gardens reflected a cultural pattern of self-sufficiency and adaptation. When shortages of food and finances occurred, the fishermen turned to providing for themselves without a second thought. Some of them went so far as to stay on the island through the winters, a task that often required complete self-sufficiency and independence.

In addition to gardens for food, some of the women also had flower gardens. Reflecting their sense of environmental aesthetics, they often brought plants from their mainland winter homes to enhance their island homes. Such activity suggests that they did not think of their homes on Isle Royale as any less permanent than their mainland homes. They were developing their own attachments to place through these gardens.

An additional aspect of the flower gardens that poses future investigation is the location of them relative to the views the women had of the lake, of the routes their husbands, fathers, grandfathers, uncles, and sons took to and from the fishing grounds.

Some of the remnant garden areas suggest a purposeful location between the house and the first point where the returning fisherman could be spotted.

Current Conditions and Recommendations

Today, some of the plants used by the fishermen are healthy while others are degrading. One fisherman explained, "The cedar and spruce are in excellent condition but the balsam fir and birch are in poor condition. The aspen is in fair to poor condition lower down but the higher ones seem to be holding their own. The composition is changing – the beaver are taking the birch; the mountain ash is on the decline from moose browsing; the spruce is displacing the deciduous trees lower down. A tornado took out two large birch at the inlet and the spruce replacing it."

The general feeling is that most of the changes in the plant communities are natural, successional, and what one would expect from a lack of management. Beaver constructions and moose browsing have changed also contributing, consequently, to the current plant composition. Several fishermen explained that the lack of natural fire and light harvesting done by their families are the primary causes for the current condition. As detailed by a fisherman, "It's a fire hazard. They don't let people clean the wood. There's lots of deadwood, the patches are no good." Other problems the fishermen and their families have noticed include not spraying for worms that kill some of the trees, and factors outside local managerial control such as acid rain and PCBs.

Two notable impacts of tree encroachment to the fishermen's Island lifestyle are reduced visibility of the lake from the remaining homes and declining blueberry patches. Clear views of the lake from homes were important to the fishermen and their families for two reasons: they could watch for weather changes before setting out for their fishing grounds, and family members could watch for their return. Although the latter need is significantly less today, watching the weather and lake is practically an innate behavior that has not diminished with the decline of the fishery. Watching the lake and weather was a major contributor to the relationship between the fishing families and their environments.

Declining blueberry patches, in addition to Park regulations, have eliminated the social custom of berry picking that supported relationships between families and

neighbors, and between the families and the terrestrial landscape. While the demise of these social interactions may seem superficial, its significance may be understood through the parallel with the biological impacts of tree encroachment on blueberry patches. The decline in berries is due to shading by the conifers, reflecting fire suppression and a successional advance to a less biologically diverse, tree-dominated environment. What is considered an acceptable natural resource management practice, in actuality, promotes both social and biological ills, that latter of which more easily is remedied according to one fisherman: "They seem to be overgrown with other vegetation after several years. Then a lightning fire burns off an area and they come in thick with the new vegetation."

Reflecting their diagnosis of plant-related problems, the recommendations for improvement made by the fishermen would have both immediate and long-term beneficial results. Thinning the trees that are encroaching in the fish camps would restore the views and protect the remaining buildings. As the shading increases, moisture is retained that accelerates wood rot. Although out of the National Park Service's jurisdiction, it was pointed out that a push for legislation that would prohibit toxic dumping and provide more industry controls was desirable.

Animals

Some of the fishing families brought cattle and chickens to Isle Royale for fresh milk and eggs. Many of them also brought pets such as dogs and cats. Overall, however, the fishermen had little impact on the terrestrial animal populations outside of their small fish camp clearings.

Many species (Table 4.1) interacted with the families within the fish camps in both positive and negative ways. Food use was made of some species, such as seagull eggs, ducks, rabbits, moose, and clams, during pre-park times but the majority of interactions involved care of many of the species. One example of animal-related medicinal use was noted whereby spider webs were used for cuts.

The relationships fishermen and their families had with Island wildlife reflect intimate interactions with the terrestrial environment. These relationships often had emotional aspects that reveal a great respect and care for the animals with which they

shared the terrestrial environment. Relationships also reflected a level of risk that comes with living among wild animals. The following discussion is structured around general classifications of species rather than uses.

Table 4.1 Animal Species discussed by Fishermen.		
Birds	**Small Animals**	**Large Animals**
Blackbirds	Beaver	Caribou
Bluejays	Bobcat	Moose
Canada Jays	Chipmunks	Whitetail deer
Crows	Coyotes	
Ducks	Fox	
Eagles	Lynx	
Geese	Mice	
Great Blue Herons	Mink	
Herring gulls	Muskrats	
Loons	Otters	
Sparrows	Pine martens	
White owls	Rabbits	
Cormorants	Snakes	
Ospreys	Spiders	
	Squirrels	
	Weasels	
	Wolves	

Birds

Fishermen most often talked about eagles and seagulls. Both species would haunt some fishermen to the point that some were hand-fed or tamed. Hay Bay, Houghton Point, and Tobin's Harbor were traditional eagle nesting grounds. Nests could be found as well at Landslide and Windigo. A couple of fishermen had eagles following them so regularly that they would throw the sucker fish they caught to the birds. One fisherman's eagle was so particular, however, that he would only take the suckers when the fisherman was alone: "[It] would circle [his] boat and he'd give it sucker fish. The eagle wouldn't come near when [he] had someone else there."

Seagulls or herring gulls would flock in such abundance as to be referred to on occasion as sea chickens. Readily habituated, these noisy birds would clean the fish gut piles at the fish houses. Many fishermen and family members hand-fed and tamed gulls, many of which would come when called. One fisherman was well known for his

relationship with a particular gull that would ride on his head or shoulder. Making a pact with the bird, he always gave the first fish he caught to the seagull even if it was the only fish he caught.

Family members often sought out seagull nests for their eggs. One practice that was employed to target the freshest eggs was to find a nest and mark all the eggs in it. Later, the nest would be visited and any unmarked eggs were gathered.

Canada Jays or Whiskey Jacks and crows were often habituated to the point of eating out of peoples' hands. Rescues were not uncommon and several pets were the result of such events. These birds could be nuisances, however, and the target of youngsters' pranks. One youngster learned a valuable lesson, however, when he threw a stone at a crow and hit it. It fell to the ground, but when it awoke, it flew off with a scream. The other crows flocked to him and attacked the boy, chasing him for a while.

Another species that posed a danger to people was the white owl. These birds could be quite aggressive. Encounters at Rock Harbor and Chippewa Harbor involved direct contact by attacking owls. A fellow at Chippewa Harbor lost an eye and had to be transported to the mainland for medical treatment.

Other species the fishermen encountered included ravens, particularly around Fisherman's Home, sparrows, great blue herons, loons, geese, and ducks, of which there were plentiful species. The latter two species also provided an occasional meal in pre-Park times.

Small Animals

In spite of its remote location, Isle Royale has been home to many species of small animals for centuries. The fishing families commonly had interactions with several of them including beaver, mink, fox, wolves, coyotes, lynx, rabbit, squirrels, pine martens, otters, weasels, muskrats, mice, and snakes. Many wildlife species were attracted to the shelter of the buildings in the fish camps and to the activities of the fish house. Some families also brought pet dogs with them that had a variety of interactions with moose, wolves, coyotes, foxes, and squirrels.

Several species often became habituated to the point of being referred to as pets. Included in such relationships were mink, beaver, weasels, coyotes, squirrels, and foxes.

Most of these species also could be quite troublesome to the fishermen who would trap them, distinguishing between individuals based on their behavior.

Mink frequented the fish houses often running over fishermen's feet or jumping into the boat. It was difficult to keep them out of the fish boxes but occasionally a child would make a pet out of one. Other individuals who trapped for a living eventually reduced the mink population to the notice of the fishermen many of whom haven't seen a mink in many years.

Wolves came to Isle Royale in the late 1940s by crossing the iced-over lake in the winter and through plantings or introductions. A fisherman saw a large pack of wolves once drifting on a piece of ice at Grand Marais, Hogland, and Grand Portage and believes they drifted to Isle Royale. Another fisherman saw a pack of at least twelve on the beach at Rainbow Point in July. The fishermen noticed that the coyote, or brush-wolf, population declined after the wolves arrived. In the course of their daily routines, the fishermen seldom sighted wolves after the 1960s.

Wolves were not as likely to become pets as some of the other species. Trappers would find wolf litters occasionally and sell the pups but the fishermen who tried to raise them as pets found that they returned to the wild after they grew up. Wolves were known also to interbreed with pet dogs, although the fishermen did not encourage it, and the mixed pups tended to make good pets. Pets were susceptible to wolf attacks but one dog learned to lie on his back with his feet in the air and they would leave him alone.

Beaver were another species that could be tormentors or pets. They would store a variety of things under the fish houses and chew on the pilings. One fisherman was known to call the beaver by making whining noises. Another fisherman would make a noise with his mouth and the beaver would swim up to him. Several people were known to talk to the beaver in an exchange of camaraderie. Another family would feed them wood in the winter when conditions were difficult. In pre-park times, trappers "pretty much cleaned out the beaver;" today, the beaver populations struggle as their habitat changes from spruce/fir to poplar/birch.

Foxes often moved into or under fishermen's houses. Some would come onto the porch for handouts; one fox was known to come up on the porch whenever the children were eating. Another fox took up residence under the kitchen of the fish camp. A resident

fox might become so much a member of the family as, in one situation, to come into the house and rest its head on the fisherman's knee. In another case, the family's relationship with a resident fox is best illustrated with the fox's behavior when they finally left the Island: "You know it was sad when we left that year because he went right up on the hill and watched the boat."

Coyotes were another species targeted by trappers. Referred to as 'brushwolves' by the fishermen, these animals were not as likely to adopt a fish camp or family as the fox were. Part of this tendency may have been attributable to pet dogs that would chase off intruders. An account of a pet coyote involved a three-legged animal that was probably the survivor of a trap. One fisherman learned to mimic the coyote's yelp well enough to get them to call back. When the wolves displaced the coyotes in the late 1950s, he tried calling to them but, to his disappointment, could never get an answer.

In another account, a sick coyote, that was captured and taken for treatment, was found to have holes in its intestines although no explanation was provided. The incident, however, provides illustration of the compassion and extent to which fishermen interacted with the wildlife of the Island.

Interactions with lynx or bobcats usually involved trapping or shooting to protect the chickens brought by some of the fishermen. Fishermen recall large numbers of lynx in 1913 and some were live-trapped in 1917. Lynx were sighted frequently on beaches but disappeared with the caribou as moose came to populate the Island. One humorous story involved a lynx that was chased out of a yard by a fisherman's wife with a broom.

Rabbits typically provided food for the fishermen's families. Whenever the fox populations were low, however, the rabbits became tamer. Squirrels could be nuisances, but often they provided entertainment and would occasionally come to a cabin door for food. Weasels were another nuisance species, getting into food stores on occasion. In one instance, though, a weasel moved in with the family and slept with the fisherman and his wife. Interactions with smaller animals such as pine martens, muskrats, otters, and mice were limited to observations around the Island.

The attitude of the fishermen toward the wildlife with which they shared the terrestrial environment of Isle Royale was one of interest and kindness. The wildlife were left to go their own way for the most part. Friends or pets were made of the individual

animals that made themselves at home within the fish camps. Overall, their interactions are best characterized in one fisherman's tale of another: "[He] didn't like to chase anything away, anything...snakes kinda lived in his, he wouldn't chase a snake out of his house. My mother wouldn't come down here because she hated snakes and 'Oh, he had snakes in his house.' I think she was probably down here once and never came back. If a snake was in his house, that was, probably, he probably considered that an asset because they would probably keep the mice down. He lived in harmony with whatever was around."

Large Animals

Purportedly due to its isolation, Isle Royale was home to few large animal species. During the early days of the Scandinavian fishermen on the Island, caribou were the predominant species. Around the turn of the century, fires caused a regional vegetation change that favored moose and deer habitat over that of the caribou. As moose populations increased, opportunities to cross a frozen Lake Superior were taken, resulting in the displacement of the caribou in the early 1900s. Following natural boom and bust cycles, the moose population ranged from estimates of 400-to-500 to 1000-to-3000 until the wolf came to the Island in the late 1940s (Shelton 1997). Such numbers made sightings by and interactions with the fishermen commonplace.

An attempt was made to introduce whitetail deer to Isle Royale; it failed but not before sightings and interactions resulted in a few pets. The majority of interactions with large animals, however, was with moose, although, fishermen knew areas where caribou and deer could be seen. Noting many caribou on the Island in 1913, fishermen noted that caribou were hunted for winter food before they were displaced by the moose. One fisherman compared them to the reindeer of Norway suggesting a connection with the homeland that contributed to the attraction of Isle Royale for the fishermen.

Whitetail deer frequented the Windigo and Daisy Farm areas of Isle Royale. One fellow found a fawn, almost dead, laying among the gooseberries when he was fishing for brook trout. He brought him back to the cabin and placed him in front of the heater. As the fawn recovered, they fed him with a calf bottle. After he recovered, the fawn stayed and followed them around the fish camp and in the surrounding woods.

Moose were a source of food, entertainment, and annoyance, sometimes to the point of being dangerous. Swampy areas, streams, bays and small, neighboring islands were known for moose populations. Siskiwit River, Lake Ritchie, Windigo, Alice Bay, Duncan Bay, Chippewa Harbor, Tobin Harbor, Amygdaloid Island, Thompson Island, and Rock Island are some of the areas of common sightings.

During pre-Park times, moose replaced caribou as a winter food source for some of the fishermen, especially during the moose transplanting period when the population was high. At one point, even the game warden shot moose for people. Occasionally, even families not staying the winter on the Island would take a moose back with them for food.

Several fishermen became involved with the transplant efforts carried out by the State of Michigan and the Civilian Conservation Corps. With a population estimated as high as 3000, moose were captured for transplanting on the Upper Peninsula of Michigan in the 1920s and 1930s. Fishermen noted that the wildfire of 1936 was so extensive that the population dropped to 200, mostly as a result of lost habitat. Some rescue efforts even took place: "Pete saw an Indian guy save moose from the fire by herding them into a cattle car; he communicated with them (ORHI 8)." After the arrival of the wolf, fishermen observed fluctuations in the moose population that were influenced by the wolf population. They indicated that the moose populations today are smaller than during the heyday of the fishermen.

The fishermen and their families enjoyed having the moose around, although on occasion, a particular animal would cause problems or become a danger to those living in the fish camp. Moose were known to swim among the surrounding islands and some suspected they would swim between Isle Royale and the North Shore, although, most fishermen were aware of them crossing the iced-over lake in the winter.

A swimming moose was an interesting sight that sometimes prompted dares to ride it. One fisherman, on a fifty-dollar dare, slipped over the side of his boat and onto the back of a young male moose. He rode the animal for the challenged minute and slid off before it could get its footing in shallower water. Another case of moose riding occurred at Tobin's Harbor suggesting the dare was a popular, if rarely accepted, challenge.

Pleasant interactions with moose occurred when a calf was born in a corral and needing adopted, or when a moose deciding to take up residence at a fish camp. It was

not uncommon to name these moose and develop rather intimate relationships with them. One cow moose became an "outhouse escort" for a fisherman. She would eat bread and blueberry pancakes from someone's hand, or in one instance, from someone's mouth. Her fishing family remembers her fondly and noted "she had great eyes."

Moose were often troublesome and occasionally dangerous. Fishermen discussed how a moose might scare someone although it was simply curious. During one winter, the snow was deep enough that some fishermen had to dig tunnels out from their front door. One fellow found his tunnel caved in when a moose fell through the snow pack.

Moose would tear down clotheslines with the wash attached, or come up on a porch. Being curious, moose would investigate the various containers found in a fish camp such as vitrol blue used for net maintenance or linseed oil used for corks and floats. One persistent moose became sick after a dose of linseed oil but returned to the fish camp and ate some salted herring.

Those families who brought pet dogs with them had some retaliation as the dogs would chase the moose from the fish camps. The dogs could be a mixed blessing, however, bringing the moose back with it because the moose had decided to charge the dog rather than run from it. One dog, being of a herding breed, actually brought moose home, herding them all the way.

Moose were known to chase people as well. One cow that had a calf with her did not like the sound of the chainsaw used by the fisherman. As a "resident" moose, relocating apparently did not appeal to her. She chose instead to run after anyone around the boat dock, the house, or other buildings within the fish camp.

In a similar incident, a moose was standing at the front door of the house and would not let the children go in. Another time, a fisherman found himself trapped in the outhouse by a moose.

In a more dangerous instance, a cow moose kept the fisherman and his family hostage for about five days before she tired of it and left. Other examples of the danger presented by moose include one family's dog that was attacked by a moose and almost died, and a fisherman who was knocked down and hurt by a moose. One fisherman was reeling his nets when his dogs led a charging bull moose toward him. He ran through the screen door of the house and the moose circled the house, stopping to look through the

windows for him. Rather than protect themselves by shooting problem moose, however, the fishermen and their families generally responded in ways as simple as throwing tin cans at the animal or keeping an eye out to seek shelter in advance.

Current Conditions and Recommendations

The fishermen and their families tended to form relationships with the animals with which they shared Isle Royale. When hunting occurred, it was done out of necessity rather than sport. A lack of people, the company and entertainment provided by the animals, and the tendency for animals to become docile simply by living around people, led to relationships that generally were beneficial to both people and animals.

Living in such close proximity with so many species, the fishing families could not help but notice odd behavior or population changes when these occurred. Their observance continues today as reflected in their comments about the present condition and management needs of the animals.

Overpopulation and lack of food resources are causing health problems in the moose population. Habitat changes, primarily the replacement of deciduous trees, grass, and shrubs by conifers, are the result of fire suppression and have affected the moose and beaver populations. Natural events are having impacts as well. Bad winters also have contributed to declines in bird, beaver, and moose populations. Other human impacts include poaching in spite of the controlled access to the Island and Park regulations. Fishermen have found relatively new traps in recent years indicating current activity. The fishermen describe these problems as being representative of the whole island.

Another species noticeably impacted by natural and management problems are the bald eagles. The spruce, balsam fir, and poplar on Hay Bay and Houghton Point have been home to several nests in the past. The trees are dying, however, and the eagles are being displaced as they search for other nesting sites. It is interesting to note that the eagles seemed to do better during the fishing days than today, possibly consequent to easy access to the fish and fish by-products of the fishermen's activities in addition to less fire suppression.

Management recommendations naturally address habitat changes. The reintroduction of fire, or lack of suppression, would naturally revitalize plant

communities providing a variety of successional stages that support healthier populations and more species. Maintaining control of the numbers and activities of visitors, including the number of boats, is another management action that would benefit wildlife. These suggestions reflect a let-nature-take-its-course philosophy. As one fisherman put it, "Animals pretty much take care of themselves. Moose, for example, when the browse becomes scarce head for Canada on the ice." The preference, however, is to maintain healthy and diverse populations on the Island.

Fish

A discussion of the fish resource, as a primary focus of this study, calls for a contextualization of local traditional knowledge systems for an adequate understanding of the Scandinavian fishermen's knowledge of the Isle Royale fishery. Attendant conditions include the fishing skills they brought with them, settlement patterns along the North Shore and its extension of Isle Royale, and characteristics of island life and the fishery. Following this setting, we discuss the fishery, the fishing system and routine, fish species and ecology, impacts and the fishermen's responses, and finally, current conditions and recommendations.

Fishing Knowledge

As one of the indigenous maritime enterprises Norwegian and other Scandinavian immigrants brought to the United States in the 19th century, commercial fishing offered a compatible and readily adaptable lifestyle to the terrestrial and marine environments of Lake Superior (Kaups 1975). Some of the fishing knowledge and skills the Scandinavians brought with them served them well in their new environment. The knowledge and skills they needed to fully adapt to the different conditions of Lake Superior, however, were readily acquired since fishing "was a way of life that they thoroughly understood" (Blegen 1931:349). Their adaptation was simply an extension of the continuity and evolution of local knowledge that built on what Nietschmann (1989:65) called "firsthand experience and intellectual elaboration," both fundamental characteristics of traditional systems (Ruddle 1994).

These aspects of local knowledge had additional basis in the immigration routes of the Scandinavians. Those who settled and fished along the North Shore predominantly came directly from Norway and Sweden, and from fisheries in New England and Lake Michigan (Kaups 1975). Those direct from their home countries brought knowledge of their homeland marine environments while those from the American fisheries brought adaptations and experiences that built upon their homeland knowledge. The Norwegian gill net, for example, was first used in the coastal cod fishery of New England in 1880, replacing the setlines used for herring (Kaups 1975). Many of the Swedish immigrants brought boat-building skills that they adapted to Lake Superior conditions (Fieldwork 1999). Since the Scandinavian groups tended to live in ethnic-based communities initially, including on Isle Royale, communication among them presented opportunities for accelerated learning of and adaptation to the Lake Superior environment.

Within this settlement process, the Scandinavian fishermen of Isle Royale handed down their accumulated knowledge to their children and grandchildren, which many descendants retain today (Fieldwork 1999). To understand this example of knowledge transmission as evidence of a local, cultural-based knowledge system, we have to look beyond relationships with the physical and biological environments. Exploration of the fishermen's knowledge must be within the context of social relationships and productive activities, because the tangible aspects of local knowledge are intertwined and supported by that context. According to Ruddle, "Community knowledge becomes *the* given-received social world for children, and an analog of the biological-physical world with which it overlaps. [And]...the transmitter's sense of reality is strengthened" (1994:163).

Ruddle believes that local knowledge systems that originate and are deeply rooted in a specific culture and local ecological system are traditional, but not static. "'Modern' influences do not necessarily make contemporary local knowledge less 'traditional,' as they are incorporated into a framework of existing knowledge" (Ruddle 1994:175). The descendants of the Isle Royale fishermen demonstrated their own intact knowledge core, one built from the observations and experiences of their ancestors who were intimately familiar with the environments in which they worked. They are the children raised within the "given-received social world" of the Isle Royale Scandinavian communities.

The Isle Royale Fishery

The fishery system developed by the Scandinavian fishermen on Isle Royale has its roots in the homeland fisheries found along rugged coastlines dissected by innumerable branching fjords. The long-standing tradition of the homeland fisheries involved a combination of small-scale fishing and agriculture along the shore of the fjords. These fisheries were maintained as the exclusive domains of the local populations, and fished with hand lines, longlines, and gill nets (Jentoft and Mikalsen 1994).

Characterized with rugged, rocky shorelines, dissecting channels, and deep waters, Isle Royale presented a familiar fishing environment to the new immigrants. The fishermen found a combination of warm shallow waters and deeper cold waters interspersed with rock reefs rich in fish populations within the first four miles from shore. Early fishermen, consequently, did not have to sail far for their catch and could get by with smaller boats and less help. As more fishermen came to these waters, however, they had to go further out in the small boats, sometimes as much as eight to twelve miles.

The typical fishing operation, whether individual or family, was equipped with a boat, sometimes a skiff, set lines, and gill nets. The fishermen who immigrated to New England before coming to the North Shore and Isle Royale, replaced set lines with gill nets to catch herring (Kaups 1975). This change was seen in the Lake Superior herring fishery as well where the Norwegians, in particular, were primary developers of the Duluth herring industry (Kaups 1975). Some fishermen built their own herring skiffs which resembled the *sjekte*, a fishing boat used along the inner coast of eastern and southern Norway. These boats were fifteen to seventeen feet long, four to five feet wide, and two feet deep. Fishermen seldom went more than two miles from shore, the approximate extent of the herring fishery, in these small boats (Kaups 1975). Some fishermen had two boats, one around nineteen feet long for fishing closer to shore, and another around twenty-four feet long for going further out (Fieldwork 1999).

The Fishing System

Although fish were caught throughout the year, the peak seasons occurred from May to July for lake trout, and from October to January[2] for herring (Kaups 1975;

[2] Pertains to year-round fishermen as most Isle Royale fishermen ended their season in November.

Rakestraw 1968). Whitefish and siskowit, known also as fat trout, were the other primary market species, although the siskowit market was in decline.

Catch methods included hooklines with herring for lake trout and gill nets for herring and whitefish and trout. While these methods were used throughout the Scandinavian fishing era, some technological changes did occur. Nets, for example, changed from cotton, to linen to nylon (ORHI 23). Floats changed from wood, often cedar, to aluminum to plastic (ORHI 4; ORHI NEMN 2). These changes meant changes in the maintenance of nets and floats, two of the more significant being no more need to oil the cedar floats, and no need to treat the cotton nets with blue vitriol[3]. Most of the Scandinavian fishermen used hooklines and gill nets. A few who could afford it, like Captain Francis, tried pound nets with trout and whitefish but used gill nets during the fall spawning season (ORHI 23).

Spring was the time for deepwater fishing with gill nets for lake trout. This season ran into June or July. The summer was spent catching small herring for bait with hooklines, and deepwater fishing for siskowit trout. During the fall season, which ran into November, fishing was with large-mesh nets for trout and whitefish (ORHI MH 2).

The size of mesh and placement of the nets were based on the fishermen's knowledge of the submerged landscape characteristics. Anchors and boulders were used to weigh down and secure the nets (ORHI 4; ORHI 76). The north side of Isle Royale was more difficult to fish with nets than was the south side, and sandy bottoms were preferred for net fishing as well (ORHI 9).

> *[We would set] gill nets, one to fifteen fathoms deep, and leave them out two nights. Others. We used boulders to weight them. Now, a claw anchor holds [them] at sixty feet (ORHI 4).*
>
> *Gill nets work better at Siskiwit Bay because of sandy bottom. The north side is difficult, but the south side is good (ORHI 9).*
>
> *[Some of the] gill nets were 500 feet long and six and a half feet wide. [We used] small and large mesh depending on the time of year; spring, we used small mesh because the fish were smaller, and fall, we used large*

[3] Blue vitriol is copper(II) sulfate pentahydrate, $CuSO_4 \cdot 5\ H_2O$. The compound is called blue vitriol because because it can be prepared by oxidizing copper in hot concentrated sulfuric acid ("oil of vitriol") (Senese, Frederick A. 2000. "What is Blue Vitriol?" http://antoine.fsu.umd.edu/chem/senese/101/inorganic/ faq/blue-vitriol.shtml. Last revised 12/9/00. Last accessed 1/11/01.) Also, known as cupric sulfate pentahydrate.

nets. [We] put nets on the bottom or floated them...[some nets were] 225 feet long and twelve feet deep. Trout nets [had] smaller mesh for bank fishing [in] twenty to fifty fathoms of water (ORHI NEMN 2).

[We] put a large anchor on, then dropped two lengths of net and used another anchor. This enabled you to see the migration pattern of herring. You could adjust your nets accordingly. (ORHI 76).

Inez helped her father, then her husband, with the nets. She [took the] fish out of the nets, untangled nets, and helped gather spawn in buckets to take to hatcheries. [They] fished at Tobin Harbor with the Andersons. The men left at about 3:00 in the morning and came back at 4:00 in the afternoon. Inez and her son had to go out once and get the nets because Art was at his mother's funeral (ORHI 29).

Francis used pond nets for trout/whitefish; used gill nets during spawning in the fall. Linen nets were used for trout until nylon (ORHI 23).

The typical fishing day began between 4:00 and 5:00 a.m. Some fishermen took a little time for coffee while others would go out to lift their nets and return for breakfast before going out to work the hooklines. In the first case, the fishermen lifted nets or hooklines throughout the morning, sometimes into the early afternoon, then spent the afternoons cleaning and processing the fish, or working on their boats, nets, or corks. Their days usually ended around sunset, however, some fishermen continued into the night to pick their herring nets. Weather often influenced the routines (Fieldwork 1999):

Their fishing territories were limited by how long it would take to get there, do the work, and return home before dark. The typical day ran from 4:00 a.m. to 5:00 or 6:00 p.m. They would fish in the morning and clean in the afternoon. The herring nets were picked at night. Spring was deep fishing for trout with gill nets. Summer was small herring for bait with float hooklines; also, real deep for siskowit trout, a fat fish. July for trout with gill nets, and shallows for a few herring. Fall at McCormick, big mesh nets until October, November for trout.

They left early in the morning to get the best weather. Lifted nets or ran hooklines until early afternoon and have lunch while they were working. They used 25-foot boats for hooklines and reef nets, and 35- to 40-foot tugs for deepwater nets. They returned early afternoon, had dinner and then process the fish, and planned the next day. They had supper at sunset.

They would start out about 4:30 or 5:00 in the morning, grab a cup of coffee and something quick to eat, then go out, pick the fish out of nets and reset them. They'd get home around noon, put the fish in the fish house, and go in to get something to eat, then spend the afternoon processing the fish, and ice it. In the evening, they'd clean and gas up the boat and get ready for the next day. During bad weather, they had nets to reel and dry, to mend, and corks, engines to work on, clean up the yard, general maintenance.

At sunrise, they'd eat cookies and coffee. In June, they'd go out and pick up short nets set along the shore, in shallow warm water. They would put the fish into a box or burlap, then come in and process them at the two fish houses. They would chop ice, weight the fish, and put them in the cement cooler. The fish guts were for the seagulls. After dinner, they took care of the nets and corks. They sometimes had two to eight reels with nets drying. Blue vitriol was used to maintain the tan or color in the nets. Deepwater nets were set after lunch sometimes; they emptied them and put them back. They didn't bring them back.

They were up around 4:00 a.m., out to bait nets, then home for breakfast. Then they'd go out to the hooklines where they baited and picked the lines for fish. They'd get home around 2:00 p.m., then proceed to prepare the fish for market, dressing, boxing, icing, and weighing. Clean up finished about 6:00 p.m.

I can't even imagine all these people...I don't remember how many rigs, I could probably count 'em up. But the spots that we fished in the fall, I can't imagine how all those people made a living dividing up the spots. And whoever got there first and, but they were, the fishermen were um highly competitive but great friends. Nobody would ever do anything to, if anybody need help, they were there like that. I can remember them standing, lifting a box out of the, 'cause everybody watched to see how many heavy boxes they're taking out of the boat. Up around 4 a.m. Out to bait nets. Home for breakfast. Out to hooklines where they baited and picked the lines for fish. Home around 2 p.m. Then proceed to prepare fish for market. Dressing, boxing, icing, and weighing. Clean up finished about 6 p.m.

They would put 'em [wooden net floats] in linseed oil and they'd put 'em up and dry them and then you'd have to rub them in order to put them on the rack to dry them.[They used] big vats or a half a barrel....and then they threw them into this trough. And they have the linseed oil hot. They would heat the linseed oil. [At] the same time they were doing that, they were doing lead. And I can still hear the tingle of the lead machine when they were molding the lead, the hot, pouring it into the molds, sizzling. And I guess that time of the year we liked best 'cause the men were on

shore and we saw something of 'em. Otherwise, they were workin' from four in the morning until seven when they went to bed. But it was more of a family time at that time of the year. It would be about this time [July] when they would switch from doing hooklines to doing the netting. And then we had big blue vitrol barrels that we used to tend the nets in...the vitrol had copper sulfate.

The general pattern of the fishing system, then, was to rise early, fish through the morning, clean and process the fish in the afternoon, tend to equipment and prepare for the next morning. Some days were spent solely on maintenance of nets, boats, and other equipment. The parameters influencing the fishing routine included the size of their boats, whether they fished alone or with someone, whether they were under sail or had a gas engine, ice and other storage features, and when the market boats were due.

The Fish Species and Ecology

The Scandinavian fishermen continue to be aware of a wide variety of species and subspecies of fish in the Isle Royale fishery (Table 4.2), although, trout, siskowit and whitefish were the target market species from 1837 into the 20th century (Nute 1944). Herring entered the market scene in the late 1800s when the Scandinavian fishermen of Duluth started its development. As one fisherman explained, "In the early days, herring was important because it was salted. [There was an] early focus on herring [because of the] extremely productive fishing grounds (Fieldwork 1999)."

Shortly before the sea lamprey began to impact the lake trout in these waters, scientific surveys by university researchers reported several species known to the Scandinavian fishermen including northern pike, rock sturgeon, and several species of lake trout. Researchers qualified this knowledge noting a lack of scientific documentation to support it (Hubbs and Lagler 1949). The fishermen also recognized subspecies within herring, whitefish, and trout populations, including the lean lake trout, the fat lake trout or siskowit, the redfin, a speckled trout at Windigo, and the Rock of Ages trout, which was found also at Taylor Reef Menagerie Island (Fieldwork 1999; Hubbs and Lagler 1949; ORHI 3; ORHI 21; ORHI 65; ORHI 67; Rakestraw 1968). According to one fisherman, "There were different fishing stocks in different areas. The Rock of Ages fish, for

Table 4.2 Fish species known to the Scandinavian fishermen of Isle Royale (Oral Histories and Fieldwork 1999).

	American Burbot	Bluefin	Brook trout	Great Lakes Whitefish[2]	Herring	Lake trout	Rainbow trout	Redfin trout[7]	Rock-of-Ages trout[7]	Rock sturgeon	Siskowit	Coasters	Yellow pikeperch
Amygdaloid Channel						X		X			X		
Belle Harbor						X							
Belle Isle				X	X	X		X					
Blake's Point		X		X	X	X							
Chippewa Harbor	X			X	X[1, 5]	X		X			X		X
Duncan's Bay				X									
Fisherman's Home	X	X	X	X	X	X	X	X				X	
Five Finger Bay				X									
Hay Bay			X	X	X	X	X	X					
Johnson Island					X	X		X					
Little Boat Harbor						X		X			X		
Malone Island					X	X							
McCargoe's Cove				X[5]									
McCormick Rocks, Reef						X[6]		X					
Rock Harbor	X			X	X	X		X					
Schooner Island				X									
Siskiwit Bay				X	X	X		X					
Taylor Reef, Menagerie Is.									X				
Tobin Harbor	X			X	X	X[4]		X			X	X	
Todd Harbor						X							
Washington Harbor	X		X	X		X	X		X	X		X	
Washington Island				X		X		X					
Windigo												X	
Wright Island				X		X		X					
Shoal waters						X[3]					X		
North shore of Isle Royale											X		

[1] Two kinds of herring were identified as spawning in different habitats (Fieldwork 1999).
[2] Two kinds of whitefish here: the Great Lakes whitefish, found throughout the Isle Royale fishery, and round whitefish or menominee (Fieldwork 1999).
[3] Two kinds of lake trout: the "regular" and the redfin. Hubbs and Lagler (1947) urged a study of lake trout species to verify differences.
[4] Trout only on rock in front of the harbor (Fieldwork 1999).
[5] Prime spot for this species (Fieldwork 1999).
[6] Prime lake trout spawning (Fieldwork 1999).
[7] Redfin and Rock-of-Ages are subspecies of lake trout. The latter is smaller, darker, and concentrated at Rock of Ages while the redfin is long and lean with a big head and pectoral fins, and is more widely dispersed (Fieldwork 1999).

example, looked like a red brook trout but was only 8 pounds. That's a special species of fish, the Rock of Ages fish" (Fieldwork 1999).

Other trout species included the rainbow and the brook trout (Fieldwork 1999). Fishermen first saw rainbow trout in the east end of Washington Harbor in 1927, noting schools of ten- to twelve-inch individuals in fifteen feet of water along the shore. They often saw rainbows with common brook trout (Hubbs and Lagler 1949), reflecting an ability to differentiate between species within the submerged landscape. During recreational breaks, the brook trout found in the Island streams and lakes were another target species of the fishermen and their families (Fieldwork 1999; ORHI 17).

The Great Lakes whitefish was the more common of the whitefish species in the Isle Royale fishery, however, the fishermen also identified the menominee or round whitefish in some parts of the fishery (Fieldwork 1999; Hubbs and Lagler 1949). Whitefish could be found as well in some of the interior island lakes such as Lake Whittlesey (ORHI 65).

While scientists consider herring and ciscoes as the same fish, some Scandinavian fishermen differentiated between them. The bluefin cisco, for example, was noted as being larger than a herring: "There used to be a lot at Blakes' Point, trout, whitefish, herring. And there used to be bluefin, larger than herring" (ORHI 22). Bluefins were differentiated as well under the names of blackfins, chubs, longjaws, and bloaters. These fish were found in large numbers at the turn of the century but were greatly reduced between 1905 and 1927 (Nute 1944). The fishermen also differentiated between herring that spawned in different habitats. One species, or subspecies, spawned near the surface of the lake over deep water while the other spawned on sand in shallow waters (Hubbs and Lagler 1949).The Scandinavian fishermen's knowledge of the various species included habitat types, size, and number. During the pre-park era, they watched as the fish populations changed in response to increased sport fishing pressure, market demands, and the introduction of exotic aquatic species. The responses of the Scandinavian fishermen reflect their knowledge of the fish, their ecology, and their management. They made a variety of adjustments in their equipment, timing, and fishing locations.

Three general areas of habitat are occupied by the market species: warm, shallow waters, rock reefs, and deep, cold waters (Figure 4.1). The Scandinavian fishermen targeted the more productive areas for setting their nets and lines. Reefs and channels are good for setting nets, especially those that are "reasonably isolated," as are the reefs and immediate waters around the small islands. These areas share various combinations of shallow water, bottom structures, shelter from wind, and proximity to deeper waters, all features of productive fishing grounds (Fieldwork 1999).

Some of these features are particularly attractive to or identified with certain species. The fine gravel bottom of the confluence of McCargoe's Cove provides the best whitefish run in the Isle Royale fishery. The currents in the Wright's Island fishery were productive for netting whitefish at certain times of the year. Reefs, especially those in the McCormick Rocks area, tend to have bottom structures that are beneficial for lake trout spawning. Even whitefish, which prefer calmer waters for spawning, will spawn in the McCormick Rocks area later in the year (Fieldwork 1999).

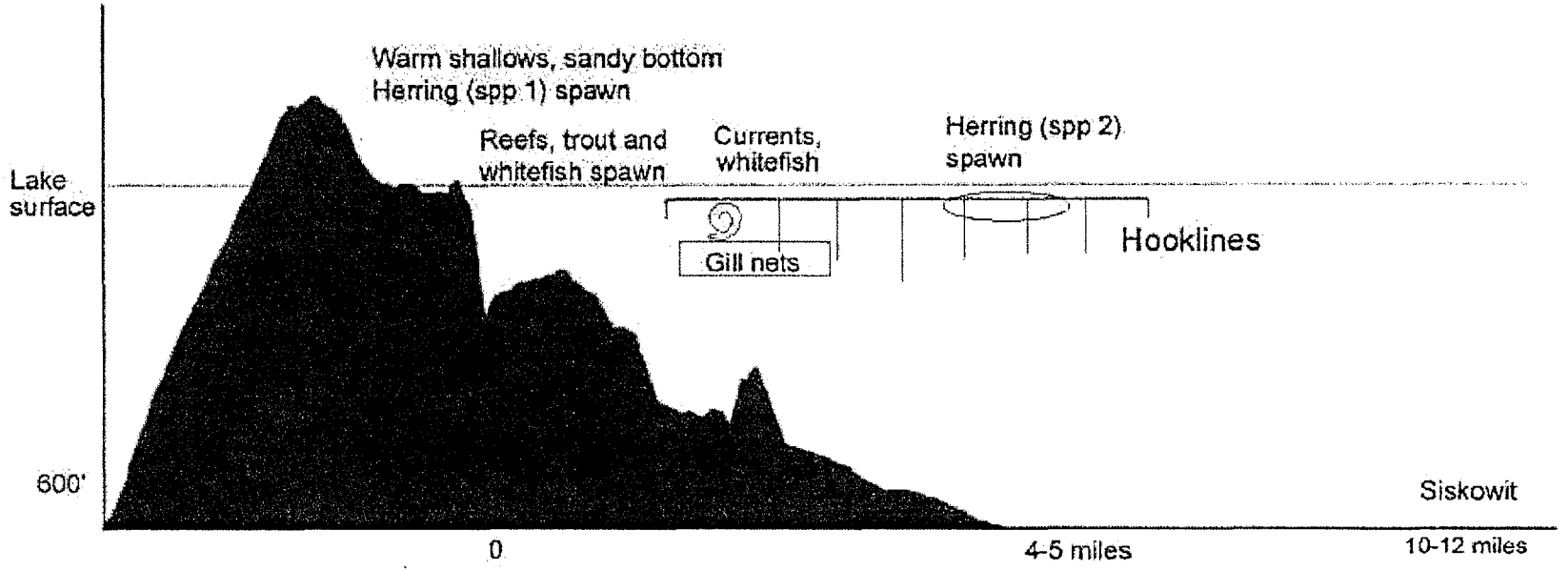
The Scandinavian fishermen's knowledge of the Isle Royale fish and fishery reflect an intimate relationship with these resources. Many of the informants said the fishing style at Isle Royale was like the fishing style of their homeland. Some also said that the Isle Royale fish were similar to those in their homeland. Such familiarity allowed them to adapt quickly to the differences of the Isle Royale fishery. Practically every waking minute of their lives on the Island involved some activity with or aspect of these resources, and, consequently, each day brought a new detail or lesson.

> *These people, my grandparents, and ---'s and the others, coming over from the old country, just had a kind of fishing way of their own. The success on the island was due to the people, not because there was so many fish (Fieldwork 1999).*

> *The north shore started using some of the same techniques. They taught everyone how to be fishermen and survive, make equipment. Granddad brought skills from Norway and passed them down (Fieldwork 1999).*

> *They learned everyday... different techniques, different knots, hooklines (Fieldwork 1999).*

> *They learned how handle trout (Fieldwork 1999).*



ACTIVITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Fishing – hooklines												
Fishing – gill nets												
Redfin spawn												
Lake trout spawn												
Trout and siskowet				w. gill nets on bottom, latter at depths 600'								

Figure 4.1 Generalization of Scandinavian fishing patterns at Isle Royale.

Although the Scandinavian fishermen did not have to travel far for their catches, generally within four or five miles of the Island, a few of them sailed far enough to find a productive siskowit reef ten to twelve miles southeast of the north end of the Island and from Siskiwit Bay (Fieldwork 1999). Such exploration may have been the result of following the lake trout as they moved farther out in the summer where they could be found closer to the lake surface. With the onset of the fall spawning season, these fish would follow the currents back toward the reefs of the island (ORHI NEMN 2).

The Scandinavian fishermen tracked changes in the fish populations noting that larger fish, up to fifty pounds, and more fish were caught in the pre-park years. They recognized particularly productive areas, some of which coincided with the two fishing communities of Washington Harbor and Rock Harbor. Other places were recognized as areas in which it was more difficult to obtain a good catch. Long Point, for example, was known to be difficult (ORHI 17), and an area off the immediate north end of the Island came to be avoided because of the tourist impact there (Fieldwork 1999).

> *There were more trout caught [in the Washington Harbor area] but they also had more people fishing here so it is hard to tell if this area is really better for trout. Fisherman's Home is excellent fishing early in the year (Fieldwork 1999).*
>
> *[Johnson's Resort] has reasonably good trout fishing capabilities, but it has prime herring fishing grounds (Fieldwork 1999).*
>
> *The best whitefish run is McCargoe's Cove at the mouth where there are fine gravels. The last whitefish fished out [of there] did very well. The fish [today] are growing like weeds and biting like crazy. The fish here are the same general mix as all over (Fieldwork 1999).*
>
> *[We fished for] brook trout in the stream, and lake trout. There's two kinds: redfin [which run] 20 to 25 pounds, and spawn around September 20 while regular trout spawn around October 10. Whitefish was a big market for us; we got a lot of whitefish here, up to 16 pounds. [We fished for] herring late in the fall after the boats quit running. We would salt them and sell in the spring. We sold them fresh, smoked, salted, and traded to the fish company for credit slips until the bill was paid (Fieldwork 1999).*
>
> *If the water was very cold in September, around 45 degrees, the lake trout would spawn in early September, but generally spawning was from the*

second week of September through October. The redfin and Rock-of-Ages trout are subspecies of lake trout. There's a different looking fish around Taylor Reef and Menagerie but I doubt if it's the Rock-of-Ages fish. The redfins got up to 40-45 pounds, still do. DNR would announce a two-week closed season in October so the redfin could spawn, then we'd fish redfin the whole November season. There are also half-breeds, or half-fats, possibly a cross between the lean and fat trout. They have a stubby nose and are lean with a fat or puffy belly. They're found in deep water and spawn in late August. The cisco fishing was in very deep waters, around 400 feet, but there wasn't much of that around Isle Royale. You'd find the siskowits in deep waters around almost every fish camp. We caught them for their fat to make lamp oil, and for medicinal needs. We'd use gill nets to 400-feet depths but mostly fished lean trout and whitefish at 200-feet or less. When we pulled the nets, we'd find groups of fish similar in color and shape spawning on different reefs but there was some crossing and subspecies development.

We had to get up around 6 o'clock in the morning. Get our breakfast, take off out on the lake to lift the nets, come home at about noon, measure the fish and, uh, get them all weighed up and put away, iced up and then come up to the house and get your meals ready, clean up the place a little bit (chuckles). If we pulled in some nets, we'd go out and wash them (pause), get them reeled up so it (went) from the time you get up in the morning until you go to bed at night (Myrtle Johnson, NPS 1976).

Oh, it's changed a great deal from sailboats to motor boats and, of course, with a good deal harder work in them days than we have now. Didn't have the motor boats or the net lifters. If the wind wasn't blowing, we had to row. And, of course, we were all wishing for a wind then which we don't now, you know. Sailboats were, uh, up to, uh, 26' long some of them and a good deal wider and they had two spars and a gaft rigging and, of course, two pair of oars. What with the two and it wasn't blowing, you rowed 'em. We'd pull hand over hand under 600' of water; so it was lot more work in the earlier days. The net itself sits right on the bottom just like a fence would be ashore, and every 6' there's a sinker. And above the sinker is a plastic net float where in the olden days we used cedar floats, we didn't have the plastic. But one week and they were, they were shot, you know. Water-soaked right through. And next came the aluminum float. And some were just as flat as a pancake, you know, the pressure of the water just flattened them. And then the plastic floats; if they didn't break they'd, they'd last indefinitely. The net is weighted, uh, with lead. Three would run about a pound. And they're spaced to, right below each float, about six feet apart. They're down to 60' and the float keeps 'em at that level. You have your distance from the float to the net see, measured off, and it keeps them at that level and when you raise them, you just shorten the, uh, the line from the float to the net and, uh, those are anchored, oh, off-shore

here about a mile and they're anchored in 600 feet of water. The anchors go down that deep but the net is floated. If you fish a marine that's bringing your [nets] down about 16 fathoms and as the season goes on along, you lift them up to about 2 fathoms. We'd start rowing out to there but it's in a wind. Before you got out to the outer end, you had to always pick these nets with the wind, you know, so it would be so hard you couldn't pull 'em into the wind 'cause the boat was sideways. Before you got to the outer end sometimes you were all in. When you got a hold of the buoy there you wish you were home. Oh boy, then you had to start your work. Pull it up and start picking, and when you're through with that and you have about half a ton of that stuff and then row back... oh boy. Those days were tough I tell ya. It weren't like now; we never had an outboard; it was just oars and those skiffs (Milford Johnson, Sr., NPS 1976).

That was a genuine lake trout. It was a salmon trout from Rock Harbor channel. Oh, that thing was longer than a dress board; I seen that and I took an 18-pounder and threw it off the scale and put that on the scale, and it was 46 and half pounds without the insides and the head. And my wife and I had a very good meal off the head. I'll tell you one thing, that's the best part of the fish, the head (ORHI 3).

[We fished for] whitefish, lake trout, and herring, [which we] salted with coarse rock salt, soaked in brine. A 25-pound trout was about her limit, but they had people working there that caught a 44-pound trout. Myrtle caught a 47-pound trout once. Ingeborg said that 28- to 30-pound fish were very common years ago (ORHI 4).

Fishing was better on the other side of the Island, like at Siskiwit (*ORHI 11*).

Pete's nets used to bring in 40 to 50 [pounders]. There used to be a lot at Blake's Point, trout, whitefish, herring. And there used to be bluefin, larger than herring (ORHI 22).

The fishermen's knowledge extended to a level of detail of the physical anatomy of the fish. Such information became more obvious following the requirements of the assessment regulations in the 1960s.

We prepare the fish after we get back. The first thing you do, you have to unload 'em, of course, and pull 'em up to the scale. These fish have to be weighed before they're cleaned and after that's done, she takes a fish out of the box and she measures it and she hands it over to me and I clean it; back slit, the heads come off, and the knife goes, follows right along the backbone. And they're cleaned, then washed in a tank, scooped outta

there, drained good, and then iced. And we have to sex it, whether it's a male or female, and then these are weighed again when they're dressed. Then you have to take scale samples of each one, the length of it, where it's caught, what depth of water and, uh, all the things. In the olden days, you could've cleaned and prepared up to half a ton in the time it takes now to get 5 or 6 hundred pounds ready (NPS 1976).

Further attention was given to the affect of seasonal and climatic changes on the fish populations. Equinox disturbances, storms, squalls, and a full moon altered fish behavior and, generally, reduce the catch (Fieldwork 1999; ORHI 18; ORHI 22).

Spring [going] into summer, and fall, degree days (how fast the lake warmed up) directed where you fished. Declining temperatures in the fall determined when fish came in to spawn. Storms could mean lost nets and the fish in those nets. Storms might bang up the fish in the nets making them second-rate for the market. Nets would also get full of dirt and algae. Barometric changes seemed to cause the fish to disappear. Clear, moonlit nights would adversely affect the catch (Fieldwork 1999).

Northeast winds warm up the water and the fish go away. Southwest wind will chase warm water out and fish will come back. Big storms stir up the water and make it muddy and the fish leave. During a full moon, the fish leave the bottom but during a dark moon they're on the bottom. You can see the nets on a full moon. Air pressure causes fish to move to other locations, to leave their normal habitats but I don't know where they go (Fieldwork 1999).

Float nets fish better when it's overcast or a new moon. The full moon is known as the rubber; it was weird because they didn't get fish then. Squalls would come up suddenly; they couldn't or didn't see them. All of a sudden, a black streak over the water, in minutes a 30 mile-per-hour wind would come in over a dead calm sea, usually from the southwest. One time Dad was out when a squall came up and Granddad and others were worried. As the storm blew over, they started organizing a rescue but he showed up. It turned out that the storm had blown over him and he'd gone back to get his nets and finish the job without minding how it looked on shore. That was the only time I saw Granddad furious with Dad (Fieldwork 1999).

When the water was warm, the fish would be away. The warmest months of July and August, there was only deep-water fishing or near shore. During those times, they would work on equipment repair and such and prepare for fall fishing, the best ones. Trout, whitefish, and herring, though not much herring, just near Duluth in the fall when there was no

point in fishing the islands. Most herring was caught for bait. Sometimes for eating, for hotels, or shipped down to Chicago. Other fish were far more valuable (Fieldwork 1999).

Big storms chased the fish away, damaged the nets. Dirty water messes up the colonies; hot and cold currents affect the nets (Fieldwork 1999).

Storms prevented the tending of nets. They also loosened the bottom moss which dirtied the nets (Fieldwork 1999).

Storms damaged nets set in shallow water, bunched them up (Fieldwork 1999).

Fog [affected the catch], and clear, full moon nights because fish could see the nets in shallow water (Fieldwork 1999).

Real cold weather [affected the catch] (Fieldwork 1999).

Heat [affected the catch]; it warmed the water and sent the fish away (Fieldwork 1999).

[Your] catch depends on good weather (ORHI 18).

Most of the fishermen and their families made personal use of their catches in addition to the economic use. The market species made up at least half the diet of most families, which was supplemented with an occasional brook trout and supplies from the mainland. Some fishermen even noted changes in the flavor of lake trout that fed on smelt instead of herring. Some families also made medicinal use of the burbot, substituting the liver for cod liver oil (Fieldwork 1999).

[We] ate fish three or four times a week (Fieldwork 1999).

[We used] burbot liver as a cod liver oil substitute but that was limited to a local cure-all (Fieldwork 1999).

My wife and I had a very good meal off the head [of that lake trout]. I'll tell you one thing, that's the best part of the fish, the head (ORHI 3).

And we enjoy eating fish (ORHI 4).

[When] trout ate smelt, they got fatter and sweeter (ORHI 22).

In addition to seasonal and climatic affects on the fish populations, the fishermen noted impacts from exotic species, particularly the sea lamprey, and changes in state fish management. The lake trout in the Isle Royale waters were the last populations in Lake Superior to be affected by the lamprey (Fieldwork 1999). Once the lamprey reached the Island's waters, however, the lake trout population decreased rapidly (ORHI 3, ORHI 4, ORHI NEMN 1, ORHI 22). Even by the mid-1960s when allotment fishing was allowed at Isle Royale, the fishing was poor (ORHI 24), but by the early 1980s, it had improved (ORHI 3).

Commercial fishing is often touted as being responsible for rapid declines in fish populations (Jensen 1978), but this does not appear to be the case with the Isle Royale fishery. The impacts of pre-park management and the sea lamprey of the Island's fish populations were different than what was found in most of Lake Superior (Baggley 1942; Burnham-Curtis 1995; Fieldwork 1999; Nute 1944). It would seem that management of the Isle Royale fishery, and consequent impacts to the Scandinavian fishermen, has long been based on the more readily observed impacts of commercial fishing, recreational fishing, and exotic aquatic stocks along the mainland shores of the Great Lakes. Negative criticisms of Scandinavian fishermen's impacts, consequently, may have been overdone if not unfounded. With regard to pre-park management:

> *There does not seem to be any evidence that early commercial fishing has been detrimental to the establishment and use of the area as a national park. Actually, I believe that the presence of the commercial fishermen at Isle Royale has to some extent helped to preserve and protect the area during the years preceding tits establishment as a park (Baggley 1942).*

The conflicting theories of fish population declines have overshadowed the ecological knowledge and conservation responses of the Scandinavian fishermen. Changes in migration patterns were observed as one cause of population decline and, given that uncertainty, many of the fishermen participated in stocking programs with the Minnesota State Hatchery (Fieldwork 1999; ORHI 29; ORHI 67; ORHI NEMN2). The combination of pollutants, exotic species, and an end to the restocking program had a noticeable affect on the Lake Superior fish populations. Not only were populations dying off, those surviving were heavily stressed and more susceptible to further assaults. The

devastating impacts from the sea lamprey, consequently, took more than stocking to return the lake trout to viable populations. Whitefish populations were not affected by the lamprey to the extent that the lake trout were (Smith 1968) "because their scales make it hard for the lamprey to hold on (ORHI 3)."

> *You know, one year we might get an awful lot fish up this way and the next year was a little less. Then it was by Marquette...and it could vary in different parts of the lake. And some years there was more and some years there were less and some people said that...they were fishin' out the lake. That wasn't true because some places it was kind of skimpy some years but it could be much, much more some other end of the lake. And I know the times when we claimed it was a poor year, well, they said down in Marquette...there was all kinds of fish; and the year after, they complained that there was little down there; then we had them up here. But now I think there's fish all over the lake even starting to get up in Minnesota. And that was empty, that was really empty up there (ORHI 3).*
>
> *The fishermen helped the State conservation office and gathered spawn in buckets, and then would take the spawn to hatchery. They did that for many years (ORHI 29).*
>
> *They used to replant spawn and trout in reefs and sheltered places at Chippewa and Schooner, but they stopped in 1932 or 1933. The fish began dying out after that (ORHI 67).*
>
> *If they try to stop one way of fishing and they leave the commercial fishermen out, they're making a mistake because the fish has to be harvested and, uh, taken care of because if they get too many fish in the lake, who knows what the trout will do, if it gets over-produced. They'll die off some way, well they, they won't gain anything by it. They might as well have the gill net fishermen here to take off the surplus (Pete Edisen, NPS 1976).*
>
> *I recall back in the 1940s, when they would drop off milk cans of fingerlings at Belle Isle fresh from the hatcheries. These fish would home in on, or bond with the area. When Lake Superior was losing trout to the lamprey...this area was among the last that had fish. Fish planted today are kept at hatcheries to within a year of catchable size. Planting 300,000 fish today is a big deal. Years ago, the U.S. and Canada planted millions (Fieldwork 1999).*
>
> *The trout would move farther out in summer, closer to surface, then, with the currents, move in toward shore for spawning. [During the] spawning season in August, the fish are sluggish; you can fish on top. [After the*

lamprey, they were] allowed to fish trout for spawn. [They] sold [it] to the hatchery and they'd raise the eggs. After Labor Day, [we] used bigger mesh nets and sold fish to the hatchery. Up to 85% of the eggs hatched, but only 4% hatched in the wild (ORHI NEMN 2).

Lamprey, smelt, lack of restocking led to the dramatic decrease in Lake Superior fishing. Lake Superior was called the "Dead Sea" in the 1960s. Silver Bay, MN, taconite plant dumped 67,000 tons/day of tailings into Lake Superior effectively aging the lake at least 500 years according to some experts. Tons of smelt ended up on beaches with fungus in the gills (Fieldwork 1999).

The lamprey "hitchhiked" from Canadian waters on boats. [They] practically did away with lake trout . [It] sucks blood out of the fish, takes about a day to kill a ten-pound fish. At peak infestation, [it] caused a fishing decline so that many fishermen had to quit. Some had fishing lands [on the] Minnesota shore (ORHI 4).

[They] cause white spots, suck the blood right out. The last lamprey infestation could've wiped out fishing. Pete's nets used to bring in forty to fifty pounds [but] during the lamprey, [he had] only twelve pounds in his nets (ORHI 22).

There were dead lake trout all over when the lamprey were here. It took about eight years before they found a cure for the lamprey [but it] took all the trout in the meantime (ORHI 83).

...the times here when I set, I had a net I called the "Barometer," and I used get from thirty-five and up to forty-five, fifty pounds... when I lifted it the first time in the spring. One year I come there and it was only 12 pounds. The year after I didn't see 'em. I says, now I know there's somethin' rotten in Denmark. And by golly you know, they were dead; I went along the whole shore down here, you could see the white spots along there; and I picked up one, that was about 14 pounds, he was drilled on both sides by lampreys, right close to the heart and laying 's what killed 'em. And I could see that all over so I went down to Blake's, and I followed up almost to the Narrows, well, I did go up to the Narrows too, and you could see them fish laying down there dead, and uh, there was one specially pretty good sized one, I took a treble hook and I went down there and I fished 'em up. It was too big holes right where the heart is, finished him off... but if he can get away then, you know, he might buildup a new supply of blood and keep on going. I've seen that some places, that they had been sucked on, you know, and then left, and then they uh, built up blood again so they had plenty of blood when I got 'em. Oh, it [the lake trout population] was rock bottom, actually rock bottom at that time. They had hit it so low that there wasn't hardly any comeback. If it wouldn't

have been for fightin' the lampreys then, they'd've never got fish back in the lake; because the lampreys would've taken over. [In 1982] ... I haven't had much trouble with lamprey in here but I have noticed in two or three places that they uh, been on 'em but it's old scars... but they were plenty of 'em here at one time and down at Blake's Point was just a gathering place for 'em, and that's where they really cleaned up bad, that was one of the best trolling grounds on, on Isle Royale... there's fish there again now (ORHI 3).

[The] lamprey and smelt impacts on lake trout led to DNR and commercial fishermen gathering spawn, fertilizing eggs to help restock the lake trout in Lake Superior (Fieldwork 1999).

The appearance of the sea lamprey in Isle Royale waters occurred at a time when many of the Scandinavian fishermen were close to retirement age. Had their life leases allowed it, their children would have taken over their operations. Between the constraints of the park and the decimation of the lake trout population, all but eight of the fishermen gave up their fishing lifestyle and retired. Had this combination of events not occurred, a viable fishing community would undoubtedly continue today rather than be down to a single fisherman.

Current Conditions and Recommendations

According to informants during the 1999 fieldwork, the lake trout populations have increased and while some believe they are in better condition than before the lamprey invasion, most informants qualified their responses by noting breeding and predator problems. Their overall quality is not as good because many lake trout have bred with the siskowits, particularly the Rock of Ages trout. The cause of the cross-breeding was attributed to "selective species targeting and under-caught fish spread all over." As a generalized assessment, the trout and herring populations are in good condition but the condition of the whitefish and siskowits is uncertain.

Negative impacts today come from increasing numbers of cormorants that feed on the herring, the smelt that predate the trout fry, and the sea lamprey, although, it seems to be in check. The cormorants appear to be the biggest problem at present as they are spreading to areas where they have not been seen before. The smelt, although impacting the trout populations, seem to be on the decline. Fresh lamprey scars, indicators of new

hatches, have been seen on lake trout by both Scandinavian and sport fishermen, tumors have been found on some fish, and periods of hot weather have driven trout from the reefs to deeper, colder waters. Many people talk of the fishing being very good today but some of the informants remain skeptical.

> *There have been many saying the trout are back and fishing is great. I can't say that. It's as good as in the late 1940s and early 1950s and Dad said there was a significant decline then from when he began fishing. ...consider for a moment that you are a politician. Who has the larger share of votes, the sports fisherman or the few left who fish for a living? How would you influence fish stocking? Sport fishermen claim the populations are increasing and back to pre-lamprey numbers. They have their vision skewed by relating to late '50s and '60s fish populations. There is no way that the fish population is anyway near 1920s and 1930s density.*

Strong sport fishing pressure also holds potential harm. Some informants feel the catch-and-release regulation for big fish is good, however, others believe it is a waste of fish since they are often brought up to quickly from great depths: "...they used a gaf hook to puncture the stomach since they [the fish] blew up on the way from the bottom (ORHI 76)." This practice is believed to have an affect similar to the bends and to be severe enough to kill the fish in spite of being returned to the water.

Recommendations for protecting the fish populations reflect the fishermen's intuitive sense of the management needs for this resource with which they are so familiar. On-going monitoring and control of the sea lamprey, particularly of two spawning areas in Siskowit Bay, is a priority as is the control and monitoring of cormorant populations. Prudent game management policies for sport fishing and a comprehensive assessment program for investigating genetics and subspecies would be of tremendous benefit to the populations.

The current Isle Royale sport fishing catch of 40,000 to 60,000 that has been reported by some is viewed as excessive. It was suggested that a long-term but subtle shift from current catch-and-release regulations to fewer throw-backs, without an increase in the keep limit, would have a beneficial affect on the fish populations. It is

important to the Scandinavian fishermen that the purpose of fishing be tied to "eating the catch and away from the trophy concept...away from the feeding frenzy mentality."

Water

The most ubiquitous of Isle Royale's natural resources, water served a variety of services upon which the fishermen and their families depended for their social relationships and livelihood. It was used for transportation, both to and from the mainland, to and from the fishing grounds, and to visit neighbors and relatives. Lake water was used for drinking, washing, bathing, swimming, and other domestic needs as well as for fish processing and clean up around the fish house.

Transportation routes identified by the fishermen include shipping lanes, with some areas noted as "graveyards" of shipwrecks, channels, trails to fishing grounds, Indian water trails, and Native American trade routes for copper and other minerals. These routes extended beyond Lake Superior to include the St. Lawrence River, the other Great Lakes, the entire watershed, and the ocean. Among the many wrecks of fish company boats, the fishermen recalled the ALGOMA, the Steamer AMERICA, which sank in 1928 at Washington Harbor, and the KAMLOOPS, which sank in the winter but was not found until spring. "Actually, ---'s father is the one who found the KAMLOOPS wreckage. Well, a neighbor of his [a fisherman] found the wreckage and he went and got ---'s father to help him go look around."

While the importance of this resource seems obvious, informants expressed that importance in terms that reflected relationships with it that run as deep as Lake Superior. One informant explained that the water trails or routes are important to the fisherman in the same sense that a farmer's routes to his fields are important.

> *Well, you see, when you, see there's hills in three layers back here and you get trees on one hill and as you move they'll line up and when they line up that means you can go through a certain cut in the reef. And that's things that everybody knows. I mean all the fishermen know. You come through Hopkins Harbor and pull into Wright Island and, for example, you can't turn the corner comin' into Wright's to the south until Shiverette is comin' out from behind the point or you're going to cut it too close and then you'll hit the reef. The fishermen know the routes of their fishing areas better than others' routes around the island. Everyone knows their*

own territory best. [And] they were handed down. The average person is not going to know about them.

The routes were used almost daily and often followed in the same sequence. Buoys, reefs, shallows, trees, and points of the island were used for guidance. The fishermen generally took the shortest, safest route but it depended on the size of their boat, the season, the underwater topography, and weather conditions. Discussed further in the landscape chapter, specific responses identified place-to-place connections:

[From] Crystal Cove to Rock Harbor. Routes between the docks at Edisen Fishery, the lighthouse, Star Island, Crystal Cove, and their nets out in the lake. From Edisen Fishery south and across the neck of Moskey Basin. From Crystal Cove south a bit to a mid-point on Amygdaloid Island. From Crystal Cove to the Five Finger Bay area. From Crystal Cove to Rock Harbor for ice, to go to the store, especially the kids, and to deliver fish. The trails across Moskey Basin, Amygdaloid, and Five Finger Bay were to access a land trail for berry picking.

Mainly Isle Royale to Copper Harbor, Isle Royale to Grand Portage, and Isle Royale to Grand Marais.

Blake's Point to Tobin's Harbor via Merritt's Lane. The Anderson-Mattson route from Johnson Island to Tobin's Harbor tight along the shoreline. The Gap shortcut from Amygdaloid Channel to Robinson Bay. Blake's to Tobin's for transportation and sport fishing. Anderson-Merritt for social occasions. The Gap when storms or weather was bad.

The answer seems pretty obvious. They followed routes repetitively to nets as long as that's where the nets were. Generally, they followed routes that were as direct as possible between destinations, except for skirting reefs; between homes and fishing grounds, for socializing and fishing.

Everybody basically goes the same way. Routes are all around. You always go through cuts in the reef; there's one between the buoys, between Fisherman's Home and Hay Bay. There are hills and trees that are landmarks.

To Fisherman's Home and to Wright's Island to socialize. Also, a systematic routine to check nets. The shortcut through the reef [at the end of Point Hay] to Fisherman's Home was used by Skadbergs but others avoided it.

She would stand in a deep skiff and row from her mother's house to her grandmother's and back. Her mother and grandmother would stand on their docks and watched her.

To Knife River, Minnesota, and to Lake Forbes [where we went] fishing for perch as kids.

[To] French River. The lamprey and smelt impacts on lake trout led to DNR and the commercial fishermen gathering spawn, and fertilizing eggs to help restock Lake Superior. [The] hatchery there was part of the restocking program.

To the Natural Arch on Amygdaloid Island, a keyhole. We used to go there to pick berries, sometimes with Laura and Pete Edisen. To the whole lake [Superior]. To the Indian face on the cliff at Edisen Fishery. Some of it's gone now; it's lost its chin.

Water could be both friend and foe to the fishermen. Safe harbors and protected areas, sought out for fish camps, were always in the back of the fishermen's minds as shelters from sudden storms. Protected areas, however, were not entirely safe from lake actions, particularly, seiches, which could have a real impact on a harbor.

Seiches that ran concurrent with large storms would raise and lower the water level. Hans' boat might be sitting on the bottom one minute and straining at the lines the next.

Potable water was another primary concern for the fishermen. The lake that provided transportation also provided for domestic uses. Inland bodies of water that were close to the fish camps were often stagnant and unusable.

We had water docks. We didn't take the water from the regular docks, but we drank right from the lake. So we had separate water docks where you couldn't park a boat or anything like that. The row boats used to come, the ladies come to coffee, they'd use the dock, you know. They took their water in pails from there but... and like I say they were never used by any boat with a motor. It was always somebody rowing.

One of the first things to do in the spring was to get a drink of water. The lake was most important. The harbor was only for small fish, and a source of shelter. The neighboring pond only bred mosquitos and kept moose happy.

The fishermen not only depended on the water for survival, livelihood, and social relationships, they spent most of their waking hours on or working with it. They, consequently, developed a deep understanding of it, its ways, its changes, and its behavior.

Current Conditions and Recommendations

Two pollutants were identified as negatively affecting the condition of the lake water: parasites and sediment. Several wildlife-related parasites have been identified in recent years and sediment from the inland rivers is filling some of the harbors. The water quality in these areas, consequently, is degrading through a cycle of decreased depth and current movement, and increasing temperatures favorable to parasites. While the water is not fit for drinking in many places, some fishermen continued to drink it up until the mid-1980s, and a few continue to do so today. No recommendations were made for improving the water quality.

Climate and Weather

Like the water, climate and weather present resources that the fishermen dealt with on an intimate level and on a daily basis. Their knowledge, consequently, is so much a part of them, and so obvious to them, that conscious expression of it occasionally was difficult, however, predicting weather and recognizing affects on their fish catches were two areas they frequently discussed. The fall storms typically were the worst of the year, and winds from the west and northwest tended to be the most severe. Bad weather tended to send the fish to deeper depths and reduce the catch for a few days.

> *They generally get off the seas when they can't pull nets anymore, about a 20 mph wind. They can travel in worse weather than they can fish in. The worst was a so'wester in '56; it built up big waves. They gauge storms by wave size. It shouldn't have hit Pete Edisen too hard. There was a big storm in 1905, THE big storm of Lake Superior. He and Milford Johnson were in separate boats when they got caught in a nor'wester. Milford took a lot of water but he had an 18-footer with a 5-horse and didn't take any water (ORHI 2).*

[There was a] huge storm where winds were so high we had gravel in the living room. Rocks came through the front door and flew twenty feet. We had four feet of pulp wood piled outside the door. It raised hell with the fish house. An old man from Norway had a boat, met him on the water and gave him fish; he said he'd never seen a storm as bad since he left Norway (ORHI 24).

In Washington Harbor, a bad storm took six homes. Long ago, a so'wester ran right into the bay. I think there were 30 to 35 foot waves; that was 1955-56 or so (ORHI 19).

Some boats were torn apart at Houghton Point when [they were] moored in storm; it stranded my uncle for days (ORHI 17).

Storms in the fall are treacherous (ORHI 18).

[An] equinox disturbance [can cause] high winds and waves; it can wash nets ashore (ORHI 18).

Storms kept them from getting out. Also what they called "shakers" ... the nets would get rolled up into a ball. --- set quite a few nets. The whole family was involved; that was the year his sister was born. They took out nets 300 to 360 feet long. They had everything set and had two nets setting back in the fish house. It took a couple of days to set the nets. On the way home from Rock Harbor, it started blowing from the northeast and blew for three days. They lost all the nets they set; only had the two that were left in the fish house. The only way you could prepare for it was to not set any nets but then if you're going to fish and don't set any nets, how are you going to make any money (Fieldwork 1999)?

Granddad did a self-rescue once. He was rowing from Washington Harbor to Chippewa Harbor with another fisherman for the fall herring fishery. Bad weather came up and they made for Long Island. They were trying to get the boat ashore in high seas but it swamped. They made shore but had to stay the night, dry out their clothes. In the morning, they made for Fisherman's Home and stayed there; scrapped the Chippewa Harbor idea. Spring into summer and fall, degree days, how fast the lake warmed up, directed where you fished. Declining temperatures in the fall determined when fish came in to spawn. Storms could mean lost nets and the fish in those nets. Storms might bang up the fish in the nets making them second-rate for the market. Nets would also get full of dirt and algae. Barometric changes seemed to cause the fish to disappear. Clear, moonlit nights would adversely affect the catch. Heavy storms in the fall, particularly northeast storms (Fieldwork 1999).

Northeast winds warm up the water and the fish go away. Southwest wind will chase warm water out and fish will come back. Big storms stir up the water and make it muddy and the fish leave. During a full moon, the fish leave the bottom but during a dark moon they're on the bottom. You can see the nets on a full moon. Air pressure causes fish to move to other locations, leave normal habitats but I don't know where they go. We built docks up to a comfortable working level to accommodate 10-year cycles of high-low water. In bays, lots of rain water would suppress fishing, although in the spring, the fish like the warm river water (Fieldwork 1999).

An east wind is okay but a west wind is a problem. With an east wind, you're safe with your nets but with a west or northwest wind, you're not so safe. You try to be opposite the weather with the nets. We had nets blown into the trees at Belle Isle and Cork Island once. We could see them by the red corks in the trees but there were no fish in the nets (Fieldwork 1999).

Float nets fish better when it's overcast or a new moon. Full moon known as the rubber; it was weird because they didn't get fish then. Squalls would come up suddenly; they couldn't or didn't see them; all of a sudden, a black streak over the water, in minutes a 30 mile-per-hour wind would come in over dead calm sea, usually from the southwest. One time dad was out when a squall came up and granddad and others were worried. As storm blew over, they started organizing a rescue but he showed up. It turned out that the storm had blown over him and he'd gone back to get his nets and finish the job without minding how it looked on shore (Fieldwork 1999).

They wouldn't go out on days when the barometer was falling. If there were clouds, they would get finished sooner (Fieldwork 1999).

[We had] heavy storms in the fall, particularly northeast storms. We set nets in areas sheltered from those storms, and did the same for other wind directions. If it was really bad, we might pull the nets and wait for it to blow over before re-setting them. Nets in shallow water might be pulled in the morning but reset in the evening if it looked like storm would quieten overnight (Fieldwork 1999).

They were terrible carpenters but they knew the wind. They could tell by looking out, they could tell what's gonna happen, and when this happens and, when the southwest comes in, the fog disappears, and when this, and that (Fieldwork 1999).

Dad became interested in weather and took courses in meteorology. He kept a daily diary since he was a teenager. He'd watch the weather and wind change pattern and then listen to the radio and plan. He got to be

fairly good at weather prediction. If it was ferocious weather, no one would go out. [There was] no special equipment for rough weather but they all had barometers and listen to weather forecasts. The fishery developed a barometer chart and sent as a present to all the fish suppliers. It had a wind and cloud pattern for Lake Superior and it worked moderately well. --- still has one (Fieldwork 1999).

They were guided by the sound of water on the rocks when it was foggy (Fieldwork 1999).

Thunderstorms, high winds...you stay off the water (Fieldwork 1999).

The boats, though small, were quite sea worthy. In later days, they carried a small boat behind, a row boat; didn't trust 4-c engines (Fieldwork 1999).

They didn't fish some reef areas until they were confident of good weather (Fieldwork 1999).

They would build docks up to a comfortable working level to accommodate 10-year cycles of high-low water (Fieldwork 1999).

The fishermen were good at predicting weather and usually went in when it was looking bad (Fieldwork 1999).

The fall was the most predictable (Fieldwork 1999).

They tried to tell the weather but could not "predict on this damned island (Fieldwork 1999).

The only way you could prepare for it was to not set any nets but then if you're going to fish and don't set any nets, how are you going to make any money (Fieldwork 1999)?

Long periods of cold would make a difference in the season, how long they stayed on the island or when they could come out. Drought didn't have effect. The lake level has less effect out here than at Grand Portage (Fieldwork 1999).

There was a bad storm coming in, you could see it coming, but he figured 'I can get one last net in.' And, uh, apparently he was working the point around the side from Fisherman's Home and he knew he couldn't make it back across Siskowits so he whipped around the point by Fisherman's Home and got in behind some little rock piles kind of for protection. And it was terrible, worse than he thought it was going to be. And it blew and rained and then the hail came so he emptied the fish box out, put the fish

box over his head and the hail was rappin' his knuckles so he ... and was balancin' it on his head and stood there with his arms at his sides and he said it only lasted about 15 minutes but it seemed like forever. And it finally, quit and he bailed the boat, went around the point and here comes his father full speed, well, full speed of about 9 miles an hour, and he figured for sure the kid was drowned you know and he was all excited (Fieldwork 1999).

There was one story where my grandfather got hit by lightning and knocked right to the floor of the boat, knocked him unconscious, fried the boat motor. He woke up and he'd been floatin' for a while and rowed himself behind an island and laid low until the storm passed. He was a little leery of lightning after that (Fieldwork 1999).

Usually after a thunderstorm the fish were not real active, it scared 'em down deep; I'm not sure if it was because of the lightning or because it, the currents stirred everything up and so they went down deeper where it was calm; I'm not sure what the reason was but the fishin' wasn't that great. I think they said right before a storm, the fish knew it was comin, and then after the storm, of course, they're hungry so then things were pretty good (Fieldwork 1999).

A tap on the barometer and a check to see how much dew formed overnight were the morning's first order of business, and as we were leaving the harbor, squinting into the rising sun, you would look back to see what kinds of clouds were forming over the Island to determine wind direction. Different cloud formations would predict, for example, light east wind all day or a strong southwest wind in the afternoon (Fieldwork 1999).

The fishermen's knowledge of the climate and weather conditions around Isle Royale is a product of their understanding of and relationship with the lake. They were particularly cognizant of these conditions since they were often alone on the lake and had no radios. Their very survival, as attested to in some of the preceding stories, often lay in their own hands.

Topography

The topography of Isle Royale was noted by several fishermen as being similar to their fathers' and grandfathers' homelands in Norway. Several fishermen stated that the similarities of the North Shore and Isle Royale to Norway held a particular attraction to the new immigrants (Fieldwork 1999; ORHI 83). The discussion on topographic features

is divided between those at or above the lake surface and those below the lake surface. This distinction is made based upon the format of the site interviews and the differences between the maritime and underwater landscapes discussed in the landscape chapter.

Surface Features

The many small islands that surround the main body of Isle Royale are some of the most prominent topographic features in the lives of the Scandinavian fishermen. Being interwoven with the subsurface features of reefs and channels, the islands are part of the fish habitat resource and, consequently, discussed within the fish resource section. Other surface features of particular importance or worthy of note include land trails, points of the island, rocks or rock outcrops, and minerals, particularly copper and greenstones. The fishermen's knowledge of copper focused on mine locations and trails. Since the mines and trails were known to but not frequented by the fishermen, they are discussed later as part of the "Evidence of Previous Use" section.

Greenstones have been a popular feature of Isle Royale throughout the Scandinavian fishing period. These small stones have provided many afternoons of recreational beachcombing, and in pre-park days, a token income from collectors. Some members of the fishing families were so familiar with the greenstones around the island that they could tell by the color from what part of the island they came (Fieldwork 1999; ORHI 65).

In a discussion of connections, several fishermen mentioned the lava flow that forms both Isle Royale and the Upper Peninsula of Michigan. Rocks and rock outcrops, however, tended to be discussed in terms of landmarks and guides along the water routes. Sunset Rock, Rock of Ages, the Natural Arch on Amygdaloid Island, the Indian face at Edisen Fishery, Lookout Louise, and Monument Rock were popular places to hike to for an afternoon of recreation or berry-picking. Discussion of beaches and rocky shorelines, reefs protruding from below the lake surface, and harbors reflected once again resources that were deeply intertwined in the daily lives of the fishermen. Sheltered docking areas and sloping beaches, for example, made boat maintenance easier in that the boats could be pulled out of the water at the end of the season and secured for storage and repairs.

Rock features had a variety of uses including storage, as landmarks while setting nets or navigating, and teaching new generations of fishermen.

> *Landmarks used all the time such as details of rock, treetops, rock piles, points for lining up. Used locally by a few. Navigation was by compass, watch, landmark, chart if available.*
>
> *[They were used] to teach new generations, not necessarily the children but new generations of fishermen.*
>
> *There's a cleft in a rock that was once used as a cooler for ice and butter during my father's and grandfather's days.*
>
> *[There is] a tree on the shoreline as you approach Hay Bay; they used it to avoid the shallow reef near the entrance to the bay. There was a small rock by the shore that hung out over the water; --- used to go there to look at the lake or Little Star Island.*
>
> *Sunset Rock by the radio tower on Washington Island has a nice view. [And there's a] large sand bar and glacial drift in the front yard, and a huge boulder that's flat on one side. --- had a garden there. Everyone would come here by trail or boat.*
>
> *[We] used to go there [the Natural Arch on Amygdaloid Island] to pick berries, sometimes with Laura and Pete Edisen. And the Indian face on the cliff at Edisen Fishery. Some of it's gone now, it's lost its chin.*
>
> *On the north side of Tobin's is Monument Rock. This is a striking feature, good for recreation, sunset, and viewing Sleeping Giant.*

Of the surface features mentioned, land trails are most significant to the fishermen. They were connections with neighbors and family, opportunities for recreation such as stream fishing and berry-picking, and access to work (Fieldwork 1999).

> *[There were] trails all over Washington Island, Windigo, and to Lake Desor. [They were] used for exploring, inland fishing, mining.*
>
> *From Edisen Fishery south along the channel to Moskey Basin, ending at Bangsunds. It was close and convenient; used probably a half dozen times a season. [It was] important for kids who could go visit.*

The trail from the lighthouse to Edisen Fishery, the Lake Ritchie trail, and miscellaneous trails. The lighthouse trail was used back and forth from one house to the other. The Lake Ritchie trail was used for recreational purposes, day fishing. [There were] miscellaneous trails for berry picking. And to get to work, and to maintain social relationships.

From Rock Harbor to Scoville Point; from Rock Harbor to Tobin's Harbor. There was only one before the park. From Tobin's Harbor to Lookout Louise and Monument Rock.

To Siskiwit Lake from Malone Bay and Hay Bay areas. From Chippewa to Moskey Basin and Edisen's. [It was] used a lot in winter. They might even walk up to Mott Island. From Chippewa to Edisen and Mott to visit, especially in winter when it got lonely. They'd follow moose trails to various trout streams, to access resources they needed, and for berry picking.

[They went] all over; for berry picking, to fish creeks. The trail along the creek --- fished is still there.

From Spruce Point to Schooner Island.

The fishermen's knowledge of the surface topographic features is closely tied to their knowledge of the subsurface features. The differences between these features and their knowledge of them give rise to the maritime and underwater landscapes discussed later in the landscape chapter.

Current Condition and Recommendations

Informants identified several impacts to the surface topological features. Natural erosion along the shorelines, the silting in of harbors, and unofficial tourist trails are the primary impacts on these features. Lake action along the shorelines has eroded the ends of some of the islands but, as one informant stated (Fieldwork 1999), "Islands are like that around here. I've seen them appear and disappear." Protective measures, consequently, were not proposed.

Other informants noted that the fishermen had used cribbing in the past to control shoreline erosion but most of these structures are gone now. Placement of new docks has interrupted the natural flow of sediment in some areas, which along with the lack of cribbing, has compounded the changes to some harbors. In some cases, the increased

erosion and filling in of the harbor has reduced accessibility to the point that the harbor is considered treacherous for outsiders, those who have limited experience with the area. In the case of Little Boat Harbor, the small, inner harbor is completely shut off from the lake today by a huge rock wall (Figure 4.2). It is assumed that ice action, possibly combined with a seiche, caused this blockage.

Another aspect of change to the surface features is the overgrowth of trees and understory plants. Former fish camps are becoming less desirable for habitation and informants are concerned for the negative impacts to the buildings from increased shading.

Dredging and relocation of some docks were suggested to improve the condition of the harbors with erosion problems. No management action was suggested, however, for Little Boat Harbor. Informants felt the residents of the fish camps should be allowed to care for the grounds around their homes and fish houses including thinning of new growth. This change would protect the buildings and provide more of the true character of the fish camps. Although already a management practice, renewed emphasis on using established trails was suggested as a start to reducing the unofficial trails that have appeared.

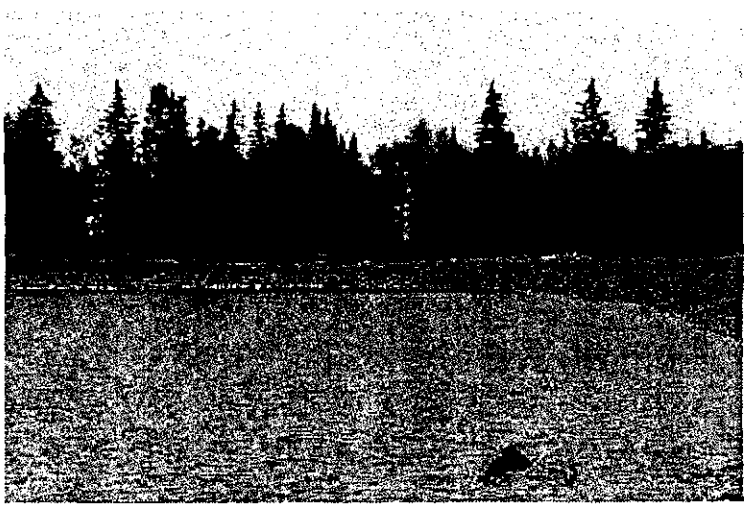


Figure 4.2 Rock wall separating outer and inner portions of Little Boat Harbor .

Subsurface Features

Much of the discussion on subsurface features has been broached in previous sections on fish and water, however, these features are a significant aspect of the fishing culture. These are the features that most influenced the fishermen's relationship with the lake and with Isle Royale.

Reefs, shallows, deep channels, narrow channels, reefs associated with small islands, bottom structures, dock cribs, and shipwrecks are the predominant subsurface features for the fishermen. Many of these areas were sought out for fishing but also avoided to a certain extent. Reefs that were known as spawning areas or having water temperatures attractive to certain fish species were favorite fishing spots. Fishermen set nets on the reefs taking care to not run up on them, and seeking out cuts in the reefs to cross them. In some areas, several of these features would combine to form a dangerous passage that might be visited for recreation or used as a shortcut. As fishermen and their descendants explained these:

> *We crossed to Belle Isle. It was kind of hard going; the north side is straight down. There are big cakes of ice in the winter (ORHI 76).*
>
> *Milford [gave up] fish[ing] at Big Todd due to tampering with his nets (ORHI 4).*
>
> *Gilbertson's Hole. It was named after one-legged man who was Johnson's father's hired hand (ORHI 4).*
>
> *Where the rocks are sticking up, you have to be careful; you don't want to wreck. Or where you can't see the bottom. Canoe Rocks is a scary, narrow, underwater cliff where water [goes] from one foot deep to 200 feet. --- used to take us up there (Fieldwork 1999).*
>
> *Each island had a small reef and deep waters, [that's] typical of the island. The underwater topo, bottom structures, reefs and associated structures, ledges [were known] (Fieldwork 1999).*
>
> *They [reefs] were sometimes a source of entertainment when someone runs up on one (Fieldwork 1999).*
>
> *McCormick Reef and Rocks are special because they have the type of bottom structure that is prime for lake trout spawning. Later in the year, whitefish also spawn [there] (Fieldwork 1999).*

Sometimes they would go to a reef about twelve miles southeast of the island for siskowit (Fieldwork 1999).

The steamer AMERICA dock which is a deep water dock and an important place for people to gather and get mail. Everyone would come here by trail or boat (Fieldwork 1999).

Some of the reefs were used as territorial markers (Fieldwork 1999).

[They would use the] Gap shortcut from Amygdaloid Channel to Robinson Bay when there were storms or the weather was bad (Fieldwork 1999).

There were some places they didn't set nets because of sport fishing, like near the resort where they took out groups fishing; Blake's Point for example. They were respecting the territory of the hotel, Tobin Harbor Resort, and Minong Lodge that was started by Gust Mattson who shifted from fishing to the hotel (Fieldwork 1999).

[They traveled] usually along the buoys or avoiding reefs and shallows. It depended on boat size, the season, underwater topography, weather conditions (Fieldwork 1999).

[They went] direct as possible between destinations, except for skirting reefs. There are all kinds of stories about the time someone hit a rock, or in the fog, or a ship that grounded here or there. [There was] a gentleman from Copper Harbor named --- who used to bring hikers, campers, and so forth. He ran a passenger ferry service from Copper Harbor over to Isle Royale. One foggy day, he had a load of boy scouts aboard and, that was prior to radar or any other aids to navigation other than a compass and a watch, and he was kind of feeling his way around looking for whatever he was looking for and the scout master became concerned and expressed his concern and --- said 'Don't worry,' he says, 'I know every rock in the lake.' And about that time the boat grounded and he says 'See, there's one of 'em now.' That's one story that's been repeated since I was a little kid (Fieldwork 1999).

The underwater world of the Scandinavian fishermen is probably the least understood or known. While informants were able to convey some sense of this world and their relationships with it, it remains the kind of world that requires investigation within the setting of actually fishing in the traditional way. This world, consequently, presents an area of future investigation of data that may soon be lost.

Current Condition and Recommendations

The impacts on subsurface features are similar to those on surface features since these are intertwined in the maritime landscape. Some areas are getting more shallow but for the most part the subsurface features continue to exist as they always have. Most of the reefs are hard rock and do not change. The sand and gravel reefs continue to shift under the influence of lake action. The condition of these features is considered to be good, based on the continuance of good spawning areas and fish habitat.

Management recommendations were limited to letting nature take its course. One informant explained (Fieldwork 1999), "I guess hands off would be my idea. Old dock cribs, sunken boats, etcetera, are part of the Island history. Look, but leave it for future generations."

Historic Resources

The fishermen's knowledge of historic resources include evidence of previous use and occupation by Indians, miners, and loggers as well as other fishermen. They have identified a logging trail at Long Point (ORHI 19), mining trails associated with the Siskowit Mine (ORHI 55), the Hay Bay area (ORHI 24), and rumored Indian burial grounds at Hill Point and near Fisherman's Home (ORHI 24). Fishermen also knew of Indian artifacts in the Hay Bay area (Fieldwork 1999) and Tobin Harbor (ORHI 55).

> *In 1929, an 86-year-old Indian told him he'd fished out of Wright's Island when he was 17 years old. He tended fire for rendering oil out of trout. They barreled the oil and a ship would come in about every three months and pick up the oil. Would bring new barrels too. Indians took some fish back for winter food. The fishery was located in a harbor near Wright's Island (ORHI 2).*

> *We went up to McCargoe's Cove up to the mines, only copper. There's places that there's silver but this was copper. And then we went up and there was a house there at that time. Well, we went through there and looked over and then we'd go in all these pits and we'd look and down in the bottom of the pits, you know, there you'd find one or two or three hammer stones. Because you know the miners they got disgusted, supposin', said ah, to heck with it and they left their hammer stones down in the hole there, you know. And there were some big hammer stones too. There were some up to 70 pounds; that was Indians. That was the Indians*

had mined Rock Harbor because we found the hammer stones and they were flattened in two ends, you know, and you could tell they was Indians there were usin' it for hammering out copper, you know. And it was mostly this here barrel copper, small stuff, you know, they didn't uh, big veins and stuff [that was] too solid they didn't bother with it (ORHI 3).

Miners used a trail from McCargoe's Cove to [Edisen Fishery] and back, kind of like a two-way highway for carrying stuff back and forth (ORHI 24).

Many fish camps were established during the American Fur Company days of the late 1830s and early 1840s. Throughout the following forty years, most fish camps were occupied by one fisherman or another, miners, and loggers. Fisherman's Home is one example of a site used by miners and fishermen over the years, although, fishermen have occupied it for over a hundred years (ORHI 17). When the major influx of Scandinavian fishermen to Isle Royale began in the 1880s, they occupied many of these sights, modifying or adding on to existing structures, and constructing new buildings and docks.

My dad built on when the COX sunk and part of it floated in there, my dad built on the, a kitchen and another bedroom on our house from lumber (Fieldwork 1999).

The dock crib design (Figure 4.3) used by many of them was specific to their knowledge and resourcefulness. Art Sivertson was known to have built almost all the docks on the island (ORHI 29).

Historic resources associated with the Scandinavian fishermen include 4th-of-July sites at Tobin Harbor and Belle Isle (ORHI 29), and at Wright's Island and Washington Harbor (Fieldwork 1999). The Rock Harbor lighthouse, recognized as an historic resource in its own right, was often used as a landmark by fishermen when they were setting their nets (Fieldwork 1999). The steamer AMERICA, a fish company boat that sank in 1928, lies within Washington Harbor where it is still considered a part of the community, as is the radio tower on Sunset Rock (Fieldwork 1999).

The steamer AMERICA dock is a deep-water dock and an important place for people to gather and get mail. Everyone would come here by trail or boat. It was really exciting. Everyone visited, particularly the women and children.



Figure 4.3 Remnant dock cribs in Chippewa Harbor.

> *The radio tower was built in 1910, five years after Marconi got the patent for radio communications. It has a spark gap transmitter which operated on broad band. [They] used it to make reservations for the resort. It's in excellent condition now with only the wooden mast being broken. It could be the last radio tower with a spark gap transmitter in the U.S. or world. I don't know if it has been nominated to the National Register. There's no interpretive sign or maintenance. It would take a minimal amount of work.*

Other historic resources include the fishermen's homes, gardens (Figure 4.4), fish houses, docks, dock cribs, capstans, net reels, nets, boats (Figure 4.5), and household items (Figure 4.6). Some of these resources, like boats and nets, were so central to the lives of the fishermen that they even named them.

> *We had many boats. Art had to name them all with "M's": the Mars, Minerva, Moonbeam, Misa. He built the Misa, which means "flat" in Finnish, about two years before he left the Island (ORHI 29).*

Every site of a former fish camp is an historic resource associated with the Scandinavian fishermen. Walking through these sites (Figure 4.7), few of which have any structural remains, family members and fishermen still detail the exact layout of structures and activities that took place. They identified areas where children played with their toys, where secret hideouts were located, and where smoke houses had been located. One of the more surprising remnants was a conifer-lined path between the locations of a former home and a fish house (Figure 4.8).



Figure 4.4 Remnant flowers from an old garden.



Figure 4.5 An old fishing boat slowly sinks into the grass of a former fish camp.



Figure 4.6 Fish boxes, sinks, pots, and boat remnants can be found throughout the island.

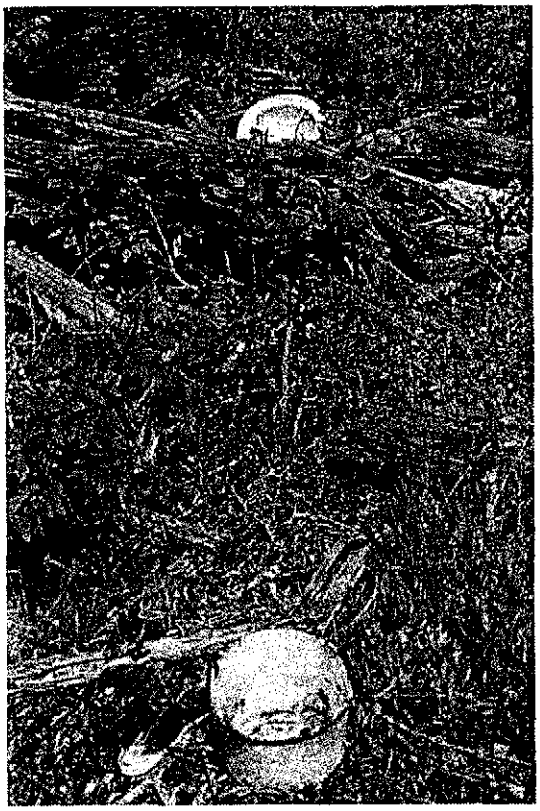


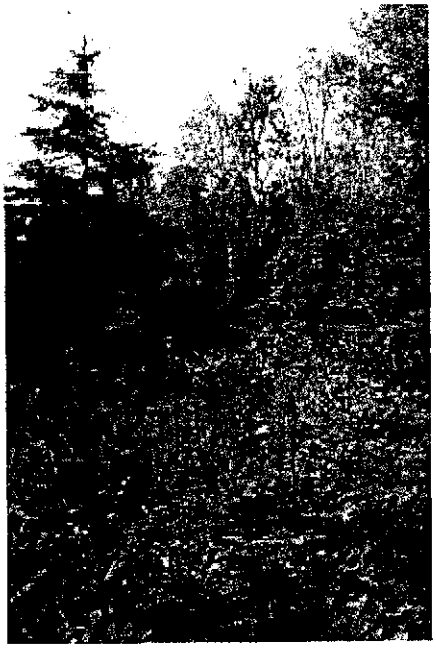


Figure 4.7 Some fish camps are still identifiable by remnant structures while others have been reclaimed by vegetation and are recognizable only to the fishing families.



Figure 4.8 Walking through the overgrowth of a bulldozed fish camp, one suddenly comes upon the path between a fisherman'' home and fish house. Given the busy life of the fishermen, this family went to considerable effort to spruce up their home.





Conservation Ethic

Several aspects of the Scandinavian fishermen's lives, both in their homelands and Isle Royale, provide the basis for understanding their conservation ethic and its apparent rapid development. Similarities of natural elements such as climate, topography above and below the lake surface, fish, and the trees attracted many of them to the area. Here they recognized familiar surroundings and room to build their lives and raise their families. They adapted quickly to the differences between the conditions and species of their homelands and Isle Royale.

Social factors also contributed to the development of a conservation ethic. As previously mentioned in the history chapter, early immigrants to the North Shore formed ethnic communities, which provided the necessary support for families to establish themselves in their new home. Many had left their homelands to find room to raise families.

> *The fjords and harbors [of Norway] are similar [as is] the fishing lifestyle, though, not the same species of fish. They brought the old ways of fishing with them which made them very successful fishing these waters. Not the language though; there was a language barrier (Fieldwork 1999).*

> *They were used to the rocky shores and islands of Sweden and Norway (Fieldwork 1999).*

> *They settled here because of the similarity to home, the general landscape, not because of the fishing. The climate, though Isle Royale winters are probably harsher. The topography in terms of islands, rocks, and trees; and the fishing style of gill nets. The language and culture were similar because there were a lot of Scandinavians in the area (Fieldwork 1999).*

> *Some came from fishing families and adapted ways to this area. Chippewa Harbor is like a fjord. Other places have long, narrow bays, easy access to fishing. [The] herring is similar, but a different species. The Norwegians adapted their fishing ways to Lake Superior waters. Norwegian was spoken at Isle Royale and along the north shore of Minnesota. It was the same for culture. Also, similar vegetation like birch, conifers (Fieldwork 1999).*

> *I have been there [Norway] but it is all rock there and a few trees. There is not a decent tree anywhere. The fishing style was different; I didn't see a gill net anywhere (Fieldwork 1999).*

I don't know if it was the terrain that made them become fishermen or they were fishermen and this is a natural place for fishermen to be. I'm not sure which came first there. Probably the climate and the terrain [held the most attraction]. It just felt like home; they just liked the area so much (Fieldwork 1999).

They used nets but they were a different kind [length, depth, mesh, cotton] and they were set differently (Fieldwork 1999).

Scandinavians stuck together when they came here because they spoke the same language. When English got tough, they fell back on Norwegian. They formed communities with the same kinds of food, same style of thinking, same work ethic. They shared what they did and what they thought; it was easier to get along and know what to expect out of others (Fieldwork 1999).

It [Isle Royale] was like coming home. They were brave people to leave land and family to come to this country. Naturally, they'd like familiar surroundings. Incidentally, I feel they left the old country to escape persecution and established homes on Isle Royale only to be persecuted by the land acquisitions for the Park (Fieldwork 1999).

While Isle Royale and Lake Superior present a remote, sparse lifestyle, they also present a dynamic system within which the Scandinavian fishermen and their families were comfortable and secure. As the fishermen and their families settled in to their new lives on Isle Royale, they relied on each other in ways that reflected the customs of their homelands. They shared the hardships of island life and Lake Superior, aspects of the work involved with fishing and processing, natural resources, and social activities. Such a level of shared lives further supported the development of a conservation ethic in that it indicated an intent to stay, to set down roots, and to pass on their ways to their children and grandchildren.

Fishing areas were first come, first served but pretty much shared; some home areas separate, didn't share. Otherwise, people shared all the time. Bachelors and families shared fishing areas when they were short-handed. Folks shared meat they couldn't use (Fieldwork 1999).

There's so many things to occupy your mind. Your, your mind is on your work and I don't know, it just seems like there's always something different (Myrtle Johnson, NPS 1976).

The conservation ethic of the Scandinavian fishermen was so much a part of the lifestyle that informants' comments were quite detailed. They recognized practices that were conservation oriented and those that were not. Overall, those fishermen who stayed for any length of time developed the strongest ethics toward appropriate natural resource use.

> *Fishermen of my knowledge were "environmentally friendly." As fish became more plentiful, SOME fishermen put out more nets than they could process. The fish would be in the water – shallow water in late summer was the worst – two or more nights and the fish would be rotten. At such times, the nets, fish and all, were thrown into the woods. My father disapproved of this and did not do it. I did not see waste, cruelty to animals, or deliberate destruction of the environment in my family. We used pulp logs, drifted from rafts onto the beach, for firewood and even building materials were recycled. I believe that some fishermen appreciated and valued Isle Royale for its beauty and because of this, returned there long after it was profitable as a fishing ground. My parents worked for three years as caretakers of a park because Isle Royale simply had no fish – due to the lamprey eel. As soon as they obtained social security, they quit their jobs and went to Isle Royale where they remained until my father died there (Fieldwork 1999).*

> *I would like to suggest that the environmental ethic that you propose is due to the role that the environment played in the lives of the Isle Royale fisher folk. The environment controlled their lives and livelihood – one becomes an intimate part of the environment. For example, during my last interview with Nieves and Rebecca I asked them if they didn't "feel" Tobins Harbor when we returned from our tour on the north-side. That "feel" for the environment of Tobins, a subtle change in smell and temperature, is part of me and tells me I'm home. And does so on perfect days like we had or when navigating in dense fog. Fisher folk respected their environment, which included the lake, the land, the air, and the natural resources. Not like present day protection-at-all-cost-environmentalists but as an environment that they were a part of (Fieldwork 1999).*

> *The greatest negative impact on the Isle Royale fishery, during my time, was a whole lake event related to the lamprey-smelt "invasion" of Lake Superior. This occurred near the end of my father's fishing and was a factor in my decision not to continue the family fishing tradition (Fieldwork 1999).*

Four and three quarter inch mesh was widely used in spring and early summer. Fall mesh sizes went to 6", 6 1/2", 6 3/4", and up to 8". Dad went from 4 3/4" mesh nest to 5 1/4" mesh in order to let the fish mature toward spawning age before being netted. As the trout dwindled off due to lampreys and possibly smelt, Dad concentrated more on herring and whitefish. He quit hooklines feeling that taking herring for bait was a waste of resources. He used crankcase oil, kerosene and mixed them with a light creosote to preserve net reels and their supports from carpenter ants. He went from cedar corks to aluminum to plastic to save drying time and linseed oil (Fieldwork 1999).

My father brought the trout eggs, after fertilizing them, to the French River Hatchery to replace what he caught in his nets. He was a commercial fisherman from the early '20s to the late '40s (Fieldwork 1999).

I don't remember a negative impact on the fishery directly related to our activities and perhaps that's due to a conservation ethic already in place by my time. This would be reflected in nets spread over a relatively large area, not over fishing one part of the area, and tending the nets on schedule to avoid wasted fish due to spoilage in the water. In addition, they recognized that they were harvesting a limited resource and were active participants in a State of Minnesota Fish Hatchery program to obtain trout and whitefish eggs for shipment to hatcheries. Don't know if the State of Michigan was also part of the program. I remember as a youth the large cases (roughly 3'x3'x4' high) with fine mesh trays that we would fill with fish eggs. Eggs would be stripped from the "ripe" females and my task as a kid was to keep the eggs fluid on the trays until the case was filled and sent on the boat back to the mainland. The only major change in our operation, that I know of, was from fishing deep-water siskowit lake trout south of the Island to more shallow water lean lake trout in near shore areas. This change was probably more a manpower and economic (better market price) driven decision than due to a negative impact on the deep-water resource (Fieldwork 1999).

CHAPTER FIVE
CULTURAL PLACES OF THE SCANDINAVIAN FOLK FISHERS OF ISLE ROYALE

Many interviews, conducted with Isle Royale folk fishermen over the years, can be found in the Oral History tape collection and library at the Isle Royale and Houghton, Michigan offices of the NPS (Cochrane 1979, 1980, 1982, 1987a, 1987b, 1987c; Holte 1984; Little 1978; Oikarinen 1979; Rakestraw 1967a, 1967b, 1968). While these describe a life of fishing from and living on Isle Royale, the data was not recorded with a consistent systematic method (such as the same set of questions), nor do the efforts appear to have been for purposes other than archiving historical information. The systematic collection of data in the summer of 1999, following the strategy discussed in Chapter Two, provides a basis for comparison as well as mutual substantiation of the folk fishing culture documented in the historic and contemporary interviews.

From that effort, three types of places, defined by primary function, were identified as being common to the Scandinavian folk fishing culture: the fish camp, the fishing grounds, and recreational areas. These places correlate with the cultural landscape characterization that follows in Chapter Six. The site descriptions in this chapter, consequently, focus on site-specific characteristics and uses rather than connections and relationships. The descriptions, based solely on the 1999 data, consistently reflect similar characteristics and uses as well as the oral tradition of the Scandinavian fishing families.

The fish camps can be characterized as small clearings adjacent to the shoreline of a sheltered harbor or cove. Several kinds of buildings and structures were erected at each site. Depending on whether the site was occupied by bachelors, single families, or families with hired hands, these buildings included a main house, fish house, net house, net reels, docks and cribs, small flower and/or vegetable gardens, and sleeping cabins.

The activities most common to the fish camps were living, fishing, gathering plants for food and construction, and, historically, occasional hunting (Table 5.1 and Figure 5.1). Several camps were popular sites for Fourth of July celebrations including the Edisen Fishery, Fisherman's Home, Hay Bay, Johnson Island, Chippewa Harbor, Tobin Harbor, Washington Island, and Wright's Island.

Common Uses at Twelve Scandinavian Fish Camps	Female	Male	Total*
Living	3	21	24
Hunting		11	11
Fishing	3	21	24
Gathering Food	2	16	18
Camping		3	3
Ceremony/celebration	1	10	11

** Responses are consolidated for all twelve sites.*

Table 5.1 Why or for what purpose would fishermen use this place?

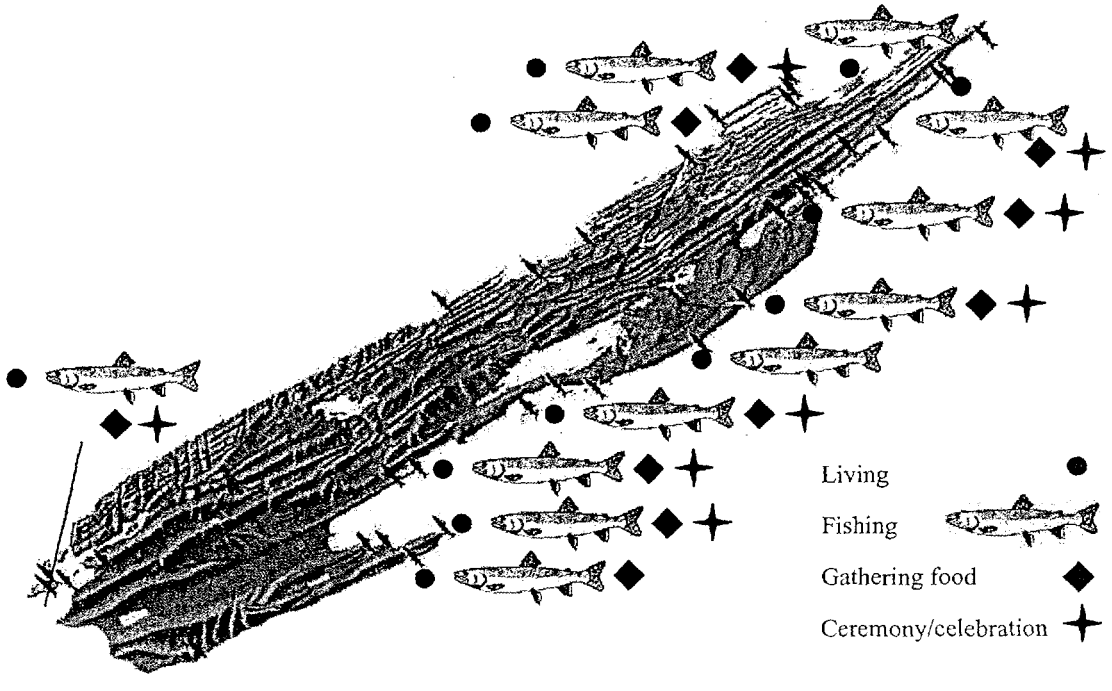


Figure 5.1 Activities common to Scandinavian folk fishing camps.

The fish camps provided an area for living, small-scale socializing and recreating, and activities associated with the business of fishing. In the morning, the sites served as staging areas for venturing into the dark, cold waters of Lake Superior and, upon the

fishermen's return at midday to early afternoon, as processing and marketing sites. Processing involved cleaning the fish, followed by salting, icing, or smoking to prepare them for shipping to the mainland. Building and equipment maintenance and repair, including net cleaning and mending, filled the time between fishing and processing.

The fishing areas were comprised of reefs and deep waters. Hooklines and gill nets were used at different times of the year in these areas as fishermen pursued herring, lake trout, whitefish, and, occasionally, siskowit. Generally speaking, they fished for lake trout from the spring through fall, whitefish in the fall, herring in the spring and fall, and siskowit in the summer. Summer catches might also include small herring for bait and some trout. Gill nets of varying mesh size were used for all four species but hooklines were used primarily with herring for lake trout.

Recreational areas were used for picnicking, berry picking, stream fishing, rock hunting, hiking to scenic vantage points, and Fourth of July celebrations. Many of these areas were natural, undeveloped habitats found on the Island. Fourth of July celebrations, however, were usually at one of the fish camps with more open space to accommodate the games, races, and other activities.

The twelve sites at which interviews were held in the summer of 1999 – Edisen Fishery, Fisherman's Home, Hay Bay, Johnson Island, Johnson's Resort, Little Boat Harbor, Scotland-Anderson, Star Island, Tobin Harbor, Vodrey Harbor, Washington Island, Wright's Island (Figure 5.2) – were characterized as having all three functional areas, and, for the most part, the same uses. Specific resources discussed include plants, animals, water, fish, evidence of previous occupation or use, surface and subsurface geological features. Evidence of previous occupation or use generally refers to any of a variety of constructions associated with Scandinavian fish camps. It may include physical or archaeological artifacts associated with these constructions, and/or Native American artifacts.

Based on the following descriptions, each site is a fish camp with a safe harbor, associated fishing grounds bounded by island points and/or reefs, productive reef systems, deep waters, and nearby berry patches. These sites are representative of the Scandinavian folk fishing camp and what one could expect to find at any of the locations of other former fish camps.

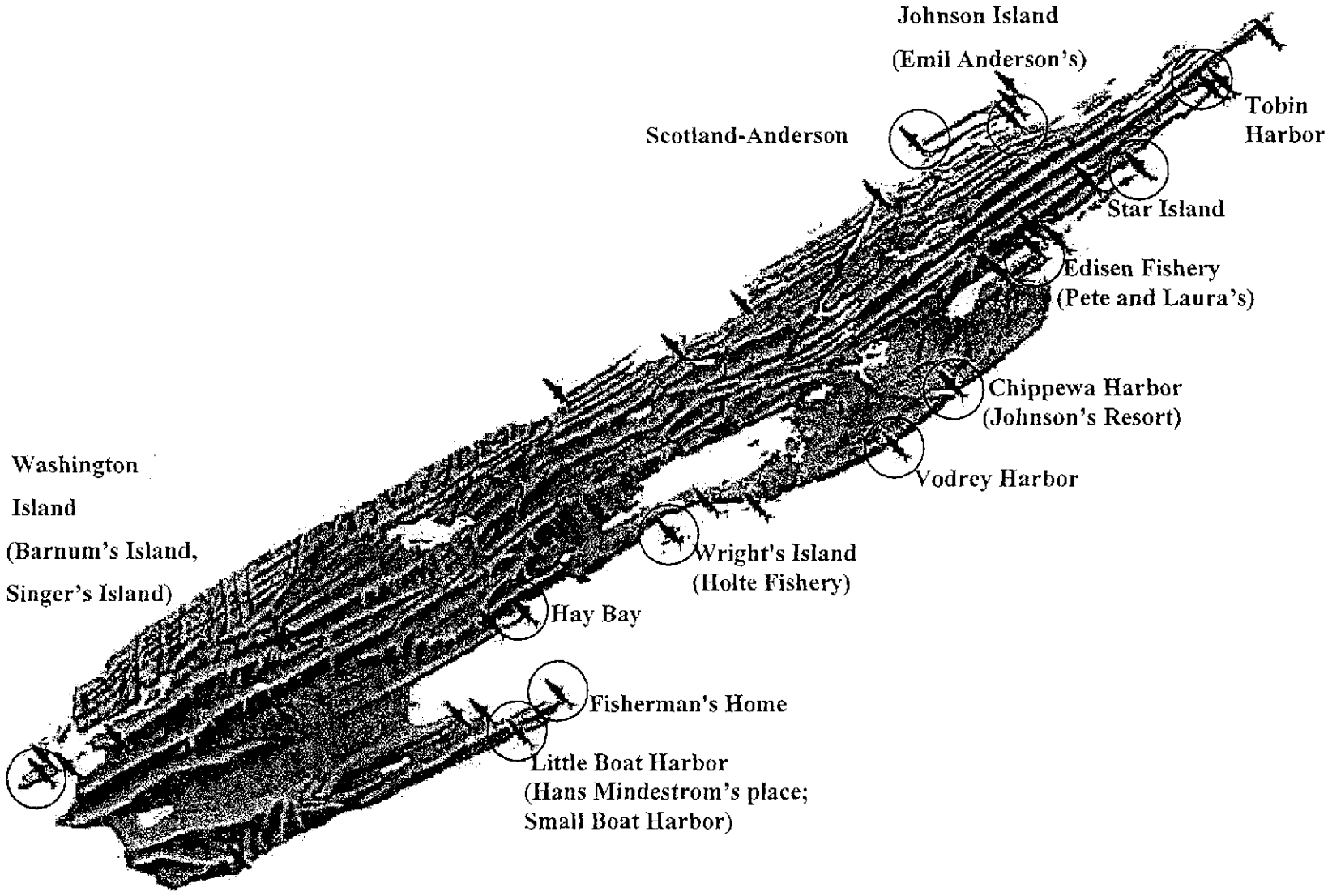


Figure 5.2 Fish camps visited for the site interviews.

On-Site Fish Camp Descriptions

Edisen Fishery

The Edisen Fishery is a historic folk fish camp located at the south end of Rock Harbor (Figure 5.3 and 5.4). Having received National Register recognition, it stands as representative of the Scandinavian fishing history of Isle Royale. Named for its last fisherman, Pete Edisen, the site contains the only on-fish-camp-site interpretive center. Other fishermen and their families had used the camp before Pete and his wife Laura. Louis Mattson and John Anderson fished there from around 1890 through 1904. In 1905, they sold their buildings and docks to Mike Johnson and his family. They had adopted Laura so when the Johnson families relocated to Star Island in 1938, Pete and Laura took over the fish camp. From Mattson-Anderson fishery to Johnson fishery, this site came to be known among fishermen as Pete's and Laura's, and Pete Edisen's place.

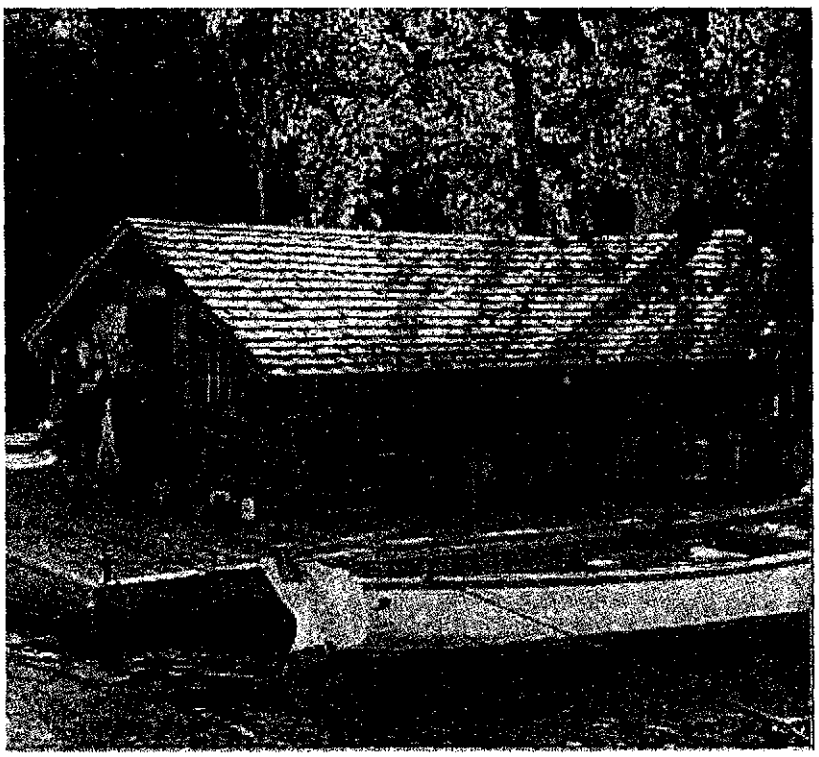
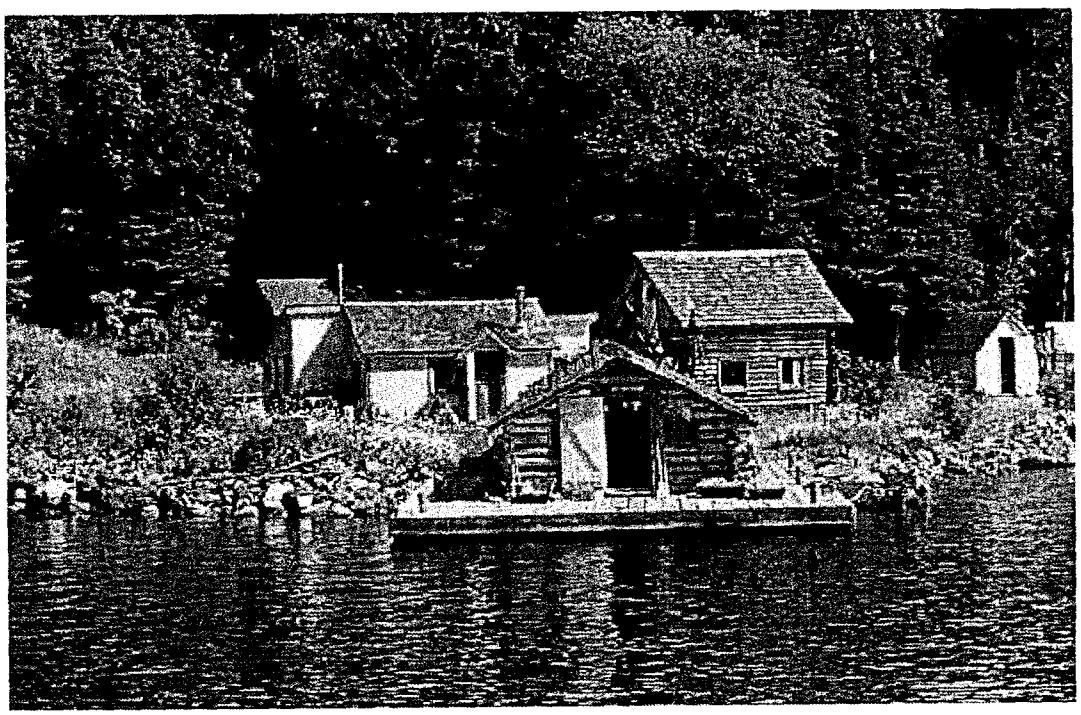


Figure 5.3 Pete and Laura Edisen at their fish house.



Figure 5.4 The Edisen Fishery – then and now.



The Edisen Fishery extends from a small bay at the mouth of the channel to Moskey Basin to an area bounded by the Rock Harbor lighthouse, Middle Islands, and Greenstone Ridge across the channel. The site includes a land base surrounding Pete's and Laura's buildings, the Rock Harbor lighthouse, and the area between the two establishments. The fish camp structures include the main house, the fish house and dock, a variety of outbuildings, and the Rock Harbor lighthouse.

The site provided ideal conditions for a resident fish camp. Although living on-site and fishing were the primary activities, some mining activity had occurred. The surrounding land-lake interface provided habitat for all three marketable fish species: lake trout, whitefish, and herring. The area historically had provided a variety of wildlife and plants, particularly moose and blueberries, of which the fishermen and their families would make occasional use. The Greenstone Ridge just above the Edisen Fishery was known to the fishing families as having the first ripe blueberries of the season. The abundance of the area favored more long-term use than simple, seasonal camps and its location resulted in it being a gathering place for fishing families to hold their Fourth-of-July celebrations.

Specific features of the area that contributed to the historic activities of the fishing families are both land and lake based. The buildings front on a protected harbor that provide safe refuge from the storms that characteristically churn Lake Superior and threaten the lives of anyone caught on open water. The reef structure and a good lake bottom provide ideal habitats for lake trout, herring, and whitefish.

Located at the south end of Rock Harbor and with immediate access to the lake, the Edisen Fishery is adjacent to one the longest-used water routes in the Island's history and has always received many visitors. It is connected, consequently, to other places on the Island through family relations, but particularly to Star Island near the midpoint of Rock Harbor where the Johnson families moved in 1938.

It is ironic that the location actually contributed to that move. By the 1950s, the sport fishing pressure had increased to a level that motivated the Park Service to reduce the number of "commercial" fishing nets. In spite of the Johnsons' tenure at the Edisen Fishery, they did not hold title it and had to yield to the Park Service's decision. Pete and Laura remained at the site presumably in a cooperative arrangement with the Park

Service to act as demonstrators of a functioning fish camp for the visiting public. The Edisens also supplied the Rock Harbor Lodge with fresh fish for its guests. The couple continued to live and fish from the site under this arrangement until they died.

Informants described the Edisen Fishery as being in generally good condition. The site features discussed for the purpose of evaluation include water, plants, animals, fish, evidence of previous occupation or use, and geologic features above and below the water level (Table 5.2).

Overall	Good
Water	Fair to Excellent
Plants	Good
Animals	Good
Fish	Good to Excellent
Evidence of Previous Occupation	Good
Geologic Features	Excellent
Subsurface Features	Excellent

Table 5.2 Informants' condition ratings for the Edisen Fishery.

Historically, the lake water was used for drinking, various domestic needs, fish processing, and transportation. Although it is no longer recommended to drink the lake water, informants felt the condition of the water was fair to excellent. Although informants identified the primary contributor to the decline in water condition as a parasite carried by moose in the area, they did not believe it to be as much of a problem as it was a few years ago.

Plant use in the Edisen Fishery area focused on a large blueberry patch near the Greenstone Ridge. Being the first to ripen and providing such a good supply of berries early in the season, the patch was popular with family members and friends who ate or prepared the berries in various ways. Informants evaluated the berries as being in good condition although moose browse the area and there is some competition from old growth hardwoods and thimbleberries.

Animal use in the area was limited but focused on moose. Those fishing families who wintered on the Island occasionally took a moose when supplies were low. It was not uncommon for two or more families to share a moose during such times. Informants

evaluated the condition of the moose as good and not being affected by anything at present.

The target fish species through the Island waters were lake trout, herring, and whitefish. These were used both for food for the fishing families and as their economic livelihood. Informants evaluated these species as being in good to excellent condition with nothing threatening their condition.

Informants identified the Rock Harbor Lighthouse and other buildings on the site for evidence of previous occupation or use. These buildings provided habitation for several families over the years and remain in good condition. Informants felt the restoration workmanship was good, although it didn't completely replicate the original structures but the discrepancies were "things only a fisherman would notice." They also noted the age of the buildings was having some impact on the overall condition. Informants included the interpretive program for the site in their discussion of the condition of the buildings and felt it did a good job on the fishing history of the site.

The harbor and point are the surface geologic features of the site that informants identified for evaluation. The uses of the harbor were for shelter and as a home site. The point was used as a territorial marker. The condition of these features is excellent with nothing affecting them.

The reefs are the subsurface geologic features of the site identified by informants. The primary use of the reefs was natural by design as these were excellent fish habitat and targeted by fishermen for use. The reefs are in excellent condition with nothing affecting them.

Informants identified the overall condition of the site as good. While nothing is affecting the condition of the site at present, informants noted that a potential threat to the site is the National Park Service which informants feel could change the function site at any time. Informants made several recommendations for protecting individual features and the site. Changing the site back to a "commercial" fishery was recommended to protection of the buildings, the lighthouse, the reefs, and the site as a whole. The interpretive program was implicated as protecting the site at present. Establishing trails was suggested as a possible way to further protect the site. No recommendations were offered for protecting the water, plants, animals, fish, or surface geologic features.

Although the site has been retired from active "commercial" fishing, informants indicated that it remained important to them and their families. While recommendation was made to return the site to an active fishery, informants felt that being able to visit the site was desirable because the place was still home for the fishing families of Isle Royale.

Fisherman's Home

Tucked inside a quiet harbor just south of Point Houghton lies the fish camp called Fisherman's Home, also known as Fisherman's Cove. The harbor is a long, narrow bay with shallow pebble reefs and warm water. It extends along the island-side shoreline of the peninsula that ends as Point Houghton. As with the other fish camps, Fisherman's Home begins as a small land base with several buildings, including a main house, living quarters, net house, and fish house, and docks (Figure 5.5). It extends this nucleus to include the surrounding shoreline and the fishing area associated with the camp (Figure 5.6). These waters extend as far south as McCormick Reef, northeastward to Paul Islands, then into the middle of Siskiwit Bay, back to Francis Point, and back to a half mile from the south shore of the peninsula. Geographically, the site is distinguished by mature sandstone of Houghton and Feldtmann Ridges unlike the rest of the basaltic island. The chain of islands and associated reef structures, the well-sheltered harbor and its water, and the good fishing early in the year - a result of the combination of the reefs and warm water - contributed to a long-lived, successful fish camp.

During the Scandinavian period of fishing the Island, the camp was used first by E.T. Seglem, then by Andrew Rude. Tom Eckel, Sr. used the site briefly before Willie Williamson, Sr., the son-in-law of Andrew Rude, took it over for three to four years. Andrew's son Sam was then next resident fisherman. When Sam died, his son Mark maintained the family fishery for his mother who held the family's assessment permit.

The variety of habitats in the area supported moose and geese populations that historically may have supplemented the family larder. The fishermen and their families also made use of the blueberries that grew along the ridges south and west of the main site. The reef system, in combination with the warm water, supported an extremely productive fishery known for its early season. During the heyday of "commercial" fishing, the sheltered areas and nearby communities supported seasonal camping as well.

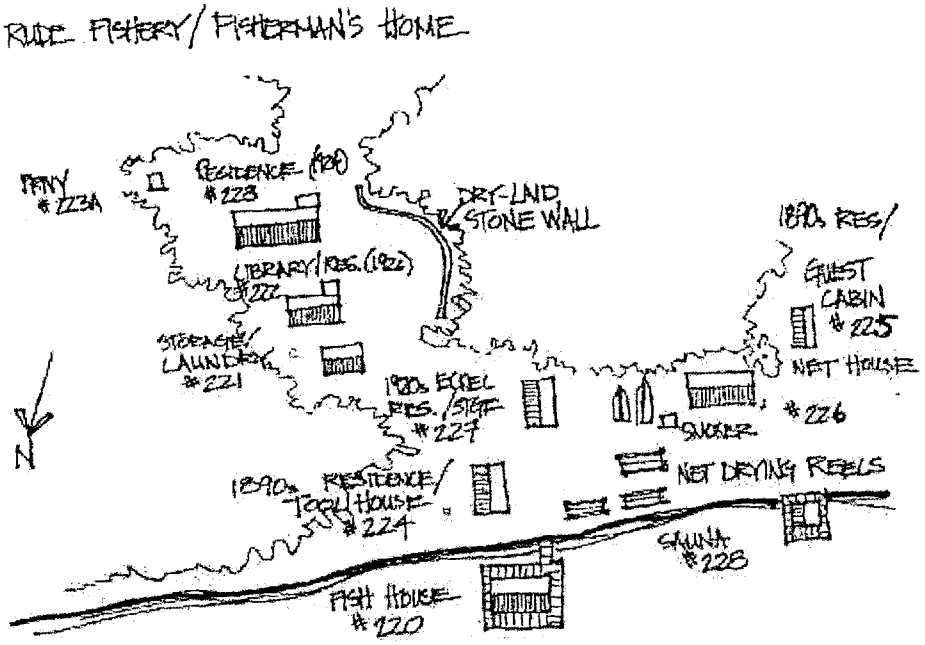


Figure 5.5 Layout of Fisherman's Home by Dena Sanford 1995, in Franks and Alanen (1999:74).

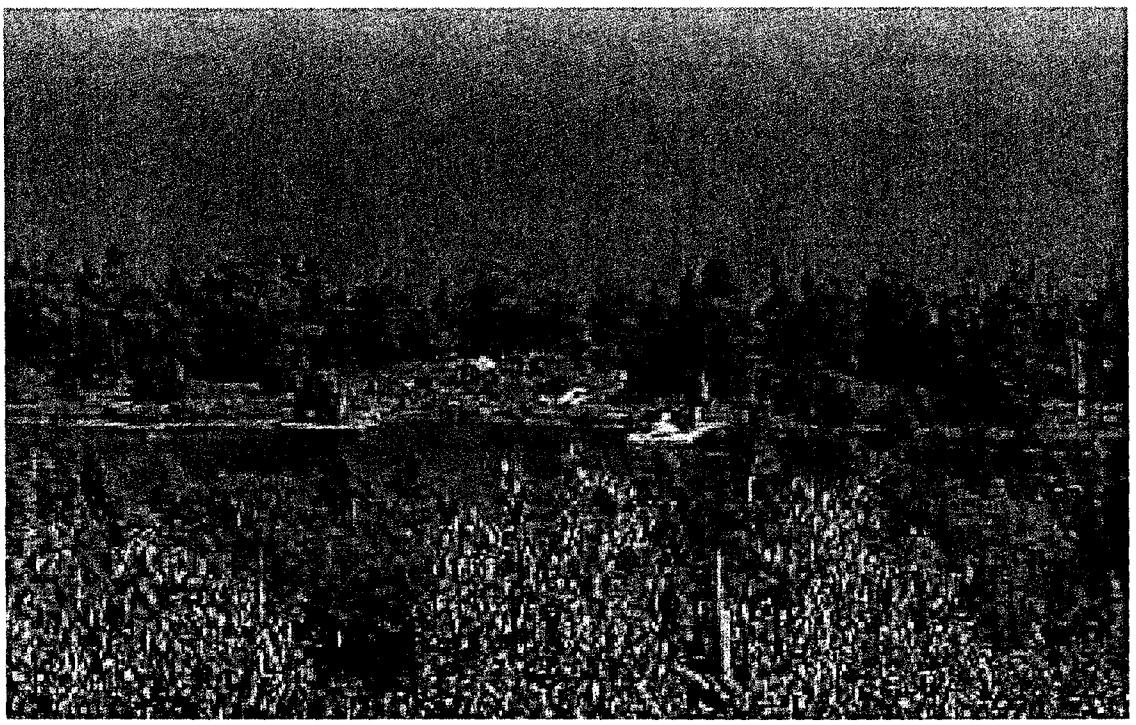


Figure 5.6 Fisherman's Home.

Although Fisherman's Home is near one of the longest used water routes, it was distant enough to not have the visitor pressure of the Edisen Fishery. The few trails around the site were made by wildlife and were used by people primarily for plant gathering purposes. A particular exception was a trail between Fisherman's Home and Little Boat Harbor, which is a small cove about a mile south, which was used frequently by Hans Mindestrom, the fisherman at Little Boat Harbor.

The location of Fisherman's Home provides an interesting mix of isolation and social access. Until the mid-1940s, many of the fishermen of Isle Royale were limited in their mobility to rough trails, sails and oars, and inboard or outboard powerboats that topped out at seven to eight miles-per-hour. With the exception of the 4th of July, relationships between fish camps were constrained by these conditions and the busy fishing seasons.

Informants described specific features of Fisherman's Home as ranging from poor to excellent condition, and the overall place as being in fair condition (Table 5.3). The water from the lake and harbor were used for drinking and other household needs. Historically, it was so clear, clean, and uncontaminated that an early spring ritual was to get a drink from the harbor. Informants still considered the water to be in excellent condition although they knew of contamination problems elsewhere around the Island.

Overall	Good
Water	Excellent
Plants	Fair to Excellent
Animals	Fair
Fish	Good to Excellent
Evidence of Previous Occupation	Poor to Excellent
Geologic Features	Good
Subsurface Features	Fair to Excellent

Table 5.3 Informants' condition ratings for Fisherman's Home.

The plants identified with this site include berries, driftwood, spruce, balsam, and cedar. Berries were picked and eaten while the different woods were used for dock stringers, cabins and framing, buoy pulls, and cedar floats. Spruce pitch was used medicinally for wounds.

Informants rated various plants from fair to excellent condition. The cedar and spruce are considered to be in excellent condition, but balsam fir and birch are in poor condition. The aspen are in poor to fair condition at the lower elevations but are "holding their own" at higher elevations. Informants expressed concern about the fire hazard of accumulating dead wood which was due to people no longer being allowed to "clean the wood," and there was no spraying for worms that were killing some of the trees. Another impact that was noted was the changing composition of the tree species. Beaver are taking the birch, mountain ash is on the decline from moose browsing, and the spruce are displacing deciduous trees at the lower elevations, particularly the birch where a tornado took some rather large birch out a few years back. With the added impacts from the beaver, the spruce trees are rapidly replacing the birch.

Some food use was made of animals at Fisherman's Home. Historically, rabbits, seagull eggs, and moose were eaten. Informants rated the animals as being in fair condition as a result of sickness due to over-population, and lack of management.

The fish used at Fisherman's Home were whitefish, lake trout, and some herring. These species were sources of food, medicine, and economic livelihood. The fishing was noted as being particularly good early in the year. Burbot liver was used as a local cure-all and substitute for cod liver oil. Informants rated the lake trout in excellent condition, and the whitefish and herring in good condition. Their condition is better than before the lamprey crisis of the 1950s although current fishing regulations make it impossible to make a living anymore. Informants feel the lake trout stocks are as healthy and viable as they were in the 1930s although there are signs of new impacts from sea lamprey and cormorants. The increase in cormorants in recent years has resulted in reduced catches, particularly of herring. Recently, sport fishermen have noticed fresh lamprey scars on the lake trout, something the informants noticed in the 1980s. These occurrences indicate fresh hatches of lamprey and a weakness in the lamprey control program. On the positive side, the smelt impact on trout young is diminishing, and there are no over-fishing or pollutant problems.

Evidence of previous occupation or use of Fisherman's Home was identified as the Seglem family homestead, which included numerous buildings. Used as a residence and for camping, this place was occupied by Seglem from the late 1800s to the 1930s.

From the 1920s to the present, the Rude family occupied the site during the fishing season. The Seglem-Rude overlap reflects a period during which a hired hand 'inherited' the fishery. The cabin the Rude family lived in was built in 1924 by Tom Eckel, Sr. Willie Williamson, Andrew Rude's son-in-law, fished with Andrew during this period. Informants gave mixed rating from poor to excellent condition with some structures serviceable but others in decline due to a lack of management.

The surface geologic features evaluated by the informants were the rocky shores and harbor. The uses of these features included teaching new generations of fishermen – not necessarily the fishermens' children, as territorial markers, and as materials for docks and homes. Informants rated these features as being in good condition although changes are occurring as a result of the large birch trees lost during a tornado. Erosion from that area is filling in the harbor with sand and gravel. The site is not as accessible as it once was and navigating into the harbor is treacherous. Informants also noted that although the harbor is deteriorating, it still provides good protection from the weather.

The sub-surface geologic features evaluated by informants included pebble reefs, associated bottom structures and ledges, and shallow water. The areas of McCormick's Reef and Frances Point were included in this evaluation. These features were used as territorial markers and for fishing. These features also provided some of the best spawning grounds for lake trout and whitefish, and good early fishing. Informants rated these features as fair to excellent condition. As far as impacts to these features, informants believed the water is shallower than in previous times, and that algae growth, seaweed, and moss continue to have some affect on the reefs.

Informants rated the overall site in fair condition noting building condition as a primary concern. Normal deterioration from weathering and a lack of maintenance are the primary causes of the degrading conditions. Privately occupied places, such as Fisherman's Home, are carried for by the fishermen to a certain extent. The short-term nature of the fishermen's use of these places discourages much upkeep. It is not uncommon for maintenance and upkeep to come from volunteered materials and labor from friends.

The recommendations for protecting the features and the site were quite specific. The recommendations for protecting the water source included autonomous use by a

fishing family who could restore and continue the historic use. The current goal of the National Park Service's General Management Plan to develop the site as a campground was not supported although some limited, well-managed harmonious use by a few people might be provide adequate protection.

Recommendations for protecting the plants included wildlife management that targeted the beaver and moose, and cutting or clearing the spruce that are growing up among the buildings. Informants felt that most of the plant problems were due predominantly to natural processes and were best left alone.

Recommendations were not made for animals in the area but were made for the fish. Informants recommended on-going monitoring of the sea lamprey which have two spawning areas in Siskiwit Bay. They also recommended poisoning, or somehow removing, the cormorants.

Some recommendations extended outside the Park Service including "prudent game management policies for sport fishing, and a new more comprehensive assessment program that investigates genetics and subspecies." Informants had concern about the impact of the annual sport catch from Isle Royale's water to the fishery, an estimated 40,000 to 60,000 fish. Specific recommendations included a long-term, subtle shift from current catch-and-release to fewer throw-back with no increase in the keep limit. Informants felt it was important to tie fishing to the purpose of eating the catch and away from the trophy concept, a move that would "get away from the feeding frenzy mentality."

Informants recommended proper maintenance of historic buildings for the Seglem homestead and other buildings at Fisherman's Home. They recognize that it will not take many more years before it will be too late to protect these places.

The recommendations for protecting the harbor reflected mixed feelings about use and protection of Fisherman's Home. Ideally, the gravel bar in the harbor would be rebuilt to its condition before the birch trees were ripped out, and the channel would be reestablished. A continuation of the traditional use of Fisherman's Home and assessment fishing were recommended as the best protection measures, possibly through a cooperative arrangement with the Park Service. No recommendations were offered for

protecting the sub-surface features. Informants felt the reefs and related structures were best left to Mother Nature's management.

Informants recommended National Register protection for Fisherman's Home. They believe several buildings should qualify for historic preservation and should be nominated. They also recommended stabilizing and upgrading the structures to their original condition, possibly through a cooperative arrangement of management for autonomous use. The common desire voiced by informants was that the traditional ways of the Scandinavian fishing families afforded greater protection of and enhancement to the natural and cultural resources of Isle Royale. Their children care about these places and the surviving fishermen are an important part of the cultural heritage of the Island. Informants noted that "there are a significant number of visitors whose high point of their visit to Isle Royale is talking with former fishermen."

Hay Bay

Tucked into the western shore of Siskiwit Bay is a long, narrow cove that was home to several fishing camps including Sivert Anderson, Ed Kvalvick, Albert Bjorvek, and John Skadberg (Figure 5.7 and 5.8). Known as Hay Bay, the well-protected cove extends from Hay Bay Point to the confluence of Siskiwit River at the south end of the bay. The Kvalvicks lived across the bay from the Skadbergs, who were the last ones to use the area, which the American Fur Company first used as a fish camp in the 1830s. Everyone who lived there later also used their places as fishing camps.

Informants' descriptions of the area include the approximate 12 miles to the headwaters of the river, the middle grounds of Siskiwit Bay as bounded along a line from Point Houghton to Rabbit Island (also known as Long Island), and then to the squared-off point on the main island known as Spruce Point. These boundaries reflect the traditional fishing grounds of John Skadberg who came to Hay Bay at a time when the area was crowded with other Scandinavian fishermen. As fishermen maneuvered for fishing areas, Skadberg shifted from Malone Bay south into Siskiwit Bay and settled on Finn Point, a spur on the west shore of Hay Bay near the south end. Here, he built a one-room cabin that, over the years, grew with his family.

The rocks, trees, and water of Hay Bay – the basic elements of the fisherman's landscape on Isle Royale – form "one of the prettiest spots on the Island." The dramatic heave of the angled rocks and ridges, the way the vegetation grows down to the waterline, the moose, and the variety of activities for which the bay is so ideal characterize informants' vision of the place. Within these descriptors lie the feelings informants have for a bulldozed, overgrown place that retains many physical and emotional traces of home whether or not they ever lived there.

As another Scandinavian fish camp, the primary use of Hay Bay was as a residential base from which to fish. The Skadberg family, however, found a variety of things to do including fishing for brook trout in the river and lake trout in the bay, picking blueberries, swimming in the shallow water where the bottom was sandy, and picking agates on the beaches. Swimming was a particular treat since the weather tends to be warmer in the bay than at Fisherman's Home.

As a long, protected bay, Hay Bay provided a home, a safe haven from storms. The lack of waves reduced dock maintenance and the surrounding hills kept the winds down. While most fishing families returned to the Minnesota North Shore in the winter, the Skadberg family lived at Hay Bay year round until 1943. The area provided shelter for a residence, camping, and 4th of July celebrations, food in the form of wildlife, fish, and plants, and recreational fishing in the river.

Moose, the primary wildlife species, were an occasional source of meat during the winters. The swamp surrounding the river confluence, the shallow bay, and the surrounding hillsides yielded a variety of plant foods for wildlife and people including blueberries, chokecherries, gooseberries, raspberries, and clams. A good clam chowder could be made from as few as a dozen clams. Sea gull eggs were gathered in the spring to make pancakes but had these were selected with care by "marking all the eggs in a half dozen nests, then going back to collect the unmarked eggs which were the fresh ones."

Brook trout could be found in the river while lake trout occupied the nearby rock reefs. Two kinds of lake trout could be found in the area: redfin, which spawn around September 20th, and "regular" trout, which began spawning around October 10th.

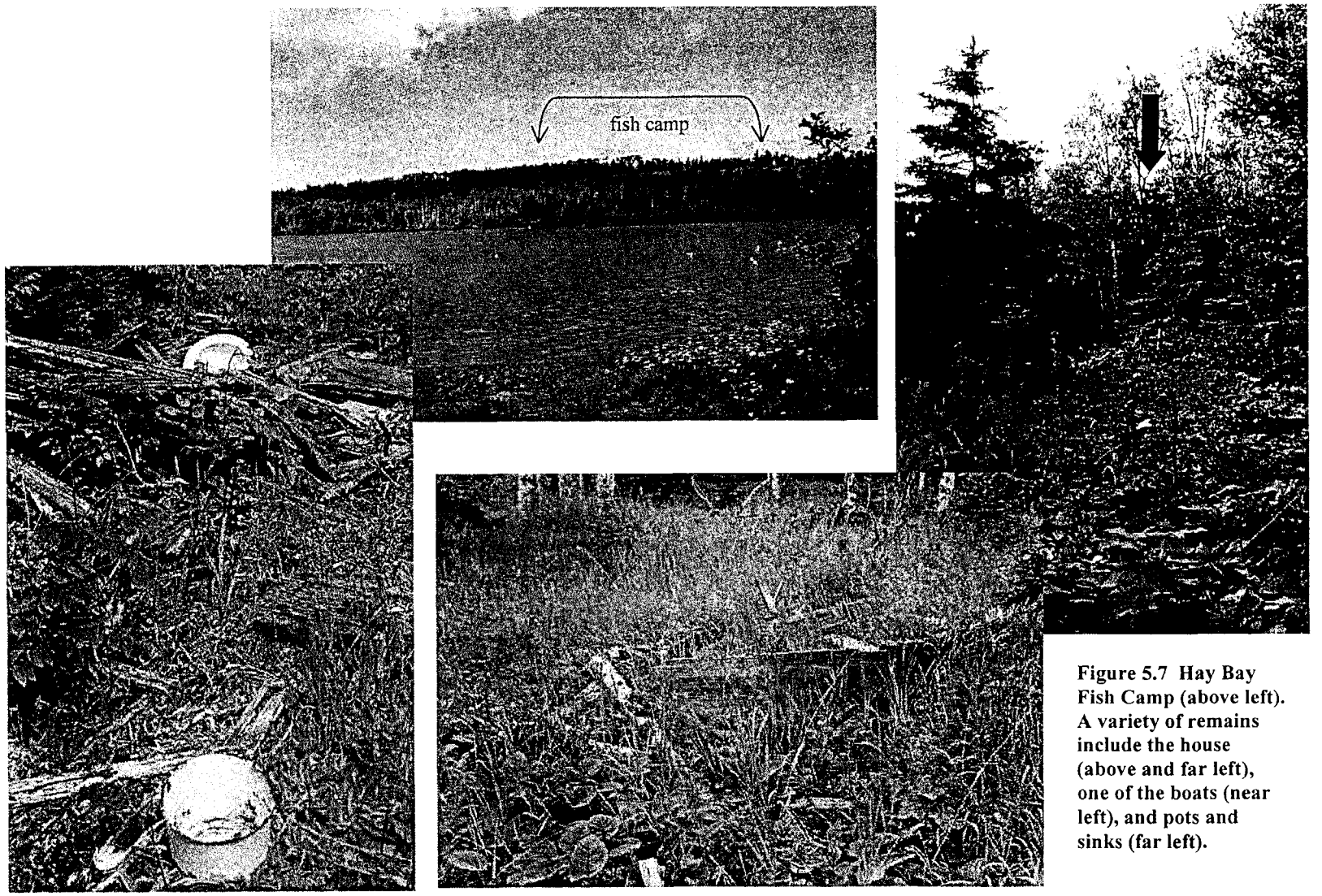


Figure 5.7 Hay Bay Fish Camp (above left). A variety of remains include the house (above and far left), one of the boats (near left), and pots and sinks (far left).







Figure 5.8 Hay Bay Fish Camp remains reflect a sense of home in the tree-lined path between the house and fish house (above), the tree house where the children watched for their father's return (above left), and in the remnant flower garden (below left).

Cedar trees were used for corks and floats. Other timber was used for docks, houses, and fish houses. Rocks provided weights for fishing nets. Balsam pitch was used for cuts by "going to a tree and cutting off a couple of blisters."

The area provides both calm water and places to tie a boat for seasonal campers who "water or boat camp." Large open areas, now overgrown, not only afforded room for the fish camp but also for the big 4th of July celebrations when fishing families gathered for potato sack races, baseball, and picnics. At the Skadberg camp, trees were planted to line the trail from the house to the fish house. Those at home had a good view of the fish house so they knew when the fishermen returned. A small treehouse afforded the children additional views of the bay and the returning fishermen.

Hay Bay is connected to Wright's Island, Fisherman's Home, Little Boat Harbor, and Rock Harbor through social relationships and water routes. The families at these locations helped each other as the need arose, shared food and fishing boundaries, and spent 4th of July celebrations together. The Holte family at Wright's Island, being the closest, was the most visited of these connected places.

The primary features of Hay Bay that were evaluated are water, fish, habitations, the bay, river, and reefs (Table 5.4). The water was calm, clean, and used for domestic needs and running a gas-powered washing machine. Family members also swam in the bay. Informants evaluated the water as still being in excellent condition although some siltation from natural processes is beginning to impede access. Passage was easier during the fishing days because the regular travel in and out of the bay helped to keep it clear.

Hay Bay and its associated waters in Siskiwit Bay are relatively shallow and filled with reefs. These conditions provide ideal habitat for whitefish and lake trout, although, some herring were caught late in the fall after the boats quit running. These were sold fresh, smoked, salted, and traded to the fish company for credit slips. Fish were eaten three or four times a week and recreational fishing in the Siskiwit River provided brook trout for a change in diet.

Informants evaluated the fish in excellent condition although impacts from occasional tumors and sea lamprey are known. The numbers of fish continue to fluctuate and during the hottest weather, the fish leave the reefs of the bays for cooler waters in the fishing grounds of Fisherman's Home.

Overall	Excellent
Water	Excellent
Fish	Excellent
Evidence of Previous Occupation	Poor
Geologic Features	Excellent
Subsurface Features	Excellent

Table 5.4 Informants' condition ratings for Hay Bay.

Evidence of previous occupation or use of Hay Bay included various habitations and Native American archaeological sites. Informants noted a sand bar near the home site where artifacts had been found; the site had been studied and is theorized to be an Indian meeting place. The house that belonged to Bill Lively, a former game warden known by all the fishermen, was rebuilt by John T. Skadberg. He "tore the roof off, put a few more rings of logs around there and re-roofed it. In later years, he added a bedroom and a kitchen. It was a one room cabin to begin with." These features were used for residences, when hunting, fishing, and gathering plants, for camping, and selling fish.

Evaluations were mixed with the general area of habitation and artifacts being rated excellent and the artifacts as being in poor condition. Most of the buildings are gone although a pile of boards remains. "The NPS bulldozed this down, landed a bulldozer on the high point and knocked it down; also, the dock, fish house, net house. The house had survived well for a long time. There was an NPS sign on it to protect it. We came back and camped here in 1964-65 ... and it was gone. Dad was given notice that it would be torn down ... given five years after he quit using it ... he took out some materials."

The surface geologic features of the bay, harbor, hills, and river were included in informants' evaluation. The combination of these features provides a block to the winds and weather, and spawning areas for several species of fish. These features provided a learning environment for new fishermen and territorial markers that aided access through the reefs into Hay Bay. Informants rated these features in excellent condition and basically unchanged.

Reefs and warm water were evaluated as the sub-surface geologic features. This combination provided excellent fishing habitat. As water temperatures changed, the fish

would follow as would the fishermen. Informants rated these features in excellent condition with nothing affecting them.

Hay Bay, overall, was rated in excellent condition. Informants noted vegetation changes and reduced access. The latter is particularly hard on older people who cannot get around as easily as they once did. The removal of docks and the park access fees were identified as impeding access.

Informants' management recommendations include continuation of fishing limits and lamprey control; protection of building remains was identified as important but their greatest concern is the presence and conditions of the docks. Access to Hay Bay is important to the surviving fishing families for themselves, their children, and grandchildren; to stay in touch with family histories and the fishing lifestyle; they expressed certainty that future generations would "want to see where it all took place."

Johnson Island

A five-acre island in Belle Harbor, Johnson Island (Figures 5.9 and 5.10) has been called Fish Island, Bell Island, and Emil Anderson's. It lies east of Belle Isle campground where John Anderson, father of Emil and Gilbert, and his partner Herman Johnson established their original fish camp. They relocated to Johnson Island around 1915 when Belle Isle Resort was built.

The fish camp includes the island, Belle Isle, and the waters between them. Johnson Island is not particularly impressive by itself but the surrounding area is clustered with islands similar to it. There are many bays, coves, channels, and reefs, and the area as a whole provides good shelter and anchorage. In the surrounding area, they hunted, fished, and gathered plants such as thimbleberries, raspberries, and blueberries. Occasionally, 4th of July celebrations were held but more often the Anderson family traveled to Tobin Harbor for the festivities there.

There was no competition for fishing grounds as the area was reasonably isolated. The reefs and channels were good for setting nets and provided good fish habitat, and the nearby main island was hunted for moose.

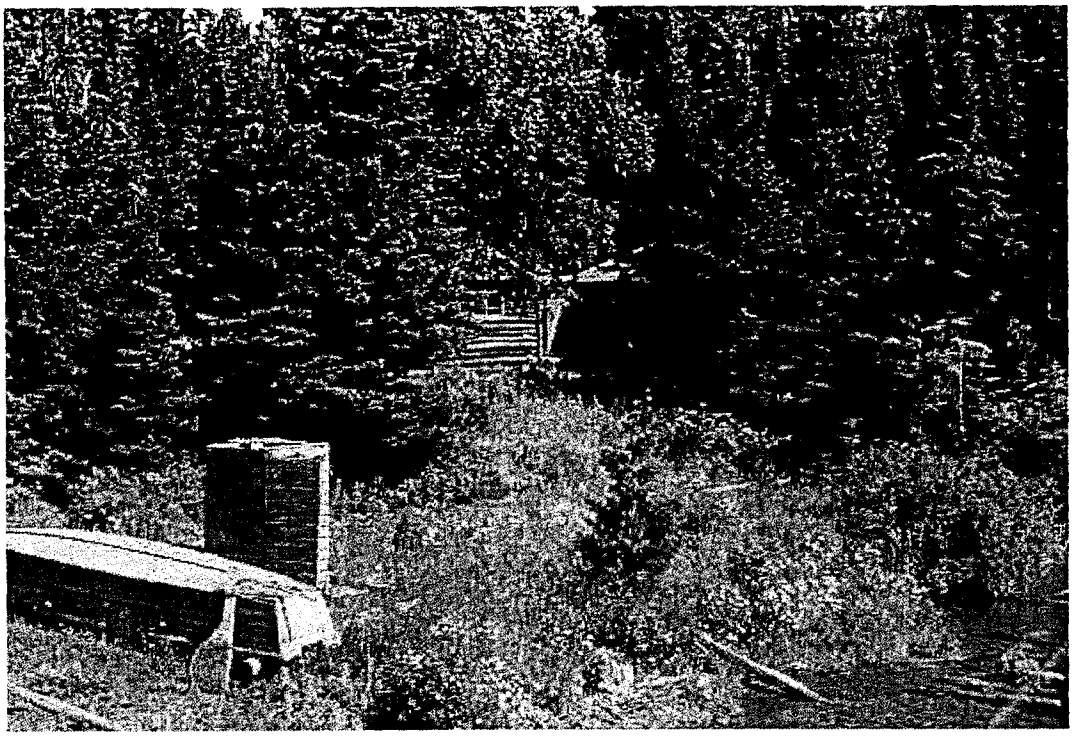


Figure 5.9 The Anderson home remains in usable condition although the fish house is gone.

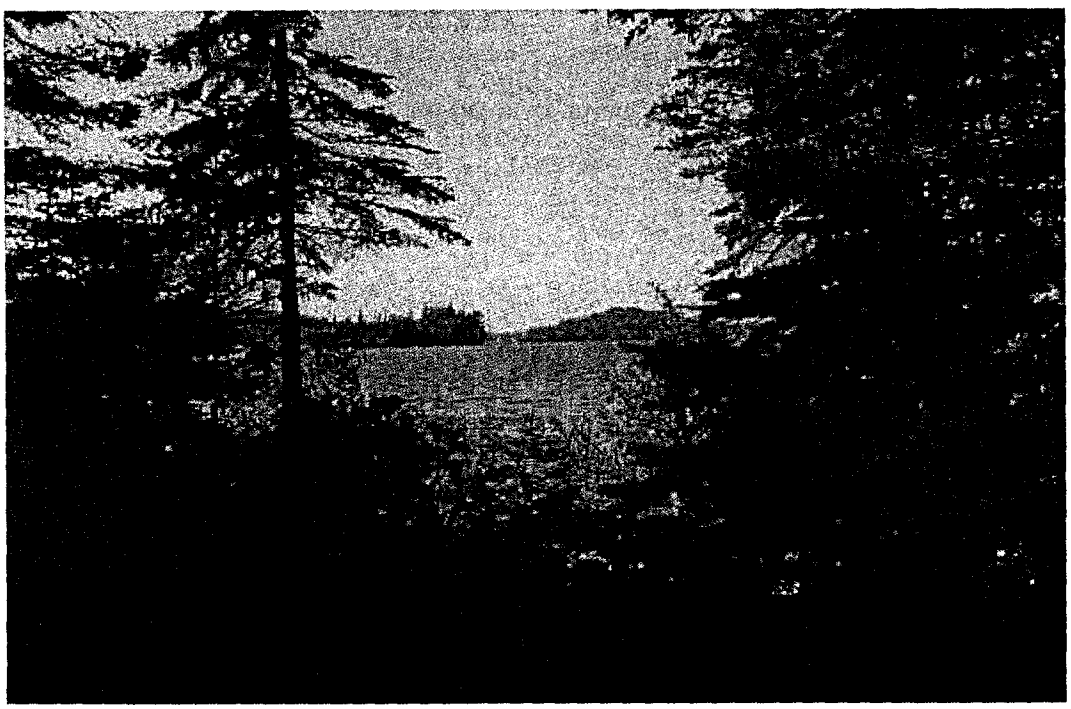


Figure 5.10 Members of the Anderson family watched from the fish camp for the fishermen to return.

While several fishermen fished the waters associated with Johnson Island, only the John Anderson and Herman Johnson families lived there. Anderson and Johnson fished the area from the 1880s to 1922 when Herman died. John's son, Gilbert, fished the area with his partner, Thure Goss, from about 1915 to 1918 before they left to serve in World War I. Gilbert returned after the war to fish alone until 1933. Emil, his father, and Uncle Edward fished the area from 1933 to 1937. When John died, Emil and Edward continued fishing until Edward's passing in 1941. Emil continued fishing with his son and several hired hands until he retired in 1958.

Social relationships connect Johnson Island to the Scotland-Anderson fish camp, Amygdaloid Island, and Tobin Harbor. Resource use connected the camp with Five Finger Bay and Washington Harbor. The small islands and reefs of Five Finger Bay are very similar to the Belle Harbor area and several good blueberry patches could be found there. The connection with Washington Harbor was established when a fisherman from that area came to Belle Harbor. Initial concern over encroachment of fishing grounds turned into helping the new fisherman find unclaimed areas to fish.

The features at Johnson Island that informants evaluated include water, plants, animals, fish, evidence of previous use, and surface and sub-surface geologic features (Table 5.5). The water was used for travel, fish, and domestic needs. Informants evaluated the condition of the water from poor to excellent. Current impacts to the condition of the water are from residual problems from the 1950s. Tailings dumped from a taconite plant in Silver Bay, Minnesota into Lake Superior years ago "effectively aging the lake at least 500 years according to some experts. Tons of smelt ended up on beaches with fungus in the gills."

Plant use in the area was focused on blueberries, raspberries, and thimbleberries. The better blueberry patches were found at Five Finger Bay. The raspberries and blueberries were used for canning and eating fresh. Informants rated the plants in good to excellent condition. A lack of management has allowed the patches to be overgrown with other vegetation but periodically "a lightning fire burns off an area and they come in thick with the new vegetation."

Overall	Poor to Good
Plants	Good to Excellent
Animals	Fair to Excellent
Water	Poor to Excellent
Fish	Poor to Excellent
Evidence of Previous Occupation	Poor to Good
Geologic Features	Excellent
Subsurface Features	Excellent

Table 5.5 Informants' condition ratings for Johnson Island.

Use of the animals in the area occurred before Isle Royale National Park was established. Moose were hunted for meat occasionally, and beaver and mink were trapped. The caribou that roamed the Island historically were also hunted. Informants evaluated the condition of the animals from fair to excellent, noting habitat loss as a recurring problem for the animals. "Beaver first cut down the poplar, then birch and what little willow remained. From what I've been able to see it appears that beaver are no longer abundant. Their food trees have mostly been replaced with conifers. Moose population for years has gone up and down like a yo-yo. When browse is plentiful, the moose herd swells. They consume the available food and head for Canada when it becomes scarce."

Lake trout, herring, and whitefish were used for food and as a "cash crop." In the early days, herring was important because it could be salted and shipped from Isle Royale to Duluth where they were transported to other markets. Informants evaluated the fish from poor to excellent condition. While the fish seem to be "growing like weeds and biting like crazy," informants pointed out problems from pollution and predators. The invasion of lamprey and smelt, combined with a lack of restocking native fish led to a dramatic decrease in lake fishing. Lake Superior came to be known as the "Dead Sea" in the 1960s. Although some say the trout are back today and the fishing is great, informants disagreed. They feel the fishing is as good as it was in the late 1940s and early 1950s but at that time there was a significant decline from the turn of the century conditions and populations.

The increasing number of cormorants also takes a toll on the fish populations. These birds consume large quantities of herring and are coming into areas the fishermen have never seen them in before. The pollution impacts discussed in the water evaluation

were reiterated for impacts on the fish populations. Although informants acknowledge the improvement in populations and species to pre-1950s condition, they indicated that anything less than turn-of-the-century condition is inadequate. Sport fishing is having an impact as well. The Scandinavian fishermen who made their living from the lake believe the management and regulations for sport fishing rather than "commercial" fishing are not providing healthy, viable trout populations. "Consider for a moment that you are a politician. Who has the larger share of votes, the sports fisherman or the few left who fish for a living? How would you influence fish stocking? I recall back in the 1940s when they would drop off milk cans of fingerlings at Belle Isle fresh from the hatcheries. These fish would home in on, or bond with the area. When Lake Superior was losing trout to the lamprey, this area was among the last that had fish. Fish planted today are kept at hatcheries to within a year of catchable size. Planting 300,000 fish today is a big deal. Years ago, the U.S. and Canada planted millions."

The informants identified evidence of previous occupation or use by cleared homesites, dock cribs, logging chains, boom logs, and boat hardware. The site was evaluated in poor to good condition. Some of the current buildings of the Anderson family are in good shape while others are crumbling. The dock is unstable and the site overgrown. The buildings are "surrounded by balsam, and spruce are growing up and shading the houses, engulfing them and keeping them wet, and becoming a wind-damage threat. It's not being managed by the Park Service because there is still some private use." The Anderson family rarely visited the site after Emil retired, but they let some people stayed there several summers. Unfortunately, they did "practically nothing to maintain the buildings and docks. Fish houses fell in on themselves when roofs were not maintained, dock planks rotted and fell in the lake. Carpenter ants went to eating the logs of the cabins." About 5 years ago, these people were moved out but "the monumental task of cleaning up after over 20 years of neglect" remains.

The surface geologic features evaluated by informants include the general area of Belle Isle and the many small islands in Robinson Bay. The area affords shelter from storms, sheltered docking areas, and sloping beaches upon which boats can be hauled out of the water at season's end and for repair. Each small island has a reef and larger reefs are scattered throughout the larger bays. The small islands and reefs were used "strictly

as a safe anchorage for the boats." Informants rated these features in excellent condition with little affecting them although "the island is much the same as it was when first inhabited. The vegetation has changed, birch, mountain ash, and aspen have given way to spruce and balsam."

The sub-surface geologic features include "reefs, channels and bottom features are important territories for fishing. Fish may school up, spawn, and feed in certain areas." These features, consequently, were used for fishing. The reefs are protected by the islands and long enough to set nets. Informants rated the reefs in excellent condition with nothing affecting them.

The evaluations of overall conditions ranged from poor to good. Informants identified the lack of Park Service management, the lack of family use, and neglect by visitor use as the major contributors to the poor condition of the place. They also noted the improvements that have been made by the family during the past four years that fact that the remaining buildings are still inhabitable and in relatively good shape.

Informants had management comments or recommendations for protecting the water, the animals, the evidence of occupation or use, and the sub-surface features. Recent changes at Belle Isle campground were noted as improving the water quality. Now, there is "a volunteer there monitoring the goings-on. Previous years there were fish heads and garbage, food scraps in the water in the shallow bay behind the big dock."

Informants felt the protection of the animals was adequate. "Animals pretty much take care of themselves. Moose, for example, when the browse becomes scarce, head for Canada on the ice. No hibernating animals exist there." Recommendations for protection of the fish focused on regulations and monitoring. Informants felt "there should be a source for Michigan fishing licenses on the Island. Coming from Minnesota, if you don't get a license in Grand Portage, you can't get one. Not having a license may not stop a person from fishing."

Informants identified the protection of the remaining structures as problematic. While they did not feel "there needs to be a fishery on Johnson Island," some upkeep and maintenance is desirable. Informants felt there was some potential for making the site an attraction for visitors "if the place was returned to original condition, but there aren't that

many visitors on that side of Isle Royale. Any building would be prohibitive paying $25/hundred pounds freight for lumber."

The recommendations for the sub-surface features addressed dock cribs, sunken boats, and reefs. "I guess hands off would be my idea. Old dock cribs, sunken boats, etc. are part of the Island history, look but leave it for future generations."

Informants felt the protection of the overall place depended on traditional uses. Ideally, it would be made a "commercial" fishery again or the life lease would be extended. Future use of Johnson Island seems to depend on proper care. People from Tobin Harbor would be interested in coming to learn about the traditional fishing and former fishermen are interested in sharing traditional stories there. Family members presently find their visits to Johnson Island rejuvenating, including all the work needed to put the place back in good condition. Other family members await the day when their younger children are old enough to enjoy the outdoors and able to come to the island. In spite of the threat of losing access and the life lease when Mr. Anderson dies, the family maintains a sense of humor. One member would "like to keep up over 100 years of family tradition. To give you an idea of how serious she is, she's mentioned life support for me and is considering taxidermy. Hope it doesn't come to that."

Johnson's Resort

Known to the general public as Chippewa Harbor and to the Isle Royale fishermen as Johnson's Resort, this fish camp began in the mid-to-late 1800s (Figure 5.11). The operation was for fish oil from the fat trout, or Siskiwit, that was a popular catch during the 1800s. Chippewa Harbor begins at the outlet as a big, deep, narrow pool with depths from 30' to 200' feet, then extends into Isle Royale for approximately three miles before becoming a half-mile portage to Lake Whittlesey. It also connects to Lake Ritchie along a one-mile portage, and along a short, winding drainage to Lake Mason (Figure 5.12).

Along the length of the harbor are two constrictions that create the impression of three separate harbors. Johnson's Resort sprawled along the north shoreline of the first segment with a broad, sheltered view of the lake. Godfrey Vodrey wintered in Chippewa Harbor in the 1880s when he began fishing. Sam Johnson, and later his nephew Holger

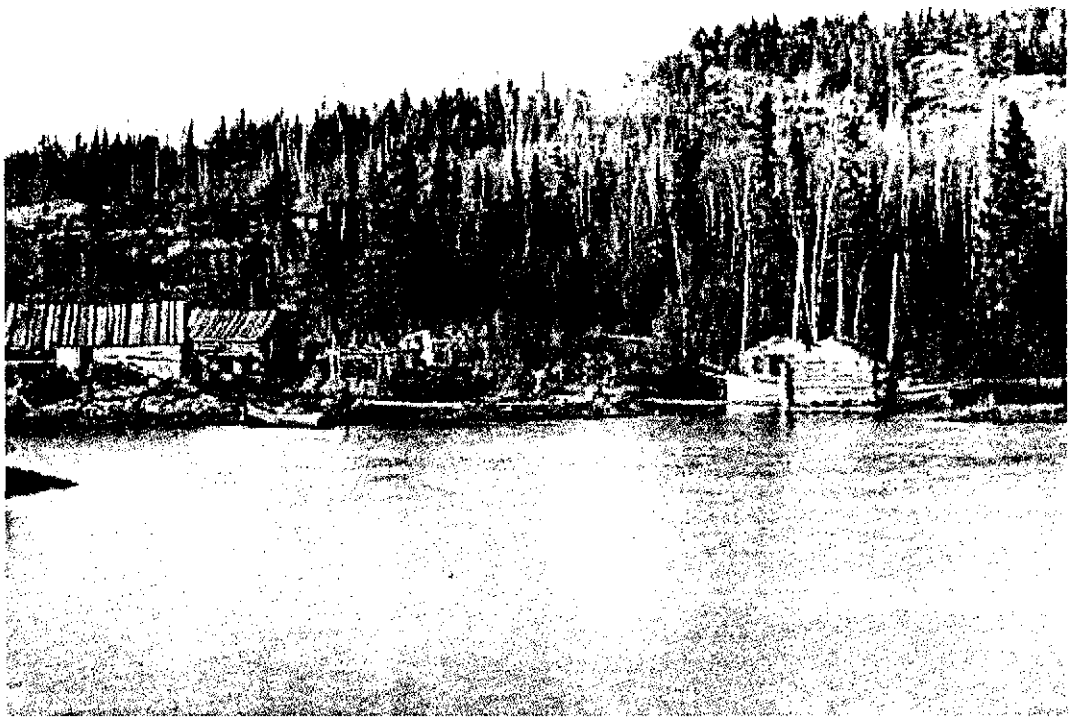


Figure 5.11 Johnson's Resort (Chippewa Harbor) in operation.



Figure 5.12 Johnson's Resort (Chippewa Harbor) today.

from 1910s to the mid-1950s, also fished from this site. When Holger and his wife Lucy added a resort and store to their fish camp in the 1930s, Chippewa Harbor became known to the local fishermen as Johnson's Resort. Unlike most of the other Scandinavian fish camps, Johnson's Resort was used year round as a residence, for fishing and trade, and, at one time, as a school. County funds provided a schoolteacher briefly, Dorothy Peterman Simonson, who taught the Johnson and Hansen children, along with her own son.

The fishing area of this site was prime herring and good lake trout habitat. By the late 1940s and into the 1950s, the fish market experienced a price drop. Not long after, the sea lamprey affected a decimation of the lake trout population. Although the site provided protection and safe harbor, and was deep enough for larger boats, other sites were "perhaps better suited for fisheries." With the added pressure of the depression of the 1920s and 1930s, the Johnsons added the resort to supplement their income. Several people occupied this fish camp over the years, most of them members of the Johnson family. Extended family was scattered around the Island creating many connections between this site and other fish camps around the Island. A land trail to Rock Harbor was used during the winter when boat use was not possible. Generally, people were not very mobile during the 1940s and 1950s but at Johnson's Resort, they had formed their own little community. The water, plants, animals, fish, and geologic features were evaluated by the informants as being in good to excellent condition. Evidences of previous use, however, were rated in poor condition (Table 5.6).

The water features of small streams, connected lakes, and the lake provided a connected source of excellent quality water for domestic needs. With the possible exception of some impacts from beaver, informants did not identify anything affecting the condition of the water.

Overall	Excellent
Plants	Good
Animals	Good
Water	Excellent
Fish	Excellent
Evidence of Previous Occupation	Poor
Geologic Features	Excellent
Subsurface Features	Excellent

Table 5.6 Informants' condition ratings for Johnson's Resort.

Seasonal berries, balsam, spruce saplings, and cedar were used, respectively, for food, construction, and floats for the fishing nets. The plants were evaluated as being in good condition but being affected by a lack of fire management. New growth since people left in the 1950s has changed the structure of the plant communities. Although much denser than previously, informants did not consider it to be a fire hazard.

Informants identified moose, wolf, caribou, fox, beaver, and otter as previously inhabiting the Johnson's Resort site. Before Isle Royale National Park was established, moose and caribou provided winter meat, and the other species were trapped for their fur. Poaching continued for a while and the Park Service spent some time trying to monitor and end these activities. Occasionally, old traps can still be found in the overgrowth. Informants rated the animals in good condition with nothing affecting them, although, they felt the mink were gone.

The herring, lake trout, and siskowit trout were used historically for food and trade. In mid-to-late 1800s, the siskowit, or fat trout, were harvested for oil for fuel, medicine, and other products. Informants evaluated the fish in excellent condition with nothing affecting them.

Dock cribs, a resort cabin, and the remains of the schoolhouse were evaluated by informants as being in poor condition (Figures 5.13 and 5.14). Originally built for living and trade purposes, only the dock cribs and schoolhouse are particularly obvious. Some informants consider the schoolhouse to be a resort cabin but felt it should be preserved. Lack of management for preservation of the structures by the Park Service was identified as an on-going affect on the condition of the remaining evidence of use. Buildings that remained forty to fifty years ago are gone now, presumably burned or torn down.

The harbor was evaluated as the surface geologic features. It is well protected from the seafront in any direction, and deep. Informants rated it in excellent condition with nothing affecting it.

The sub-surface features evaluated were the reefs and bottom structures. These are deep, as is typical of the island, with periodic temperature fluctuations. It was a great place for deeper herring fishing with float nets until the 1940s.



Figure 5.13 Dock cribs and one of the cabins remain at Johnson's Resort (Chippewa Harbor).



Informants evaluated the overall site of Johnson's Resort as being in excellent condition and already "protected." Although the remaining buildings are in poor condition, the overgrowth shields them and makes access difficult. Management recommendations were to maintain existing trails and portages since visitors use them.

Informants indicated that their children would like to be able to visit Johnson's Resort. Some already find it an intriguing place and nice to visit. Informants described it as picturesque, "probably the most picturesque harbor on all of Isle Royale. It is a fun place to fish for herring and, further up the bay, for Northerns."

Little Boat Harbor

About one mile south of Fisherman's Home lies a small bay and inlet known as Small or Little Boat Harbor (Figure 5.14, 5.15, and 5.16). Used exclusively by Hans Mindestrom, this site includes the boulder gravel beach of the inlet from the north point to the south point, and the fishing area that runs south along the shoreline about a mile and a half to the McCormick Reef area. A small fishery, it is approximately two miles long, running a half mile north, and up to one mile wide. Shallow reefs made the site viable as a fish camp:

> *If it wasn't for the fact that there were good fishing grounds here, somebody would probably have never even inhabited this place because it was so difficult to get in and out of in stormy conditions. This whole area, the ledge rock out here, extends ... there's a very shallow, barrier reef that extends between this point here (north) and this point here (south). So that there's probably only, depending on the lake level, there would probably be 6' maximum water to get in there and maybe 3' minimum, probably isn't more than 3 and a half or 4' of water to access in here. So when this harbor was open it was virtually inaccessible except by very small boats.*

Today, the small inlet, where Hans tied up his boat and accessed his house, is sealed off by a wall of rock about 5' high and 60' long. Presumably, ice action is responsible for this massive geographic change.





Figure 5.14 The interior of Hans Mindestrom's home at Little Boat Harbor. Note the custom shoes under the bed which Hans made to accommodate his disability (above). The exterior of Hans' home (below).

An interesting aspect of this fishery is its proximity to and overlap with the Fisherman's Home fishery during the same period. The relationship between the Rude

family and Hans developed into that of an extended family. A land trail and water route connected the two sites. Andrea Rude, wife of Andrew and mother of Sam, often rowed and fished the five-mile round trip from Fisherman's Home to McCormick's Reef. She tied a line to her foot so she could fish while she rowed. On her return trip, she often stopped at Hans' place for the "wonderful homemade bread" he made.

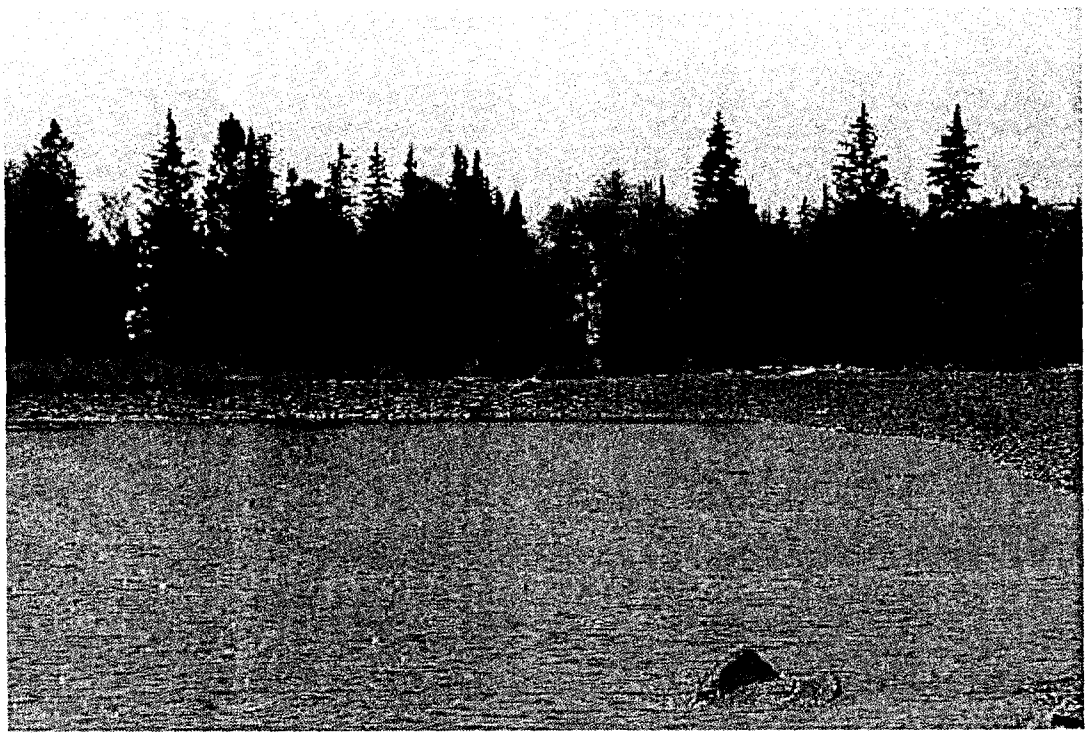


Figure 5.15 The inner harbor is shut off now from the main harbor by a 5' high rock wall believed to have been left by ice flow action (above).

When the weather was bad, Hans would leave his boat at Fisherman's Home and walk to Little Boat Harbor. If the market boat was expected at such times, he would leave his catch at Fisherman's Home where it could be picked up easily. He also left his boat at Fisherman's Home during the winter months when he returned to Knife River, Minnesota.

Although this fish camp was in an area of limited accessibility, the uses of the site include living, hunting, fishing, and gathering food. The area was full of moose in pre-



Figure 5.16 The remains of Hans' home today. Note the spruce tree growing against it (above) and the lichen and other deterioration accelerated by the shading (below).



park days. Nearby were patches of blueberries, raspberries, gooseberries, and currants. Hans was known to walk up on the hill above his home to pick berries and explore the terrain. "He talked about a cave somewhere back there where he actually found a moose that had apparently fallen in."

The remains of Hans' cabin can still be found under a large spruce tree that has grown up so close beside it that the lower branches have to be raised to sheltering the cabin remains, prevents the logs and duff from drying out, consequently, enhancing the rotting of the logs. Other remains of the fish camp include some scales, metal canisters of unknown purpose, and the capstan Hans used to pull his boat out of the water.

Unlike many of the other fish camps around Isle Royale, Little Boat Harbor appears to have been occupied only by Hans Mindestrom during the Scandinavian folk fishing period. Other fishermen respected his rights and did not use the area "because these sets belonged to Hans." All of the buildings, of which there is any trace, were built by Hans, further suggesting his sole residency since the late 1800s.

While Hans made use of the berries near Little Boat Harbor and moose were nearby, this small site was of use to fishermen only for the water, fish, harbor, and reefs (Table 5.7). Lake water was important particularly for domestic uses and fishing. The harbor, as a water source, provided small fish some shelter. A nearby pond was not used as it had little flow and "only bred mosquitoes and kept moose happy." The lake and harbor water was rated in good condition although the smaller harbor is now closed off from the main harbor by a rock wall believed to be the result of ice flows. The water is still drinkable and the fish population is viable, although, there may be some trace elements that were not present in Hans' day.

Overall	Poor
Water	Good
Fish	Excellent
Evidence of Previous Occupation	Poor
Geologic Features	Poor
Subsurface Features	Excellent

Table 5.7 Informants' condition ratings for Little Boat Harbor.

The fish are "the same general mix as all over – lake trout, whitefish, and herring. Herring was slow to process and they received less per pound so most went after whitefish and lake trout. Small herring were used as bait for hooklines but were usually salted when caught for sale." The fish were rated in excellent condition. "Since the lamprey are being controlled, the populations are better than they were in the 1950s and 1960s. The smelt have also declined and so the small lake trout and herring are doing better."

The harbor, as a geologic feature, was used for access to the smaller, inner harbor and for small fish. It provided a safe area from heavy seas, although, seiches could have a really impact. "Seiches that ran concurrent with large storms would raise and lower the water level. Hans' boat might be sitting on the bottom one minute and straining at the lines the next." The harbor was rated in poor condition, however, since the mouth is "totally closed by the beach (rock wall)."

The sub-surface geologic feature of reefs provided fish habitat. McCormick Reef and McCormick Rocks "are special because they have the type of bottom structure that is prime for lake trout spawning. Later in the year, whitefish also spawn, significant spawning even though there are other areas better for whitefish who like calmer water." The reefs are in excellent condition and nothing has "spoiled the spawning habitat."

The overall condition of the place, however, was rated poor due the extreme deterioration of the structures and few remnants. Management recommendations were given only for the structures and the place as a whole. The remaining artifacts that could be protected include the house, fish house, net house, capstan, scale, and oil area that Hans used for his cedar floats. The site needs to be protected from further raiding by "collectors" who have taken many artifacts, and should be cleared of the weed overgrowth and large spruce trees that are accelerating the deterioration of the buildings.

Although this site is one of the lesser known, less popular places on the Island, Hans Mindestrom's story is one of individual stamina and perseverance that epitomizes the Scandinavian fisherman's relationship with the Island. The hardships he faced throughout his life, the relationships he developed on the Island, and so few people to tell his story suggest that something very important to knowing and understanding the lifestyle and culture of the Scandinavian folk fishermen is about to be lost.

Because he had no family, he had no children, he was never married, when he left Little Boat Harbor, it was during a period of time when I think cultural history or heritage were certainly not one of the points of focus of the Park Service. So Hans Mindestrom and Boat Harbor were largely forgotten as those that knew him died off; there was nobody to really make any attempt to keep anything at Boat Harbor updated or to maintain it in any way. And it just kind of fell by the wayside, slipped through the cracks.

Hans' stamina, perseverance, and kindness had other impacts on his neighbors, particularly the children. Hans expressed an incredible kindness toward the wildlife and was known to "not chase a snake out of his house. He once saved a pet crow (from the) water that was too young to fly." Such activities as climbing the hill behind his cabin, and the walk along the rock-floored forest between Little Boat Harbor and Fisherman's Home are all the more incredible in light of Hans' disability. For those who knew Hans' story, his actions provided many life lessons that they remember to this day.

Well, there's a life lesson ... he was a life lesson in himself, born with severe, significant deformity in his feet, going through a childhood that, in which he was, in which his father certainly showed no love or respect. He was able to come out here and build a life for himself and exist ... I don't know what thoughts Hans may have had when he was by himself but when he was down visiting with (neighboring families) he laughed and told stories and he was just a wonderful (person). He grew up in a time when physical impairments were, there certainly were no ramps or anything else to try to help the physically challenged so he, he was able to overcome his particular deformity. He couldn't buy shoes so he made his own shoes. I think he certainly is a lesson in perseverance.

The only bitterness that his neighbors remembered and repeated often was that he showed extreme bitterness towards his father for his lack

of compassion. "Because of Hans' deformity. But he himself was a very compassionate person. I think probably the extreme bitter experience of him growing up ... his very, very bad experience with his father, lack of compassion, probably made him more compassionate. He did not want to ever be perceived the way, personally, the way he perceived his father.

Future visitation of the site by former fishermen, their children and friends, and paddlers is expected. Hans Mindestrom's kindness and perseverance had a "great, positive influence" on the lives of those who knew him. Returning to Little Boat Harbor keeps memories of Hans and his relationship with the Rude family and others alive for those who knew him. Friends of former fishermen also like to visit Little Boat Harbor, especially on stormy days when they cannot fish but can walk down to the site. Even those who do not know about Hans or the history of the place seem to find the artifacts and the site interesting, if not intriguing, since paddlers are known to frequent the site.

Scotland-Anderson

Near the south end of Amygdaloid Island, tucked into a small bay fronting Amygdaloid Channel lies the fish camp of Conrad Scotland and Andrew Anderson, two Norwegian bachelors of no relation to other Isle Royale Scandinavian fishing families. The Amygdaloid Island Ranger Station occupies the site today with NPS personnel making use of the cabin built by Scotland and Anderson (Figure 5.17).

The fish camp, which the two men occupied from the 1920s to the 1950s, extended from its terrestrial base into the bay and out to the fishing grounds that continued twenty-two miles south to Finlander Reef. Scotland and Anderson were bounded to the immediate north by Emil Anderson's fishing grounds and to the south by the Washington Harbor fishing area.

The northwest length of Isle Royale offered a few pockets of safe harbors where fish camps could be established. Being more exposed to the extreme storm conditions of Lake Superior, however, there were fewer fish camps. John Linklater based his fish camp on Birch Island, about two miles south of Scotland-Anderson in the confluence of McCargoe's Cove and Brady Cove. Another fish camp had been established at Green

Isle, about eight miles south of Scotland-Anderson in Todd Harbor, but was eventually abandoned. After Scotland and Anderson left in the 1950s, their camp was used briefly by two brothers from Washington Harbor, Tom and Dick Eckel.

Although Scotland and Anderson were unrelated to the other Isle Royale fishing families, their place being central on the north side of the Island allowed them to maintain social connections with other fishing families, particularly John Anderson's family on Johnson Island. They had connections also with the Belle Isle Resort, the fishermen at Birch Island and Green Isle, and the towns along the north shore where these fishermen spent the winters.

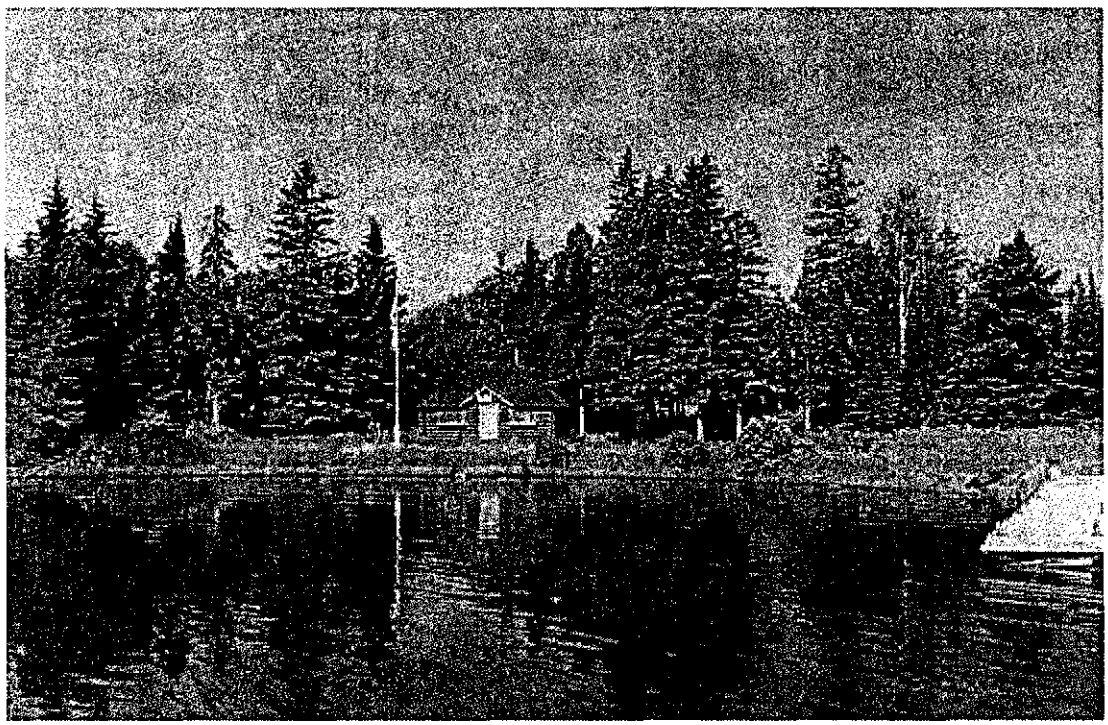


Figure 5.17 The former Scotland-Anderson fish camp, now the Amygdaloid Ranger Station.

The primary uses fishermen made of this site were living, fishing, and gathering food. Specific resources used by fishermen included high quality water, blueberries, fish, safe harbor, and reefs (Table 5.8). The water was used for food, drink, and other domestic purposes, and was rated it in excellent condition with nothing affecting its condition.

Blueberries were picked for food and preserving in August and September. Thimbleberries were used as well. The berries were rated in excellent condition although the no-burn policy of the NPS has resulted in conifer encroachment and shading, consequently, displacing the blueberries.

Overall	Good
Plants	Excellent
Water	Excellent
Fish	Excellent
Evidence of Previous Occupation	Excellent
Geologic Features	Excellent
Subsurface Features	Excellent

Table 5.8 Informants' condition ratings for Scotland-Anderson.

All three primary fish species, lake trout, whitefish, and herring, were used here. The best whitefish run is at the mouth of McCargoe's Cove where there are fine gravels. All species were rated in excellent condition with nothing affecting them.

The cabin built by Scotland and Anderson is the primary remaining evidence of previous occupation or use of the site discussed by informants. They rated it in excellent condition, being well-kept by the NPS, although trees growing too close to the cabin are beginning to shade it which accelerates the decay process.

The surface geologic feature of the harbor was rated in excellent condition. It provides the best protection from storms coming from all directions – northwest, southeast, and southwest. The installation of an NPS dock, however, interrupts the natural flow of sediments in the area resulting in accumulation within the harbor.

The subsurface geologic features used by Scotland and Anderson are reefs to the west that provided the majority good fish habitat, although, the best whitefish run was at the entrance to McCargoe's Cove. The reefs were rated in excellent condition with nothing affecting them.

The overall condition of the Scotland-Anderson camp is good with nothing affecting it. Informants' noted that it is a good site for a folk fishing operation, and particularly for assessment fishing. They recommended returning it to that function. The site is one that would be first choice for a fish camp if traditional family grounds were not available. Informants found it an interesting place to visit. Future visits to this place

would include family members who want to learn more about the history of the Island and folk fishing.

Star Island

Located approximately mid-way between Rock Harbor Lodge and Rock Harbor Lighthouse is a small, rocky, five-point island called Star Island (Figure 5.18). The Johnson families were relocated to this site from the Rock Harbor Lighthouse and Edisen Fishery in 1938. The brothers Milford and Arnold Johnson were fishing partners for about twenty-five years; Arnold quit fishing in 1951. When they and their families located on Star Island, there were two dwellings that they renovated for the families.

The island barely provided an adequate fish camp having only a small area of soil and little room for the children to play. Fritz[1] and Ida Johnson owned Star Island and fished there from 1922 to about 1925. When their son drowned, they left. John and Lorraine[2] Johnson fished Star Island in the early 1930s.

Although in one of the busier areas of Isle Royale, one could feel quite isolated on Star Island. Informants stated that it was not as bad as living in places like Hay Bay since they were only a two-mile boat ride from Rock Harbor Lodge. Milford Johnson moved his fishing site from Star Island to Crystal Cove in 1956. The buildings at Star Island were destroyed when he left and Arnold gave up his fishing rights.

Unlike some fish camps, the fishermen used Star Island only for living and fishing. The location provided a safe harbor, however, and fishing remained profitable since most of the family fishing grounds did not change.

The resources of Star Island that were evaluated briefly by informants included water, plants, animals, fish, the island, remnants of the burned house and dock cribs, and reefs (Table 5.9). The lake water, used for domestic purposes, was evaluated in good condition with nothing affecting it.

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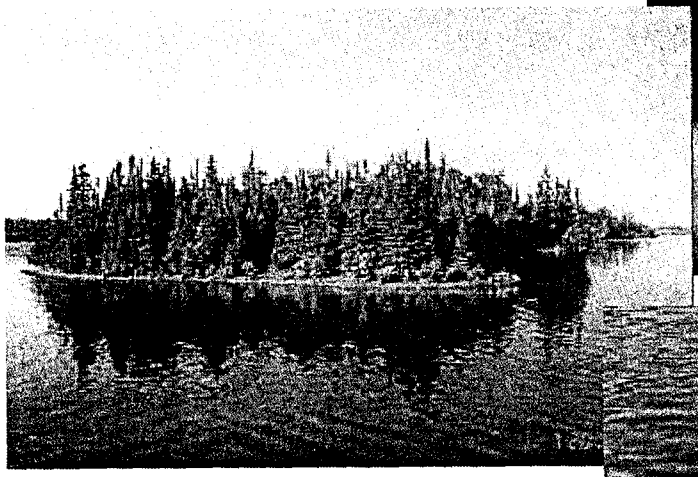
[1] Fritz' father was a cousin of Mike and Sam Johnson, the original members of the Johnsons who immigrated from Norway.

[2] Lorraine's sister was Lucy Sawyer-Johnson of Chippewa Harbor.

Figure 5.18 The Johnson family fish camp then and now. Nothing remains of the buildings today but the Stanley lies in the harbor (below right). The Stanley was built for Fritz Johnson and his brother in Two Harbors, MN. They, and possibly their father, fished out of Grand Portage and used the Stanley for freighting before Fritz established at Star Island.

The Stanley around 1937-38.







Ice eventually pulled the Stanley into the deeper water of the west entry.

Apparently abandoned when Fritz left, the boat's motor was set on shore. In 1937 when Milford and Arnold Johnson refurbished the buildings, the Stanley was still tied to a tree with the bow out of the water. The following year, the families moved in.

Overall	Good
Plants	Fair
Animals	Good
Water	Good
Fish	Good
Evidence of Previous Occupation	Poor
Geologic Features	Good
Subsurface Features	Excellent

Table 5.9 Informants' condition ratings for Star Island.

Plant use included moss for chinking the building walls and driftwood for firewood. Informants rated the condition of the plants as fair and being affected by acid rain and PCBs.

Although fishermen did not make use of any animals on Star Island, informants noted that both moose and beaver used the island. They rated the animals in good condition with only the wolf population affecting them. Informants focused on lake trout in their evaluation of the fish. The trout are abundant in this area, the fishery having recovered from the lamprey crisis. They were evaluated in good condition but being affected by cormorants feeding on the smaller fish.

The burned buildings and dock cribs were evaluated in poor condition. Informants had little to say about these other than to note that nothing was left standing.

Informants indicated that the five points of the small island were used as territorial markers or landmarks for navigation by lining up the points. These are in good condition with nothing affecting them. The cold reefs and currents were used for fishing purposes. Nets were set on the reefs for trout or with the currents for whitefish. Both features were rated in excellent condition with nothing affecting them.

Informants rated the overall condition of the place as good with nothing affecting it. They recommended, however, actions that could help protect the water, plants, and animals including legislation for "complete avoidance of toxic matter dumping, more industrial control." They felt the buildings and docks should be repaired and that descendants should live there and maintain the place as part of their heritage. Informants noted that a few other descendants are able to spend time at their homes with their children and grandchildren but Mike Johnson's descendants, in spite of having occupied three sites on the Island, have no place to do so.

Informants are aware of children and grandchildren who want to visit Star Island and other family places on Isle Royale "because of their heritage. They haven't been out here that much...(they) would like to come out here and spend some time." One respondent stated that his son "wants to come out but he wants to come out and see MY Isle Royale. Well, my Isle Royale is gone, you know. But he'd like to come out and see the places that I've been, have me tell stories about some of the things we used to do, about the few hideaways we used to have." Regarding a respondent's daughter, "she wants to come back here passionately. This is downtown (for us), this is (our) home town, home town avenue, you know."

Tobin Harbor

Running parallel to the north end of Rock Harbor is Tobin or Tobin's Harbor. The area was home to more summer residents than fishermen in its heyday but the Mattson fish camp is what the fisher folk mean when they talk about Tobin Harbor. The area runs from Blake's Point to the south end of the harbor and eastward to Scoville.

Geographically, the site is comprised of a number of "sub-islands," long, narrow bays, and warm air (Figure 5.19). The sub-islands provide "habitat for fish and humans" that is "protected from the elements."

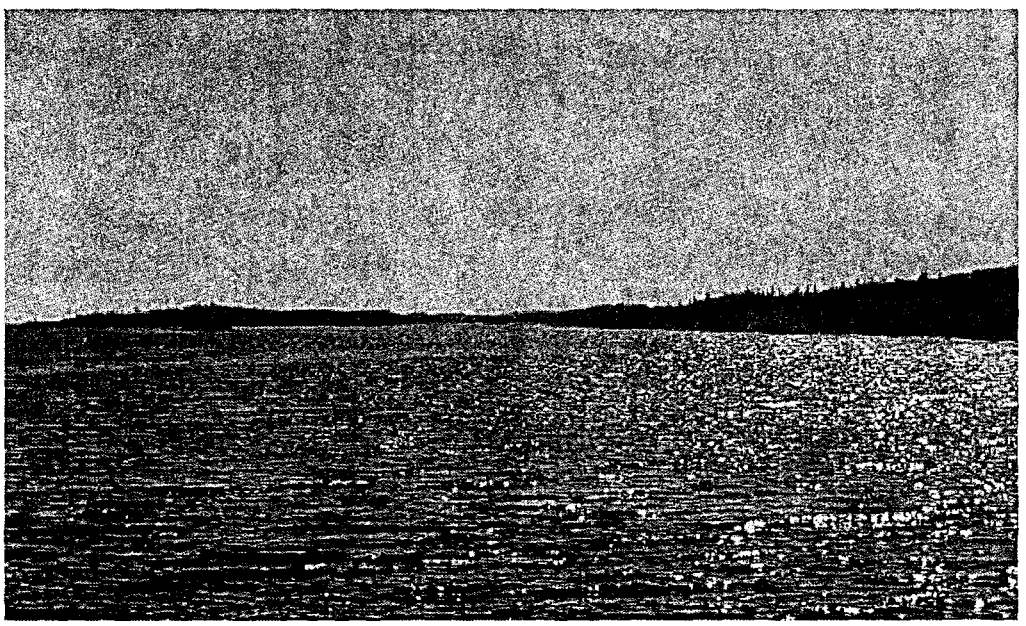


Figure 5.19 Entering Tobin's Harbor from the north. No matter the weather conditions, fishermen knew they were home when they detected the warmer air and odors that characterized the harbor.

Folk fishermen, primarily the Mattson family, shared the area with the temporary summer residents and commercial lodge operations that catered to summer tourists (Figure 5.20). They gathered blueberries for food, and driftwood or pulp logs for buildings and docks, and raised small gardens. Moose and ducks were hunted occasionally during pre-park days. The fishermen also celebrated the Fourth of July with a variety of activities when the fish companies "came out with spirits." At one time, five fish companies were "vying for people to be a fish provider."

The site is sheltered and close to productive fishing areas of reefs and other good habitat. The fishermen visited the barren ridges of the south slopes looking for blueberry patches that could be found there.

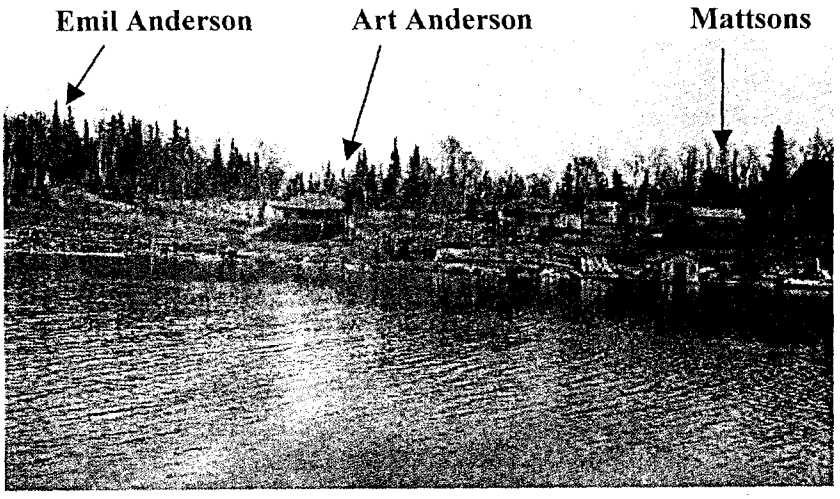
The Mattsons were one of the first, and certainly the last, folk fishing family in Tobin Harbor. Other fishermen included numerous members of the extended Mattson family, Victor and Andrew Anderson and their sons Emil (no relation to Emil Anderson of Belle Isle) Arthur. Although they had more contact with summer residents and tourists, these fishing families had social connections that extended to the other fishing families on the Island and to numerous places outside the region including St. Louis, Missouri and Omaha, Nebraska.

As with many of the previously discussed fish camps, Tobin Harbor was valued for the lake water, blueberries, driftwood or pulp logs, fish, sheltered harbors, small islands, and reefs (Table 5.10). The lake water, used for domestic needs, was rated by informants as fair to excellent. The difference lies in the perception of whether anything is affecting the condition of the water. Beaver, and otter at one time, used the area. Wildlife parasites from moose, wolves, and other species have reduced the quality of the water which was used for drinking up until the mid-1980s.

Overall	Fair to Excellent
Plants	Excellent
Animals	Good to Excellent
Water	Fair to Excellent
Fish	Good to Excellent
Geologic Features	Good
Subsurface Features	Good

Table 5.10 Informants' condition ratings for Tobin Harbor.





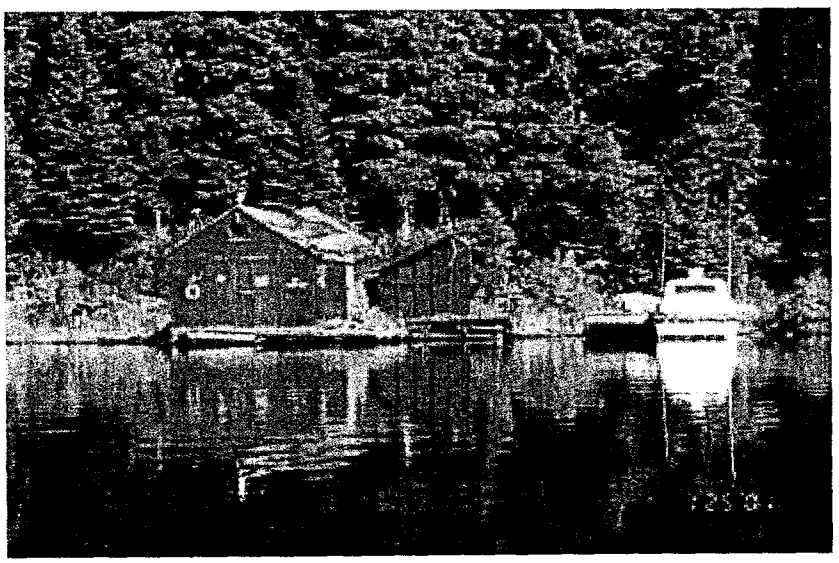


Figure 5.20 Tobin's Harbor in the 1890s, the 1940s, and 2001.

Blueberries, wild strawberries, raspberries, and thimbleberries were used for food. Driftwood or pulp logs that escaped lake transport were salvaged for houses, docks, buildings, and fences. Informants rated the plants in good to excellent condition, although, there are "not as many because of new growth shading them out. What remains are healthy but there are not as many of them."

Fishermen occasionally hunted moose and ducks during the winter for food. Moose could be found near Duncan Bay and Rock Island. One respondent was aware of a moose riding incident but noted that this was a rare event. Informants rated the animals in good to excellent condition with some impact from a lack of food resources, such as new grass and low plant growth, "due to overgrowing of trees."

The fish species used for food and trade included siskowit or fat trout, lean lake trout, whitefish, and herring. Mattsons had shipped siskowit, fresh or salted, to Chicago area markets rather than rendering them for oil. Informants rated the condition of the fish from good to excellent with some impacts and potential impacts. Cormorants are consuming the small herring. If small Tobin Harbor creek supports lamprey spawning as has been rumored, then there would be an impact on lake trout. Additional impacts come from strong sport fishing pressure although one respondent viewed catch-and-release of the big fish as good.

Surface geologic features discussed included the many small islands, each of which has its own reef, and the general nature of the harbor. The small islands and very protected waters provided safe places for nets. The islands also were used for residences, shelter, and scenery. Informants rated the islands in good condition although many are being overgrown and becoming less desirable for human habitation, and the ends of some islands are eroding

The subsurface geologic features of reefs and bays provided good habitat for fishing. Informants rated the reefs in good condition with nothing affecting them.

Informants rated the overall condition of Tobin Harbor as fair to excellent, and suffering from neglect. Informants indicated that many of the docks and fishing houses throughout the harbor are in need of "tender loving care," and that many people can not spend as much time on the Island as is needed for proper maintenance.

Recommendations were made for protecting the water, plants, fish, buildings, fishery. Where beaver and otter have taken up residence under fish houses, they should be removed. Thinning of the larger trees, especially near the buildings is needed. Informants indicated a desire to restore the views from the water of the family homes by "brushing out" these areas so they would look more like they did in the past. The continuation of catch-and-release fishing was recommended for sport fish management.

As with some of the other sites, the recommendation was made to restore Tobin Harbor to a folk fishery with on-going fishing assessment. This site is considered to be a "very good candidate for having an assessment permit," and reestablishment of a fishery would meet the recommendation to protect the buildings.

Informants expressed a great deal of concern about their futures with their homes when the life leases expire. Tobin Harbor is a fishery, a home, and a heritage for the fishermen, and future access for fishing and visiting is a high priority for informants.

Vodrey Harbor

About four miles south of Chippewa Harbor lies a small cove called Vodrey Harbor (Figure 5.21). Named for the only fisherman to use the site as a fish camp, it offers a fair amount of protection from storms. Vodrey came to occupy the site during the boom years of the early 1900s when the better fish camps along the south shore were already claimed. "It really does not afford sufficient protection from east or southeast winds. It's like Little Boat Harbor in that it is not a choice site, kind of a bachelor site. Vodrey was a single man fishing alone."



Figure 5.21 Today, Vodrey Harbor shows no signs of having been a fish camp.

The site comprises the small harbor, land base, and the fishing grounds. Other fishermen and their families used the cove as a picnic area after Vodrey left. The primary uses made of the site were living, fishing, and celebrating the Fourth of July. Besides being a somewhat protected area, the land from around the harbor and north to Chippewa Harbor was some of the best blueberry country on the Island.

Vodrey Harbor is connected to Chippewa Harbor and Wright's Island through market and social activities. Because the harbor was too small for the larger boats to navigate, Vodrey would meet the market boat off-shore. When weather did not allow this, he likely used Chippewa Harbor or Wright's Island to meet the boat, ship his catches, and pick up supplies and ice. Social interactions would be part of market days on the Island.

The resources used at this site include water, plants, fish, the harbor, greenstones, and reefs (Table 11). The lake water was used for drinking, other domestic purposes, and travel. Informants rated the water in excellent condition with nothing affecting it.

Overall	Excellent
Plants	Excellent
Water	Excellent
Fish	Excellent
Geologic Features	Excellent
Subsurface Features	Excellent

Table 5.11 Informants' condition ratings for Vodrey Harbor.

The site is near some of the best blueberry patches on the Island. Neighboring families would come to the greenstone beaches for picnics and to pick blueberries, which informants said were in excellent condition with nothing affecting them.

Herring and lake trout were the target fish species. Since Vodrey had to meet the market boat at Chippewa Harbor or Wright's Island and did not have ice, it is believed that he concentrated on salt herring more than lake trout to minimize additional travel. Informants rated the fish in excellent condition but stated that the cormorants are increasing in number and hitting the herring hard in this area.

Surface geologic features include the small harbor and greenstones. The small harbor was associated with living and fishing. The greenstones had commercial value at the time and Vodrey was located between two of the best beaches where these could be

found. It is not known whether Vodrey made commercial use of the greenstones but hunting for the stones was a popular pastime. Informants rate the harbor in excellent condition with nothing affecting it.

The reefs associated with Vodrey Harbor do not provide fish habitat as good as that of many of the other reefs. Informants rated the reefs in excellent condition but felt the cormorants were have some impact on the quality of the reef habitat.

The overall condition of Vodrey Harbor is excellent and nothing is affecting it. The only management recommendation made was for the place as a whole. Informants felt it should be catalogued as a former fishing camp. They also indicated a desire for future uses such as picnicking and visiting another fishing camp. The small harbor and beach are ideal for small boat use and access.

Washington Island

Of the cluster of islands in Grace Harbor at the south end of Isle Royale, Washington Island is the largest. Also known at various times as Barnum's Island and Singer Island, it is the original area of establishment at Isle Royale. The area has seen several name changes due to the number of families and resorts from these islands northeast to Windigo. "It was called Singer Island back (then), (after the people who owned the hotel). And then Art changed it to Washington Island. This whole harbor (circle A on Figure 5.22) doesn't have a name basically. That's Washington Harbor out there according to the charts. This (bay) (circle B on Figure 5.22) has no name. That was Johnson's Island over there; it's John's Island now and Bob John said 'Well, they made a mistake on the charts when they made 'em up. So it's always,' he said, 'it's always been Johnson's Island.'" Geographically, the area has good views of the islands and the irregularities of the terrain. The views from Sunset Point are particularly impressive.

Although fishermen, summer residents, and tourists also occupied Rock Harbor, Washington Island was described as a settlement, a community where people were not alone. There were more resorts, and as many as 20 fishing families lived there in the early 1900s. The Johns hotel even had a bowling alley and a dance hall. "Christine and Willie (Williamson) were here before and Hans Peterson was here before (the Eckels). (Sam Sivertson) started out over there (C on Figure 5.22), then brothers Carl and Einer

Eckmark were here but they fished for (Art Sivertson). Andy Hansen fished here. Gus (Bjorlin) fished for a little bit here. That goes quite a ways back. Maggie (Magnus) Martin's house was here too (before 1928)." While the majority of these fishermen were Norwegian, at least one Swede, John Samskar, fished there as well. Part of the extended Mattson family, Samskar fished next to Stanley Sivertson from 1891-1910.

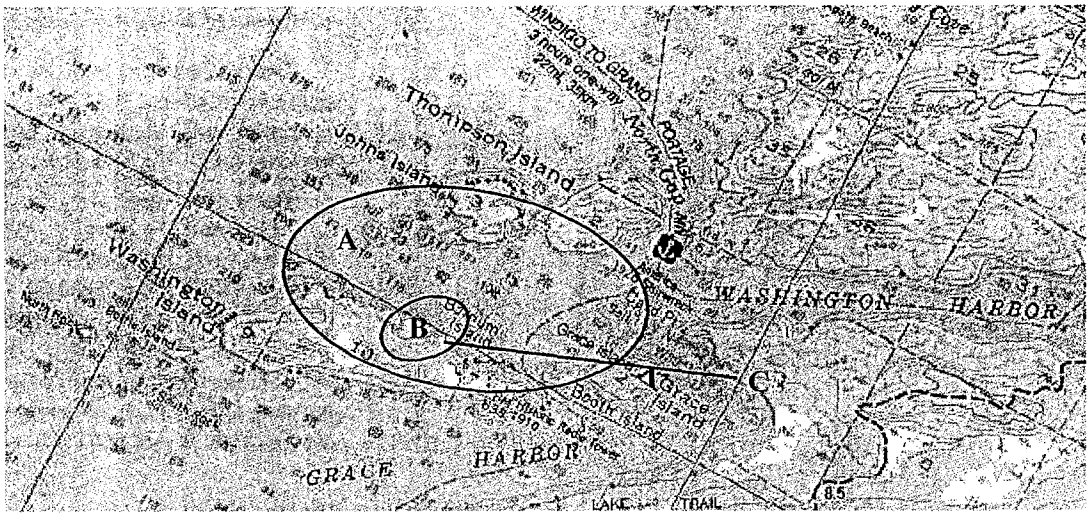


Figure 5.22 Washington Island and surrounding area.

Some of the Scandinavian fishing families developed more extensive camps than others (Figure 5.23) but their activities were the same: residences, fishing, occasional hunting, gathering plants for food and construction, and celebrations, particularly the Fourth of July. The location, the closest part of Isle Royale to the mainland, was central to fishing and housing. The numerous small coves and bays, and the amount of shoreline accommodated many fish houses and the related activities. Rabbits, moose, and berries were the primary food plants. An "extra super" raspberry patch was known on a nearby hill. Given the open space at the time, the number of families, and the hotel and resorts, the area was ideal for Saturday night social gatherings and Fourth of July celebrations.

Some families had relatives elsewhere on the Island, but the strongest connection was with Booth Island where the fish were picked up. The fishermen's wives had a water route between the two islands, which they rowed for social purposes.

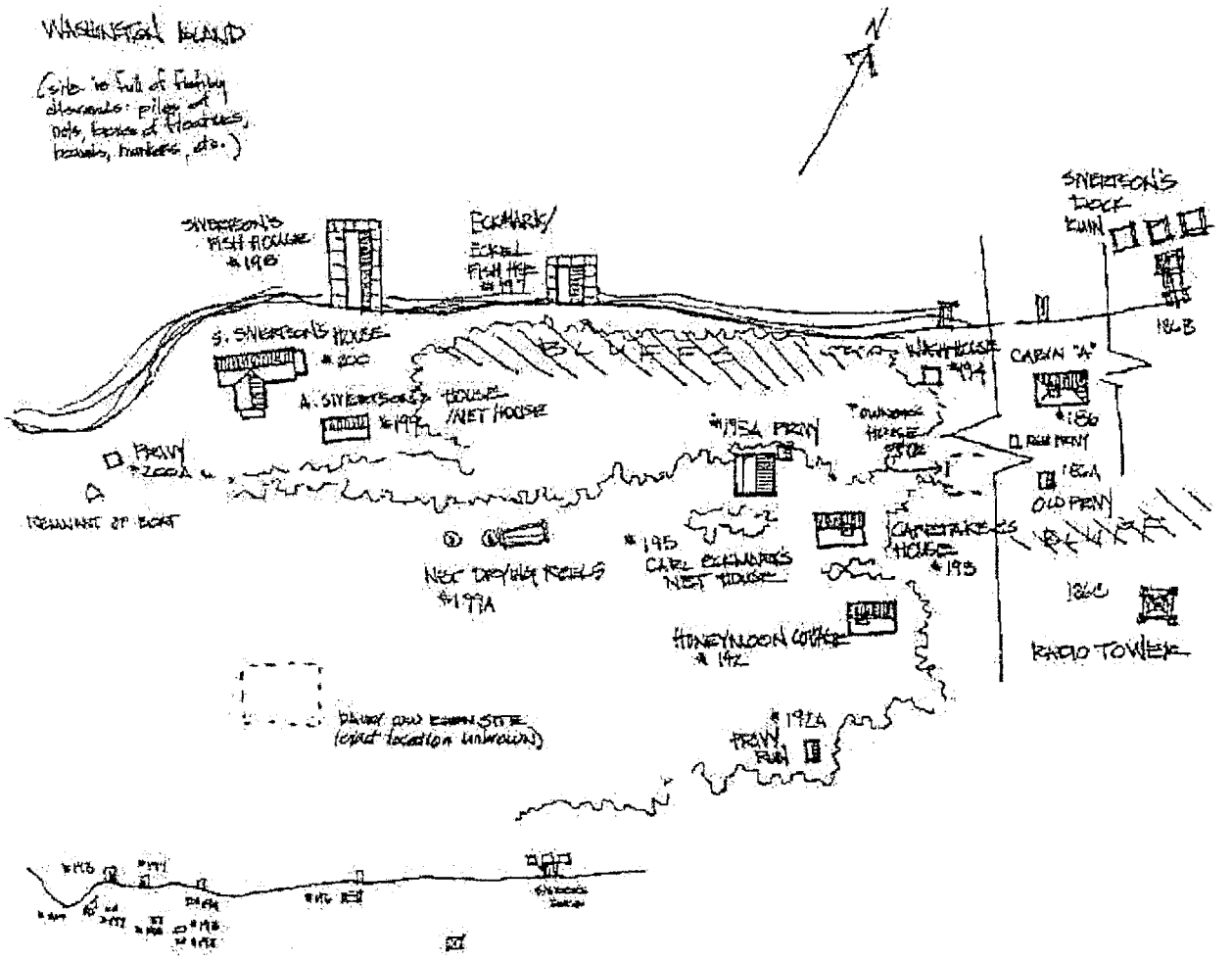


Figure 5.23. Partial Layout of Buildings on the East End of Washington Island (Dena Sanford 1995, in Franks and Alanen (1999:83)).

That was kind of a Thursday thing because Monday they washed, Tuesday they ironed, and Wednesday they mended and Thursday they visited ... they had to do some baking on Wednesday because the ladies were out visiting on Thursday ... always clean on Fridays. Saturday and Sunday, usually Saturday and Sunday didn't make a whole lot of difference. I suppose they probably caught up with what they hadn't gotten done, I don't know. Saturday night, I know, they went down to the dance hall. Down at the end of Singer Island, or Washington Island, was a bowling alley ... uncle played a concertina. One man played a violin and they would play for dancing.

Informants discussed the water, fish, buildings, and geologic features, and had suggestions for the future management of Washington Island that focused on the remaining buildings and structures (Table 5.12 and Figures 5.24, 5.25, 5.26, and 5.27).

Overall	Excellent
Plants	Excellent
Water	Excellent
Fish	Excellent
Geologic Features	Excellent
Subsurface Features	Excellent

Table 5.12 Informants' condition ratings for Washington Island.

As at other fish camps, water was used for fishing-related activities and domestic purposes with one noticeable difference. Possibly as a result of the number of families; the fishermen of Washington Island had a separate dock for each purpose.

We had water docks. We didn't take the water from the regular docks, but we drank right from the lake. So we had separate water docks where you couldn't park a boat or anything like that. The rowboats used to come, the ladies come to coffee, they'd use the dock, you know. They took their water, in pails from there but, and like I say, they were never used by any boat with a motor. It was always somebody rowing.

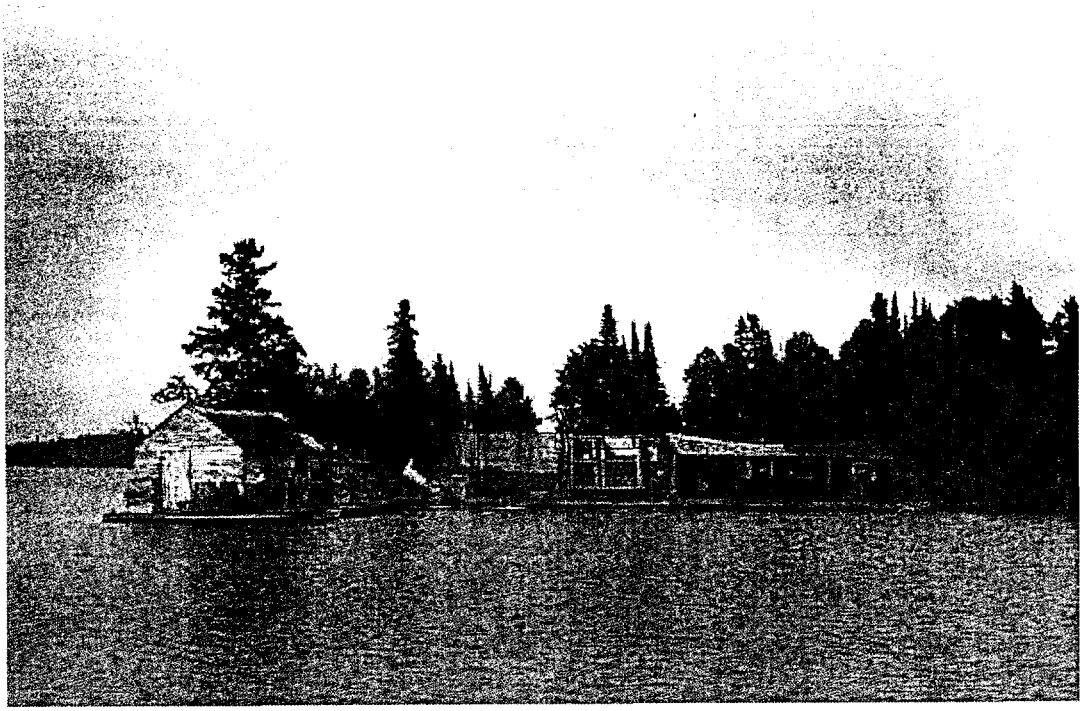


Figure 5.24 Washington Island fish camps then (above) and now (below).





Figure 5.25 Little remains of many of the Washington Island fish camps (above) but others remain in relatively good condition (below).

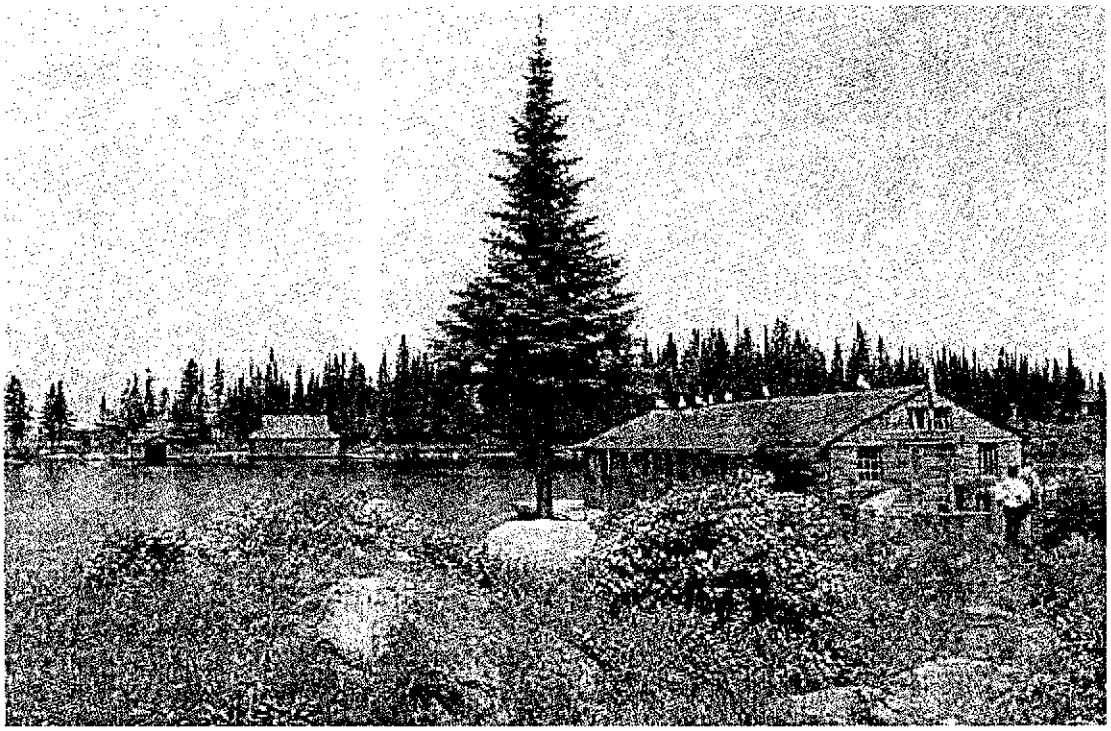




Figure 5.26 Fishermen and their families watched for weather changes such as fog (above) and the returning fishermen (below).



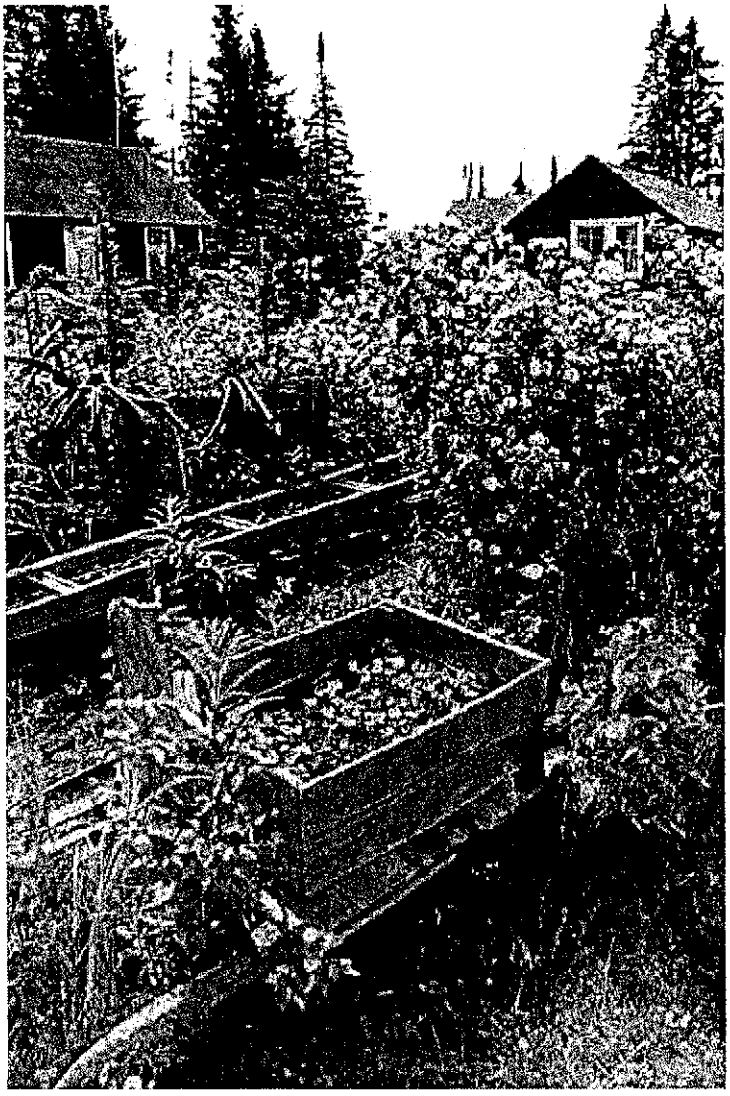


Figure 5.27 Fish boxes and other remnants of the Washington Island fish camps.

Several fishing stocks, which were used as a source of food and economic livelihood, were known within the various fishing grounds of the Washington Island fishermen. The Rock of Ages fish, for example, looked like a red brook trout and weighed about eight pounds. Lake trout was the primary market species for most of the Washington Island fishermen. The fish were rated in fair condition with both natural and management activities affecting that condition. "Fish populations are way up. The overall quality is not as good because so many have been interbred with siskowits. Some you

have to throw back because they are too fat. The Rock of Ages fish has totally interbred (due to) selective species targeting and under-caught fish spread all over."

The aspects of traditional use and occupation informants discussed included earlier hotels and other buildings that together comprised a "village" that attracted people. In addition to the residential and fishing use of some of these buildings, fishermen were also part of the community and participated recreationally with summer residents, tourists, and other who visited Washington Island, particularly during the Fourth of July celebrations. Informants gave an overall rating of poor condition to the hotels and buildings, many of which are all but gone. On-going natural deterioration and lack of maintenance continue to degrade the remaining structures. "One hotel has been torn down by the Park. The Johns Hotel went broke but it is still standing. We are trying to restore it."

The harbor of Washington Island, identified by informants as the surface geologic feature of concern to fishermen, offer good protection from storms. Washington Island is situated in such a way as to accommodate many homes within the shelter of the harbor. Informants indicated that the harbor is in good condition, although, some erosion of the ends of the islands is occurring. The erosion is due to the lack of cribbing which protected the harbor and islands in times past.

Reefs once again were identified as the subsurface geologic feature of interest to the fishermen. Fish live and spawn among the reefs which are "hard rock reefs (that) don't change. Other reefs are sand and gravel and will normally move but (these do) not change." Informants, consequently, rated the reefs in excellent condition with nothing affection them.

As to the overall condition of Washington Harbor, informants rated it in fair condition and being affected primarily by a lack of maintenance. "Most of the buildings are dilapidated. It was a busy place (that) has gone downhill since the Park took it over ... does not want to maintain the history of the area."

Management recommendations suggested by informants focused on the remaining homes and structures. Informants felt the area should be maintained and managed for its historic value, a task that could be shared between the fishermen and the NPS. "Local fishermen would maintain their own buildings if they had some assurance that they could

be there for some time." No recommendations were made for the harbor erosion as informants did not believe it was serious enough to address at this time. Other suggestions included:

- rebuilding the lodge at Windigo,
- rental boats for fishing,
- making better facilities along the lake for boaters,
- permission to continue to use the buildings as at present,
- have long-term leases for buildings,
- no new construction but small sheds should be okay, and
- nominate the community as a historic district as long as people continue to use the buildings.

Informants affirmed on-going interest within their families of future use of Washington Island. Children and grandchildren presently are able to spend time with parents and grandparents on the island and experience some of the lifestyle from which they come. In doing so, they experience some of the valuable life lessons, apparently missing from mainland life, that Isle Royale has provided since the Scandinavian fishermen made it their home.

Wright's Island

Located in the north end of Siskiwit Bay, Wright's Island, known also as the Holte Fishery, has two harbors. The northern harbor, however, offers much less protection than the south harbor, which was home to Sam Johnson's family and to the Holte family. The fish camp remained in the Johnson family, in a manner of speaking, since Sam's daughter Ingeborg married Ed Holte and they maintained the fishery.

The core of the Wright's Island fishery begins with the main fish camp and extends to the harbor, the edge of the woods, and the south point of the island. It goes on to include the entire island, the waters to Schooner Island on the northeast, the waters to Little Siskiwit Island on the southwest, to the main shore of Isle Royale, and to the archipelago of Long, Menagerie, and Paul Islands in the southeast.

Geographically, the island is quiet, enclosed, sheltered, and private. It is "always fairly cool and breezy [with a] sense of water ... sounds." The overall beauty of the harbor and the area of the fish camp make it distinctive in the minds of the informants.

The site represents one of the traditional fisheries of the Island that has continued since prehistoric times. A fish company, that processed fat trout, or siskowit, for oil, was located here at the turn of the century. Remnant oily sand and Indian artifacts of pottery, needles, and bone found along the beach, indicate a long history of use of the site. Indications of logging and mining, however, have not been found. In addition to living and fishing, use of the site included hunting, gathering food, and celebrations.

Sam Johnson and Ed Holte are the best remembered fishermen of Wright's Island but others who occupied the site before them include the Ronnings (John and Fina) and the Purdys (Charles Freeman and Mary). Through family relations, Wright's Island is connected to Chippewa Harbor. Social and fishing relationships connect it to Cheringa (Old Lady's Point), Shiverette Island, Hay Bay, and Fisherman's Home. The fishing grounds associated with Wright's Island were contiguous to those of the Hay Bay and Fisherman's Home folks, the Skadbergs and Rudes respectively.

The sheltered location of the harbor allowed fishermen to see the weather coming while being protected from the elements. With quite a bit of soil on it, the island was relative level and easy to build upon. Charles Freeman Purdy built his first home on the ridge north across the bay from the current cabin (Figure 5.28a). Sam Johnson built the main cabin that remains at the Holte fishery (Figure 5.28b). The Purdys later moved into a small house in front of that cabin.

The deep harbor is easily accessible if you know how to dodge the reefs. The surrounding fishing grounds are very productive with deep waters, shallow reefs, and a rocky, productive shoreline. Lake trout, herring, and whitefish were the food and market species of this fishery. Fat trout, or siskowit, was available also and had been marketed as lamp oil in the past.

The island was prime habitat for moose and ducks. Some berries could be found on Wright's Island and good berry patches could be found nearby on the mainland. The fishing families also found Wright's Island attractive for Fourth of July celebrations. Being a pickup site for the market boats, having adequate and picturesque open space,



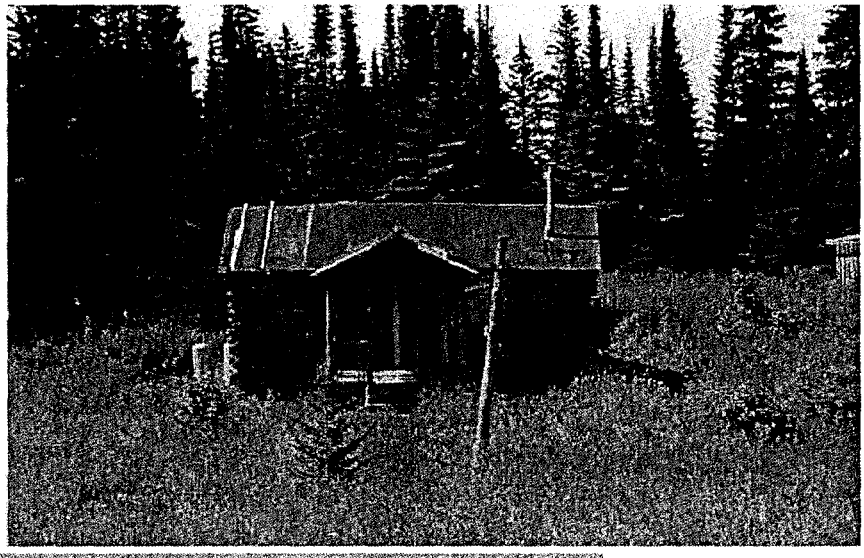
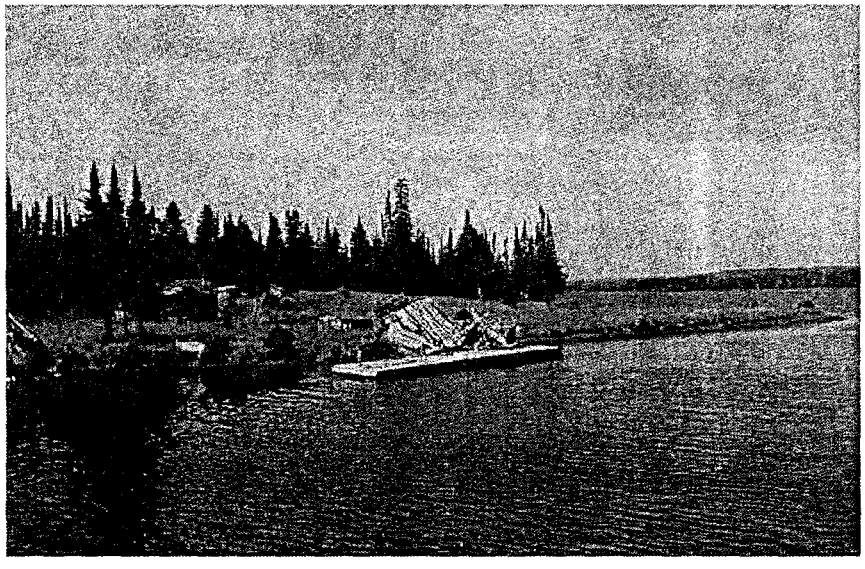


Figure 5.28 At Wright's Island, little remains of a once busy fish camp. The ridge site of the Purdy homestead (a - above), the Sam Johnson homestead (b - middle), and the site today (c - below).



and being convenient to several fishing families, Wright's Island was a favorite for these annual gatherings. But as one respondent put it, "It's a commercial fisherman's place and that's all it took."

Fishermen made use of the water, plants, animals, fish, islands, harbor, reefs, and currents (Table 5.13). Lake water was used for domestic needs, fishing, and putting out fires. Children also would play in the shallow areas of the harbor. The island has a high water table but the fishermen did not make use of it. Informants rated the water in fair to excellent condition but it is being affected by parasites that make in unfit for drinking. Blueberries and horseradish were used for food while various woods provided construction materials, and spruce pitch was used medicinally. Informants rated the plants in good condition but identified natural processes as changing the composition. The island has not burned for many decades unlike the nearby forest on the main island. Construction of beaver houses and moose browsing have affected the health and composition of the vegetation.

Overall	Fair to Good
Plants	Good
Animals	Good
Water	Fair to Excellent
Fish	Don't Know to Excellent
Evidence of Previous Occupation	Poor
Geologic Features	Excellent
Subsurface Features	Excellent

Table 5.13 Informants' condition ratings for Wright's Island.

Informants identified moose, beaver, dogs, and spiders as animals that occupied Wright's Island. Moose were used for food occasionally before the 1940s. The dogs fishermen brought with them from the mainland, moose, and beaver were a source of companionship and entertainment. Spider webs were used medicinally to treat cuts. Informants rated the animals remaining on Wright's Island as being in fair to good condition. A bad winter seems to have reduced the number of birds and no moose calves were seen last year. The beaver have disappeared, possibly due to their house flooding, wolf predation, or lack of food. Winter browse for moose is declining as well.

Herring, lean lake trout, and whitefish were used for food and economic livelihood. Fat trout contributed historically to fishermen's economic livelihood as lamp oil. Informants' evaluation of the condition of the fish ranged from not knowing to excellent. Although some informants had heard that the fishing is good, they were not personally aware of it. In the 1980s, several of the fishermen noticed fresh scars on the lake trout indicating that the lamprey had not been completely eliminated from Isle Royale's waters. Recently, sports fishermen noticed impacts from lamprey and cormorants, noting new scars on lake trout that indicated new hatches of lamprey. The many cormorants in the area are believed to have significantly reduced the herring populations.

An archaeological site by the beach and the Purdy homestead were identified by informants for evaluation. The archaeological site, excavated about six years ago, contained Indian artifacts. The Purdy homestead on the ridge had been torn down, supposedly by the NPS. These traces of previous use and occupation were rated in poor condition by informants (Figure 5.28c). The archaeological site is eroding and the homestead "suffers from a lack of preservation."

The surface geologic features evaluated by informants included the points of the island, the deep harbor, and the chain of nearby islands. All the components of a safe harbor can be found here: safety, accessibility, deep water, and reefs. Informants rated these features in good to excellent condition with only natural erosion processes affecting that condition. Some silting in of the inner harbor is occurring while the lake currents erode and rebuild the shoreline. "Islands are like that around here. They've (the shorelines) appeared and disappeared (for decades)."

Subsurface geologic features discussed by informants included reefs, bottom structures, underwater topography, currents, and water temperatures. Informants described subsurface characteristics of shallow, pebbly areas, good reefs that are deeper to the south and near the shore, areas of warm water, and currents that are "big when the water is high." All of these characteristics combine into very productive fishing habitat across a large area of Siskiwit Bay. Informants rated these features in excellent condition with nothing affecting them.

The overall condition of Wright's Island is fair to good but threatened. The lack of maintenance by the NPS has resulted in the fish house and net house being irreparable and needing removed. Sam Johnson's double-ended boat, the same kind used by the fishermen in Sweden, also has been allowed to erode beyond repair. The house, other remaining buildings, and dock need a significant amount of maintenance.

Management recommendations suggested by informants focused on protection and preservation of the site. The homestead and other buildings should be taken care of, including clear brush from around the house, and the number of visitors should be controlled. The site should not be crowded with boats to prevent impacts to the wildlife, and moose habitat should be improved with fire. A comprehensive assessment program was suggested as a way to monitor two streams in Siskiwit Bay that are known to produce lamprey. Lamprey control should be implemented as should control of the cormorant populations. Informants felt the place should be repaired and returned to the care of the Holte family for as long as they wanted to stay, and then occupied by a descendant fisherman for assessment fishing purposes.

Informants indicated that many descendants of Isle Royale fishing families would like to continue to visit the site in the future. The heritage of the site is something that should be experienced by descendants rather than read about in books. Several fishing families feel a close association with Wright's Island and strongly support the previous recommendations.

CHAPTER SIX
CULTURAL LANDSCAPES OF THE SCANDINAVIAN FOLK FISHERS OF ISLE ROYALE

Three data sets -- site, landscape, and map -- contributed to our understanding of the cultural landscape of the Scandinavian folk fishers of Isle Royale. The site data includes descriptions and boundaries of the sites, which also includes the associated fishing grounds, the important resources and uses of each site, the condition of the resources and sites, and management recommendations for the resources and sites. The landscape data includes locations of fish camps and communities, relationships between the fishing families within those communities and among the fish camps throughout Isle Royale, and connections between these places and other communities and places on the mainland. The map data includes locations of fish camps, reefs, deep-water fishing grounds, and land trails, water routes, and recreational areas used by the fishermen and their families.

Combined, the three data sets elucidate uses, meanings, and relationships at the site, island, and regional levels, a structure that parallels the Native American landscape layers of ecoscapes and regional landscapes. The site and island levels are ecoscapes of different spatial scales. The regional landscape comprises Isle Royale, the North Shore of Minnesota, the shorelines from Duluth through the Upper Peninsula of Michigan, and that portion of Lake Superior circumscribed by the shores of the mainland and extending to the northern edge of historic Isle Royale folk fishing grounds. The combined data sets also clarify the extent of the relationships between sites and other places, and the role of the cultural landscape in the lives of the fishermen and their descendants.

Both the site and island ecoscapes are comprised of three environments: the terrestrial, the maritime, and the submerged or underwater. Construed as cultural

landscapes themselves, these environments are comprised of vertical and horizontal natural and human elements.

The terrestrial landscape is made up of a small clearing for each fish camp, a house and other buildings, small gardens of flowers and/or vegetables, the shoreline, and open spaces. This landscape accommodates the basic needs of living including natural resources. Trails, plants, animals, rivers, landmarks, and views provide for recreation, food and material gathering, navigation, scenery, and shelter. Shorelines are transitional between the terrestrial and maritime landscapes, as well as between the terrestrial and underwater landscapes.

The maritime landscape, the features of which overlap with the terrestrial and underwater landscapes, begins at the fish camp with the fish house, net house, net reels, and oil areas. Extending from these features are docks, boats, shorelines, rivers, and the overall interface between island and lake that form a two-way transition between the terrestrial and underwater landscapes. The interface, characterized by sheltered harbors and coves, channels, small islands, island points, open water, and sounds, aids the fishermen in their pursuit of a livelihood, and provides a setting in which to teach new generations of fishermen. The sheltered harbors and coves provide protection from storms, small islands and island points provide territorial markers and landmarks for navigation, rivers provide spawning areas for some species of lake fish, and sloping beaches provide a place to haul boats from the water for repairs or winter storage. In addition to the lighthouses used by the fishermen in foggy weather, the sounds of waves meeting the shoreline, the odor of the land, the visible underwater landscape, and bird calls serve as navigational aids.

The interface of the maritime landscape represents an emotional transition as well since it is from here that fishermen leave the safety of home and harbor for the dangers of the deep, cold waters of Lake Superior. This aspect of the interface also extends to the terrestrial landscape as families watch the fishermen leave and wait for their return.

Underwater landscapes begin at the dock cribs the fishermen constructed from native rock and logs. From the calm water of the sheltered harbors, the fishermen sailed or motored in small wooden boats to fish habitats of rock reefs, shallow, sandy bottoms, or deep waters. There they set gill nets or hooklines to catch lake trout, whitefish, and

herring. Some fishermen went out 4-12 miles from shore but often concentrated their efforts in less than 100' of water. They followed the same routes to their fishing areas and knew the terrain below those routes better than anyone else. Many of their descendants today still know those routes and will use them while others avoid them.

Shipwrecks of freight boats that once serviced the fishermen are also a part of the underwater landscape, one that reminds them of the dangers associated with their lifestyle. The shipwrecks are further incorporated with the overall cultural landscape through story-telling and the salvaging of materials for use in fish camps.

This chapter begins with a summary of the history and characteristics of the cultural landscape of the Scandinavian folk fishermen. The landscape data follows in the form of summary tables of responses, and quotes compiled from the landscape form, details provided on the landscape field maps, from the site form, and from miscellaneous comments made during other interviews. The number of quotes, consequently, do not always correlate to the tables preceding them, which reflect only the landscape form data provided by twelve respondents (eight men and four women). One should keep in mind that many of the respondents are of Norwegian ancestry so while responses may give the illusion of a Norwegian landscape, they, and the non-Norwegian respondents, are describing a Scandinavian landscape. The use of multiple data sources enhances our understanding of the existence, extent, and persistence of the cultural landscape.

History and Characterization of the Cultural Landscape

The cultural landscape of the Scandinavian folk fishermen was conceived in the late 1880s when the second wave of Scandinavian immigrants began to settle the North Shore. As fishermen from other ethnic groups shifted from fishing to mining and logging on the mainland, more Scandinavian fishermen filled the fishery niche including the waters of Isle Royale.

For the next 120 years, Scandinavian folk fishermen and their families lived on and fished from Isle Royale, primarily from April to November each year. Most families wintered in Scandinavian communities along the North Shore, although, during the depression more of them spent the winter in their island homes as a way to keep down expenses and indebtedness. The Washington Harbor and Rock Harbor areas of Isle

Royale became home to communities of as many as twenty fishing families at any given time. Other fishermen, both bachelors and family men, established or occupied isolated fish camps that could be found in almost every sheltered harbor along the Isle Royale shoreline.

The Scandinavian fishermen of Isle Royale shared and competed for land and fishing grounds during the more populated years. Some shared work areas in the terrestrial and maritime landscapes. Competition occurred in the underwater landscape in the sense that fishing grounds were claimed on a first-come-first-served basis. The underwater landscape was shared to a certain extent, however, and competition was subtle. The fishing grounds had shared boundaries that, when mapped, formed a contiguous area of Scandinavian fishing territories that encircled Isle Royale and extended up to twelve miles from the shoreline into Lake Superior (Figure 8.1).

Strong family, social, and economic connections bind Isle Royale fishing communities to each other, to many communities in Minnesota and Michigan, and to Scandinavian homelands. Supported by land trails, water trails, stories, and geologic and environmental features, these connections persist among the descendants of the fishermen today.

As identified by respondents, seven areas, defined by delineating points of group-associated fishing grounds, were shared by multiple fish camps.

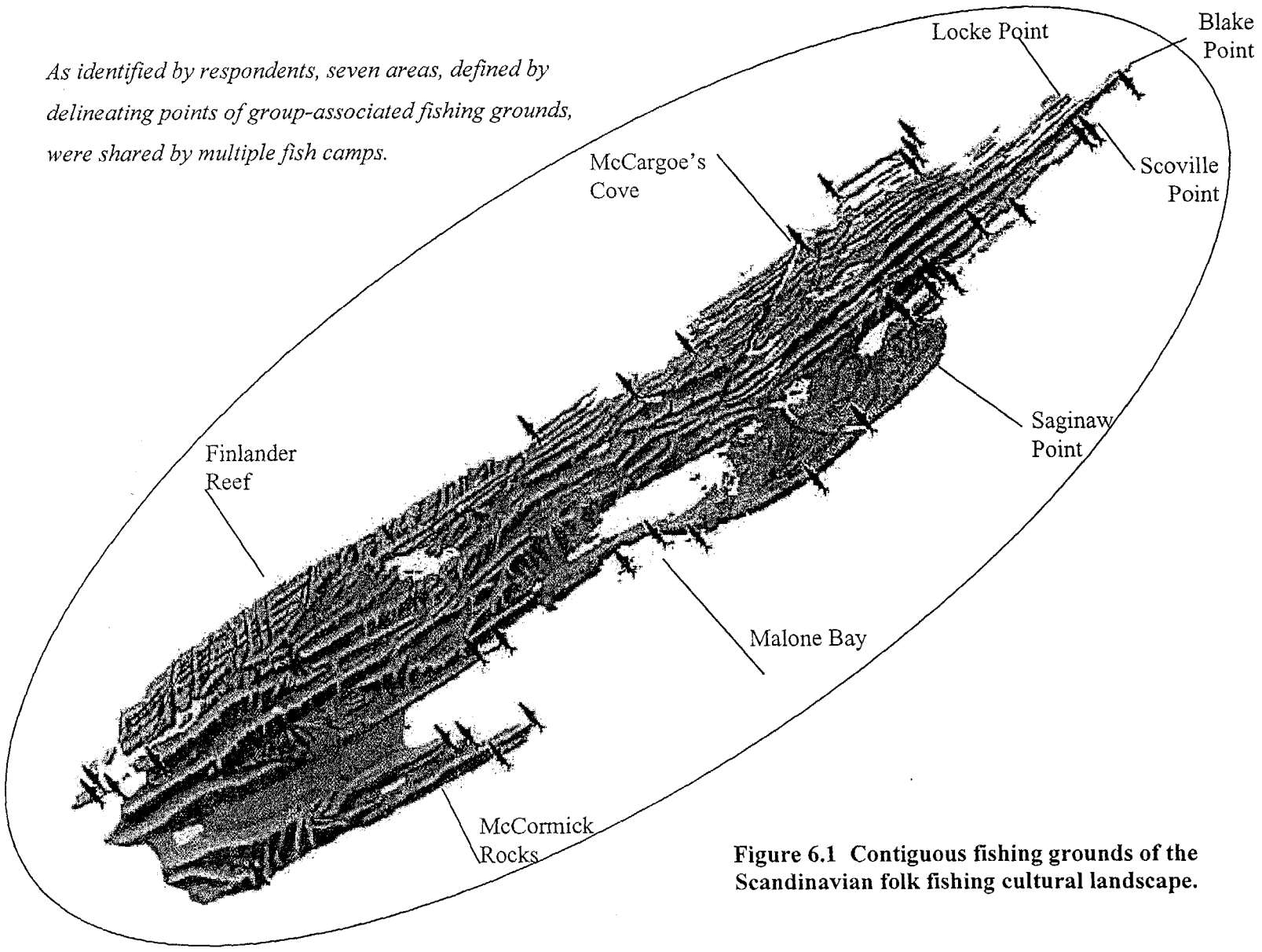


Figure 6.1 Contiguous fishing grounds of the Scandinavian folk fishing cultural landscape.

Table 6.1 Isle Royale Fishing Communities by Informant Totals.

Responses	Female	Male	Total
Amygdaloid Island	3	5	8
Belle Isle	3	5	8
Caribou Island area		2	2
Checker Point	1	1	2
Chippewa Harbor	2	5	7
Crystal Cove	2	4	6
Daisy Farm		1	1
Edisen Fishery	2	6	8
Fisherman's Home	2	6	8
Hay Bay	3	7	10
Johnson Island (Fish Island)	1	2	3
Little Boat Harbor	1	3	4
Locke Point		1	1
Long Point	1	1	2
Malone Bay/Island	1	2	3
McCargoe's Cove	2	4	6
McCormick Rocks		1	1
Merritt land		1	1
Moskey Basin	1	2	3
Point Hay	1	1	2
Rock Harbor	1	1	2
Saginaw Point		1	1
Scoville Point		1	1
Siskiwit Bay		1	1
Star Island	2	5	7
Tobin's Harbor	2	5	7
Todd Harbor	1	2	3
Washington Harbor/Island		2	2
Wright's Island	2	5	7

Q7: Where were the commercial fishing communities located on Isle Royale?

Male *The general areas were from Washington Island area east to McCormick Rocks; from McCormick Rocks to straight out from Malone Bay; from Malone Bay to Saginaw Point; from Saginaw Point to the Scoville Point area; from the Scoville Point area to Locke Point; and from Locke Point to McCargoe's Cove.*

Male	*Grace Island, Fisherman's Home, Hay Bay, Wright's Island, Chippewa Harbor, Edisen Fishery, Rock Harbor, Star Island, Tobin's Harbor, Crystal Cove, Belle Isle, Amygdaloid Island, McCargoe's Cove, and Todd Harbor.*
Male	*Grace Island, Washington Harbor, Fisherman's Home, Hay Bay, Wright's Island, Chippewa Harbor, Daisy Farm, Edisen Fishery, Rolf Anderson's across the channel from Caribou Island, Star Island, Tobin's Harbor, Belle Isle, Amygdaloid Island, and Todd Harbor near the Pittsburgh and Isle Royale Mine.*
Male	*Grace Island, Washington Harbor, Little Boat Harbor, Fisherman's Home, Hay Bay, Chippewa Harbor, Edisen Fishery, Caribou Island, Star Island, Tobin's Harbor, Merritt Land north of Tobin's, Belle Isle, Johnson Island, Amygdaloid Island, and McCargoe's Cove.*
Male	*Washington Harbor, Little Boat Harbor, Fisherman's Home, Siskiwit Bay, south of Point Houghton, Checker Point, south of Point Hay, tip of Point Hay; Hay Bay, Wright's Island, Chippewa Harbor, Edisen Fishery, just south of Edisen Fishery, Star Island, Tobin Harbor, Belle Isle, Crystal Cove, and Amygdaloid Island.*
Male	*Washington Island, Long Point, Little Boat Harbor, Hay Bay, Wright's Island, Malone Island, Chippewa Harbor, Edisen's Fishery, just south of Edisen's in Moskey Basin, Star Island, Tobin's Harbor, Fish Island (what others have called Johnson Island, next to Belle Isle), Crystal Cove, Amygdaloid Island, and McCargoe's Cove. These communities were connected through back and forth visiting. Also, some networks continued back on the north shore. Networking was more in the winter time because boats were slow and gas was a premium.*
Male	*Washington Harbor, Fisherman's Home, Hay Bay, Wright's Island, Edisen Fishery, and Crystal Cove.*
Female	*Grace Island, Fisherman's Home, Hay Bay, Wright's Island, Chippewa Harbor, Edisen Fishery, Rock Harbor, Star Island, Tobin's Harbor, Crystal Cove, Belle Isle, Amygdaloid Island, McCargoe's Cove, and Todd Harbor.*
Female	*Washington Island, Long Point, Little Boat Harbor, Hay Bay, Wright's Island, Malone Island, Chippewa Harbor, Edisen's Fishery, just south of Edisen's in Moskey Basin, Star Island, Tobin's Harbor, Fish Island – what others have called Johnson Island next to Belle Isle, Crystal Cove, Amygdaloid Island, McCargoe's Cove. These communities were connected through back and forth visiting. Also, some networks continued back on the north shore. Networking was more in the winter time because boats were slow and gas was a premium.*

Female *Washington Harbor area, Siskiwit Bay area from Fisherman's Home to Checker Point to Hay Bay, Belle Isle, Belle Harbor, Amygdaloid Area.*

Table 6.2 Were these Isle Royale fishing communities connected with communities elsewhere?

Responses	Female	Male	Total
Yes	2	7	9
No	1	1	2
Don't Know	1		1

The Isle Royale fishing communities had strong connections to each other and to many communities in Minnesota and Michigan. Many of these communities were winter homes for the fishing families, or places where they had friends. Some connections were a result of the fishing business such as the places where the freight boats came from to pick up the fish on Isle Royale, where they went to vote and get their fishing licenses, and where the fish were marketed.

Q9: Where are those communities and how are they connected?

Male *Fisherman's Home through relatives and friends. Crystal Cove through relatives. And Washington Harbor through relatives.*

Male *Edisen Fisheries, Wright's Island, Rock Harbor light house, Star Island, Crystal Cove. Edisen Fisheries with Chippewa Harbor through family. Wright's Island through family. Rock Harbor light house, Star Island, and Crystal Cove through family.*

Male *The North and south shores. Also, Duluth where they marketed fish. Grand Marais, Minnesota, some families wintered there. Many of the north shore towns like Lutsen, which is considered to be part of Grand Marais. And Beaver Bay. The very early families wintered there. Also, Two Harbors and Eagle Harbor; families wintered there.*

Male *Duluth; that's where the freight boats for fish came from. Grand Marais and Grand Portage; also where freight boats for fish came from. The North Shore because families wintered there. Also Two Harbors, Knife River, and Duluth; most families wintered there and at the west end of Lake Superior. Some families would vote by mail in Eagle Harbor.*

Male *All along the north shore of Minnesota through family and market relationships. Isle Royale was also a tourist destination back then so it was connected to any number of places.*

Male *Minnesota and Michigan. Grand Marais, Two Harbors, and Duluth, Minnesota and Eagle Harbor, Michigan. Besides those four, Hibbing and Poplar, Minnesota. All of them through the common theme of commercial fishing. There was some interaction with each other back on the mainland, more of a social network during the winter than out here because of work, because boats were slow and gas was a premium.*

Male *The U.P. to vote and to get fishing licenses. Grand Marais and Grand Portage; that's where the fish went.*

Female *As they left Isle Royale, they would winter in Grand Marais, Two Harbors, Duluth for sure, and uh there was one that I know of that lived in Poplar, Wisconsin. And they spent time in Hibbing. (Some) went to Hancock or something near Eagle Harbor.*

Female *The North and south shores. Also, Duluth where they marketed fish. Grand Marais, Minnesota, some families wintered there. Many of the north shore towns like Lutsen, which is considered to be part of Grand Marais. And Beaver Bay. The very early families wintered there. Also, Two Harbors and Eagle Harbor; families wintered there.*

Table 6.3 Did fishermen from different ethnic backgrounds fish and live on Isle Royale?

Responses	Female	Male	Total
Yes	3	4	7
No	1	3	4
No Response		1	1

Respondents felt that the Isle Royale fishermen were from different ethnic backgrounds (Norwegian versus Sweden), but they also referred to the fishermen simply as Scandinavians. Marriages were mostly with other Scandinavians, although a few acknowledged some intermarriages with English, German, Scot, Irish, and Welsh people. Respondents also, in spite of recognizing some ethnic differences at the individual level, they identified their communities as ethnic-based, that is, Scandinavian, more than intermixed.

Q10a: If yes, from what national or ethnic backgrounds?

Male *Sweden, Norway, others but don't know them.*

Male *Norwegian, Swedish, Finnish.*

Male *German, Norwegian, Swedish, Finnish, Irish*

Male *Scandinavian, that is, Swede, Norwegian, Finn*

Male *Scandinavian, that is, Norwegian, Swedish, Danish. Possibly some Scandinavian/Indian.*

Male *Norwegian.*

Male *Scandinavian, that is, Norwegian, Swedish, Finlanders.*

Female *Swedish and Norwegian.*

Female *Norwegian, Swedish, English, Welsh, German, Danish.*

Female *German, Norwegian, Swedish, Finnish, Irish.*

Female *Norwegian.*

Table 6.4 Did they form ethnic-based communities or were they intermixed?

Responses	Female	Male	Total
Ethnic-based Communities	1	2	3
Formed Intermixed Communities	2	4	6
Both		1	1
No Response		1	1
Don't Know	1		1

Male *Ethnic-based on the Island and Intermixed on the mainland.*

Table 6.5 Did the fishermen and their families have certain territory and activities uniquely attached to their Isle Royale communities?

Responses	Female	Male	Total
Yes	2	7	9
No	1		1
Yes and No	1	1	2

Table 6.6 If yes, what kinds of activities?

Responses	Female	Male	Total
Fishing	3	7	10
Hunting		1	1
Farming/gardening		1	1
Logging		1	1
Gathering plants	1	3	4
Recreation	2	3	5
Other		1	1

The Scandinavian fishermen of Isle Royale lived and worked together either from isolated fish camps or small communities of as many as twenty families. Their relationships with each other were an interesting blend of competition and cooperation that reflected their friendly yet independent natures. Territories were claimed on a first-come-first-served basis but areas were often shared to a certain extent.

Fishing was living for the fishermen and their families and each fishing family had their own home areas and fishing grounds. Where several families lived in close proximity, home areas were shared in the sense that they lived adjacent to each other. Some families shared docks, ice houses, and fish houses and the work involved with each one. When families were short-handed, they might share fishing areas with some of the bachelor fishermen. Any time someone had meat they could not use, they shared it with other families. Even when animosity existed between fishermen, they helped each other in times of trouble, a shared sense of survival overcoming personal feelings.

The fishermen shared in other activities as well. Families would go berry picking together or to cut trees for buildings, docks, buoy sticks, and other construction needs. Several areas were used as gathering sites for recreational activities, particularly the Fourth of July.

While most of these activities occurred within small communities or neighborhoods, some fishing and the Fourth of July celebrations were shared island-wide. Individual preferred fishing spots were respected but other fishing areas and deep water sets were shared. The Fourth of July was the one "vacation" day that the fishermen had each year. They held big celebrations at several locations.

Q12: Explanations of special activity and territories that they shared in their communities:

Male *It was first come, first served but pretty much shared; some home areas were separate and didn't share. Otherwise, people shared all the time.*

Male *It was more individualistic. Each had their own fishing area and were quite spread out, although, some shared docks and ice houses. Washington Harbor was the biggest influx of fishing. Some small groups or families would pick berries together. Recreation included regattas and 4th of July activities. Their family went to Chippewa Harbor or Washington Harbor usually.*

Male *Many had certain fishing grounds or sets that they used year after year. Sets mean reef sets.*

Male *Gathered blueberries. They had boat races at Tobin's Harbor; the Isle Royale Boat club held powerboat and rowing races. They also had picnics and bonfires on the beach all summer long. And the 4th of July celebration.*

Male *Mostly at Washington Harbor. There, they would share fish houses; three or four fishermen might work out of one fish house. Maybe some gardening there. There were some cattle, maybe milk cow. There was an area they had there for those. They also played softball there. Trees were cut for buildings, docks, and buoy sticks; strictly for subsistence, not commercial cutting. They gathered berries. And always took off on the 4th of July.*

Male *Bachelors and families shared fishing areas when they were short-handed. Folks shared meat they couldn't use.*

Male *Homesteaded.*

Male *Fishing in this case includes living.*

Female *Definitely fishing, nothing else.*

Table 6.7 Did the commercial fishermen of Isle Royale have special activities or territories that they shared island-wide?

Responses	Female	Male	Total
Yes	2	3	5
No	2	5	7

Table 6.8 If yes, what kinds of activities?

Responses	Female	Male	Total
Fishing	2	2	4
Farming/gardening	1		1
Recreation	2	2	4
Other			

Q14: Explanations of special activity and territories that they shared island-wide:

Male *Fishing areas other than preferred spots.*

Male *In the 1920s, Caribou Island for dancing and drinking.*

Male *Deepwater sets were open to all.*

\Male *Fourth of July was an Island-wide celebration.*

Female *No (exclusion). In fact, my grandfather said always, always, and we still do it, leave food in your cupboard in case someone's stranded. So no, there was never anything like that. My grandfather had an enemy. He wasn't always the most pleasant man. But he did have an enemy and then he also had a fire. And this man came by boat which was a slow process, came by boat from the other end of the Island and threw nets on the dock to help him get started again. And just kept right on going. That's the way they were. You had to, I don't know, I guess when you're out of doors, I guess when you do this kind of work, you know, it's uh, it's different than fighting a crowd and uh the only competition like I say was who got the most fish. And I think that was only because of the money that was being made. There wasn't any ownership of certain sections; it was first come, first serve. (Fishing territory depended on) the boats; I don't know what speed, but a boat like this is what they fished in. And then they probably went two or three miles an hour. I don't know, we never got to the end of the Island 'cause we never had enough time. You know there was no place to gas up. They were limited by how long it would take 'em to get there and do the work and get back home before dark. They went as far as McCormick's. They fished that far but then the fishermen like Mark's dad and Karen's dad and so on, that was kind of their unspoken territory. Now they have grids where you can't fish here, you can't fish there.*

Table 6.9 Do you know of any land trails, existing before the Park, that were used by commercial fishermen and their families while on Isle Royale?

Responses	Female	Male	Total Of
Yes	2	6	8
No	2	2	4

The fishermen used land trails on the main island and some of the smaller islands primarily for recreational purposes such as berry picking, picnicking, day fishing, and to maintain social relationships with other families. Many had trails between the house and fish house.

The fishermen usually followed moose trails for many of these activities. Winter could be a particularly lonely time on Isle Royale, so trails were used for visiting and socializing more often than during the summer. Some respondents indicated that the land trails were special or important for recreational and social purposes, suggesting that strong ties bound the fishing families to each other outside of the bonds associated with the dangerous work of fishing. Day fishing, as a recreational activity, reflects the degree to which fishing was inseparable from life for the fishermen. How often does one encounter someone of a particular profession or occupation conducting that work in their free time?

Q16: If yes, where did they go, why were they used, were they special?

Male *Washington Island. All over Windigo and to Lake Desor. For exploring, inland fishing, mining. No (not special).*

Male *From Edisen Fishery south along the channel to Moskey Basin ending at Bangsunds. It was close and convenient, used it about six times a season. No (not special), just convenient. No land trails really, but they were important for kids who could visit.*

Male *The trail from the lighthouse to Edisen Fishery, the Lake Ritchie trail, and miscellaneous trails. The lighthouse trail was used back and forth from one house to the other by the families at either end for family and fishing activities. The Lake Ritchie trail was used for recreational purposes, day fishing. Miscellaneous trails were used for berry picking. Yes (special), to get to work, for leisure, entertainment, and fishing. And to maintain social relationships.*

Male *From Rock Harbor to Scoville Point. From Rock Harbor to Tobin's Harbor. From Tobin's Harbor to Lookout Louise and Monument Rock. We used them for socializing, recreating, berry picking. No (not special).*

Male *Generally, when people wanted to go some place, they hopped in their boat and went. They'd go to Siskiwit Lake from the Malone Bay and Hay Bay areas; from Chippewa to Moskey Basin and Edisen's. They were used a lot in winter. Might even walk up to Mott Island. From Chippewa to Edisen and*

Mott to visit, especially in winter when it got lonely. Moose trails were followed to various trout streams, to access resources they needed, for berry picking. Yes (special), for socializing.

Male *We used moose trails a lot, all over, for berry picking, to fish creeks. The trail along the creek (lower Siskiwit River) they fished is still there.*

Female *The length of Washington Island for recreation. Not really (not special).*

Female *The trail from the lighthouse to Edisen Fishery, the Lake Ritchie trail, and miscellaneous trails. The lighthouse trail was used back and forth from one house to the other by the families at either end for family and fishing activities. The Lake Ritchie trail was used for recreational purposes, day fishing. Miscellaneous trails were used for berry picking. Yes (special), to get to work, for leisure, entertainment, and fishing. And to maintain social relationships.*

Table 6.10 Did commercial fishermen establish, by customary use, water routes (trails in the water) that connected Isle Royale with other places?

Responses	Female	Male	Total
Yes	3	7	10
No		1	1
Don't Know	1		1

Water trails or routes were used by the fishermen for fishing and social purposes. Often guided by the buoys, reefs, and shallows, these trails connected the fishermen and their families to each other and to the fish. How far they traveled for fish depended on the size of their boat, the season, the underwater topography, and weather conditions. They always took the shortest, safest route since the cost of gas was high. The fishermen would use landmarks to help them navigate other fishermen's waters with which they were less familiar.

Water trails connected the fish camps to the nets and sets, to other fish camps, and to towns (winter homes) along the north shore of Minnesota, and to towns on the Upper Peninsula of Michigan. A few women even had their own water trails for fishing and socializing. The trails were important for more extensive transportation than the land trails, for socializing, and in supporting the fishermen in their livelihood. They were special because they were handed down through the families, and not known by everyone.

Q18: If yes, where did they go, why were they used, were they special?

Male *Generally, when people wanted to go some place, they hopped in their boat and went. They'd go to Siskiwit Lake from the Malone Bay and Hay Bay areas; from Chippewa to Moskey Basin and Edisen's.*

Male *At first, they'd go wherever, but usually along the buoys or avoiding reefs and shallows. Depended on the boat size, the season, underwater topography, and weather conditions.*

Male *From place A to B. Whatever was shortest and safest. For example, the channel connecting Star Island to Edisen's. No (not special), it was just where you went.*

Male *From Crystal Cove to Rock Harbor. And routes between the docks at Edisen Fishery, the lighthouse, Star Island, Crystal Cove, and their nets out in the lake. From Edisen Fishery south and across the neck of Moskey Basin. From Crystal Cove south a bit to a mid-point on Amygdaloid Island. From Crystal Cove to the Five Finger Bay area. From Crystal Cove to Rock Harbor for ice, to go to the store, especially the kids, and to deliver fish. The routes between docks and nets for fishing. The trails across Moskey Basin, Amygdaloid, and Five Finger Bay were to access a land trail for berry picking. Yes (special), again to maintain social relationships and their livelihood.*

Male *Mainly Isle Royale to Copper Harbor, Michigan, and Isle Royale to Grand Portage, Minnesota, and Isle Royale to Grand Marais, Minnesota. They had homes on the mainland.*

Male *From Blake's Point to Tobin's Harbor via Merritt's Lane. The Anderson-Mattson route from Johnson Island to Tobin's Harbor tight along the shoreline. The Gap shortcut from Amygdaloid Channel to Robinson Bay. Blake's to Tobin's for transportation and sport fishing. Anderson-Merritt for social occasions. The Gap when storms or weather was bad. No (not special).*

Male *The answer seems pretty obvious. They followed routes repetitively to nets as long as that's where the nets were. Generally, they followed routes that were as direct as possible between destinations, except for skirting reefs, between homes and fishing grounds. Used them for socializing and fishing. They're important in the same sense as a farmer's routes to his fields are important.*

Male *Everybody basically goes the same way. There are routes are all around. Fishermen know the routes of their fishing areas better than others' routes around the island. They always go through cuts in the reefs. There are hills and trees that are landmarks. They would go through a particular reef when three trees would line up. Well, you see, when you, see there's hills in three layers back here and you get trees on one hill and as you move they'll line up and when they line up that means you can go through a certain cut in the reef.*

And that's things that everybody knows. I mean all the fishermen know. You come through Hopkins Harbor and pull into Wright Island and for example you can't turn the corner comin' into Wright's to the south until Shiverette is comin' out from behind the point or you're going to cut it too close and then you'll hit the reef. Cuts in the reef; one between the buoys and between Fisherman's Home and Hay Bay. They'd use them for fishing or visiting. Everyone knows their own territory best. Yes (special), they were handed down. The average person isn't going to know about them.

Male *To Fisherman's Home and to Wright's Island to socialize. Also, used a systematic routine to check the nets. The shortcut through the reef (at Point Hay) to Fisherman's Home was used by Skadbergs but others avoided it.*

Male *--- rowed and fished (that route) with one foot. On her return trip, she often stopped to visit.*

Male *There was a water trail between the two islands rowed by the wives.*

Female *(They were connected) through her rowing to these places, or little islands, recreationally - her 'microsystem.'*

Female *She would stand in a deep skiff and row from mother's house to grandmother's and back. Her mother and grandmother would stand on their docks and watched her. And to Grand Portage to get to and from Isle Royale. Not really (not special).*

Female *From Crystal Cove to Rock Harbor. And routes between the docks at Edisen Fishery, the lighthouse, Star Island, Crystal Cove, and their nets out in the lake. From Edisen Fishery south and across the neck of Moskey Basin. From Crystal Cove south a bit to a mid-point on Amygdaloid Island. From Crystal Cove to the Five Finger Bay area. From Crystal Cove to Rock Harbor for ice, to go to the store, especially the kids, and to deliver fish. The routes between docks and nets for fishing. The trails across Moskey Basin, Amygdaloid, and Five Finger Bay were to access a land trail for berry picking. Yes (special), again to maintain social relationships and their livelihood.*

Female *Everybody basically goes the same way. Routes are all around. Fishermen know the routes of their fishing areas better than others' routes around the island. Always go through cuts in reef.*

Female *The row boats used to come, the ladies coming to coffee.*

Table 6.11 Do you know of any songs or stories associated with the water routes of Isle Royale?

Responses	Female	Male	Total
Yes		3	3
No	2	5	7

Many of the stories known to the fishermen dealt with life experiences, particularly out on the water. The songs respondents recalled were from the home country and usually were sung in the evenings when fishermen would gather in small groups. The stories and songs are special to the fishermen and their families as ties to each other and to their homelands.

Q20: If yes, describe them: what they are about, who first told you about them, where they originated, and were they special:

Male *Just stories, no songs. Mostly about life experiences.*

Male *Just a couple of Norwegian songs.*

Male *There's all kinds of stories about the time someone hit a rock, or in the fog, or a ship that grounded here or there, snippets like that. Nothing got put together like a sea chanty or anything like that. The only story that gets repeated over and over and over again didn't have to do with fishermen, it had to do with a gentleman from Copper Harbor named Charlie Kauppi who used to bring hikers, campers, and so forth. He ran a passenger ferry service from Copper Harbor over to Isle Royale. One foggy day, he had a load of boy scouts aboard and, that was prior to radar or any other aids to navigation other than a compass and a watch, and he was kind of feeling his way around looking for whatever he was looking for and the scout master became concerned and expressed his concern to Charlie and he said 'Don't worry,' he says, 'I know every rock in the lake.' And about that time the boat grounded and he says 'See, there's one of 'em now.' So that's one story that's been repeated since I was a little kid when I heard about that.*

Male *--- got caught in a hail storm. There was a bad storm coming in, you could see it coming but he figured 'I can get one last net in.' And, uh, apparently he was working the point around the side from Fisherman's Home and he knew he couldn't make it back across Siskiwits so he whipped around the point by Fisherman's Home and got in behind some little rock piles kind of for protection. And it was terrible, worse than he thought it was going to be. And it blew and rained and then the hail came so he emptied the fish box out, put the fish box over his head and the hail was rappin' his knuckles so he ... was*

balancin' it on his head and stood there with his arms at his sides and he said it only lasted about 15 minutes but it seemed like forever. And it finally, quit and he bailed the boat, went around the point and here comes his father full speed, well, full speed of about 9 miles an hour, and he figured for sure the kid was drowned you know and he was all excited. They got tons of stories. You know, I suppose you spend every day out on the water, you're going to have a few stories. There was one story where my grandfather got hit by lightning and knocked right to the floor of the boat, knocked him unconscious, fried the boat motor. He woke up and he'd been floatin' for a while and rowed himself behind an island and laid low until the storm passed. He was a little leery of lightning after that. They're special to my family. It's good to know about my grandfather's lifestyle and experiences. He didn't die until I was about 20, 21 but it seemed like I never knew him that well because he was quite a bit older than my dad so, uh, it's good to know stories and you know, kinda figure out how he lived, what he did, how he did 'em. I heard them from Dad; they came from within the family. Yes (special).

Female *I heard stories from my uncle; from within my family. Yes (special).*

Table 6.12 Do you know of any stories about the first members of your family coming to Isle Royale?

Responses	Female	Male	Total
Yes stories	2	5	7
Yes places		2	2
No	1	1	2
Don't Know	1		1

All the respondents had stories about their families first coming to Isle Royale to fish even though the arrivals occurred in the late 1800s and early 1900s. Some came for better fishing conditions while others were seeking healthy environments. Others came as a result of the social and economic conditions in Norway and Sweden (see Chapter Three).

Q22: If yes, can you tell me something about those stories?

Male *--- and --- fished in the Baltic together at night and slept during the day. --- came here first and loved fishing in the daylight. Called up ---. Booth Fisheries set them up in business probably.*

Male *My family fished the Baltic Sea, often for days or weeks at a time, and they came to Isle Royale so they 'could sleep in a bed every night,' as grandpa used to say, and to make a living. They first started with sailboats and rowing,*

and fished deep waters, pulling nets and lines by hand. There's lots of stories; I could go on and on.

Male *My grandfather came to the Island in the 1890s. Like most fishermen then, he was a bachelor and lived in several locations.*

Male *They first came to Duluth.*

Male *My grandfather came from Duluth, when --- suggested he come fish with him at Isle Royale. He had hay fever and thought he'd find relief at Isle Royale so he came. The second year (1920), they fished from Booth Island. They rowed one fall (1920) from Washington Harbor to Chippewa Harbor for herring fishing. Bad weather sent them to Fisherman's Home. They built the cabin - the Captain Morgan cabin - in 1921.*

Male *Dad first lived out here at either Long Point or Washington Harbor.*

Male *Granddad left Norway at 18. There were elk here when he first came to Isle Royale but they were soon gone, displaced by moose. They come from a family of many farmers but he's not sure why they came. Maybe because he wasn't the oldest or second oldest and wouldn't inherit the land.*

Female *They are mostly humorous, about things that happened here.*

Female *Dad first lived out here at either Long Point or Washington Harbor.*

Table 6.13 Do you know of any ceremonies that were conducted at or near Isle Royale?

Responses	Female	Male	Total
Yes	3	5	8
No		2	2
Don't Know	1		1
No Response		1	1

While celebrations were not uncommon for the fishermen, few ceremonies were held. Religious ceremonies or services were held in a couple of places on the Island but these were provided for employees and summer visitors. Other ceremonies that respondents noted were the establishment and dedication of Isle Royale National Park, and past Native American activities. Due to the lack of fishermen ceremonies, responses to this question returned to celebrations held by the fishermen which included wedding anniversaries and for the Fourth of July.

Q24: If yes, can you tell me something about these ceremonies, like where they were held, when, and why:

Male *At Rock Harbor they had vesper services for employees, but not for fishermen; they never went.*

Male *At Davidson's across from Star Island thirty-one years ago we had Pete and Laura's 50th wedding anniversary there.*

Male *At Mott Island. I think the summer of 1940, to establish Isle Royale National Park.*

Male *At a cave near Fisherman's Home. I don't know the date or whether it had ceremonial use but I think it was used by Native Americans. Seglem's nephews discovered it. There was a big boulder in front of it that they moved aside. They found three skulls and six bodies; they appeared to be teenagers and adults. They may have been Native Americans who suffered some calamity. There were ceremonies at Cemetery Island and at other cemeteries on Isle Royale. There's one person buried at Edisen Fishery.*

Male *At Rock Harbor for Fourth of July. We had big celebrations. At Siskiwit Bay for picnicking and visiting with other families.*

Female *At Davidson's across from Star Island. Thirty-one years ago, we had Pete and Laura's 50th wedding anniversary there.*

Female *Only one. Isle Royale, the dedication of the Park.*

Female *At Rock Harbor for Fourth of July. We had big celebrations. At Siskiwit Bay or picnicking and visiting with other families.*

Table 6.14 Do you recall or have you heard about historic events involving commercial fishermen that occurred at or near Isle Royale?

Responses	Female	Male	Total
Yes	1	3	4
No	3	4	7
Don't Know		1	1

Historic events recalled by the respondents focused on the establishment of the Park and shipwrecks. Many of the shipwrecks, often of boats that serviced the fishermen, are relatively close to the main island where they ran into reefs.

Q26: If yes, can you tell me something about those events, like when, where, what happened?

Male *At Mott Island in 1940 to establish Isle Royale National Park. And many others around Isle Royale. And shipwrecks of boats servicing commercial fishermen.*

Male *Many wrecks of fish company boats. 1928 at Washington Harbor, the Steamer AMERICA sank.*

Male *There were many shipwrecks, five or more that are quite well known like the AMERICA in Washington Harbor, the KAMLOOPS, and the ALGOMA.*

Male *The KAMLOOPS sank during the winter of 1913 or 1917. Survivors were found on the shore in the spring and some wreckage later on as it broke loose from the sunken vessel. Roy Oberg used a bottom-sounder in the 1960s along an area Milford Johnson, Sr. suggested. He found a large blip through scanning there. In the late '70s, divers from Duluth went to this area and found the wreck.*

Female *Washington Harbor in 1928. The sinking of the AMERICA.*

Table 6.15 Is there any connection between Isle Royale and the mountains, lakes, and rivers of the Great Lakes area?

Responses	Female	Male	Total
Yes	1	5	6
No	1	1	2
Don't Know	1	2	3
No Response	1		1

Connections between Isle Royale and surrounding mountains, lakes, and rivers focused on geological similarities and a shared watershed. Other connections, similar to those among the fishing communities and sites on the Island, involve water routes, trade routes, mainland towns, and streams associated with fish management for lake stocking.

Q28: If yes, what mountains, lakes, or rivers, and how are they connected to Isle Royale?

Male *It may be all connected.*

Male *Communities along the north shore. We had family and friends in Duluth, Two Harbors, Grand Marais, and Knife River, Minnesota. And Lake Forbes where we went fishing for perch when we were kids. And through landmarks that we used all the time such as details of rocks, treetops, rock piles, points for lining up. They were only used locally. Most navigation was by compass, a watch, a landmark, or chart if available.*

Male *We set nets, a few times each season, on an isolated shallow reef that was about eight miles out from Isle Royale and would locate the reef using the position of islands and ridges on Isle Royale, along with the position of "The Paps" mountains east of Black Bay on the Canadian shore.*

Male *Maybe between the Island and Grand Portage.*

Male *The area in general, geologically; and Brockway at the Keweenaw Lava flow. With the North Shore of Minnesota through families. The fishing companies used the riverways between the lakes but individual fishermen didn't use them. It's connected with Pigeon River because of the fishing company and camps, and Kaministiquia at Thunder Bay, and the St. Lawrence River too.*

Male *Lake Superior by Native American trade routes for copper and other minerals. And through the lamprey and smelt impacts on lake trout that led to DNR and commercial fishermen gathering spawn and fertilizing eggs to help restock the lake trout in Lake Superior. It's connected to the French River hatchery that was part of the restocking program.*

Male *Copper Harbor, Michigan is the same rock as Isle Royale. And Grand Portage is connected by an Indian water trail.*

Male *The U.P. in Michigan, geologically. The lava flow that created it is the same one that created the U.P. in Michigan. It's connected to Minnesota, Michigan, and Lake Superior because it's all part of the same watershed.*

Female *Copper Harbor, Michigan is the same rock as Isle Royale.*

Female *To Grand Portage by an Indian water trail.*

Table 6.16 Is Isle Royale similar to the place in Europe that your family came from?

Responses	Female	Male	Total
Yes	2	7	9
No	1	1	2
No Response	1		1

Table 6.17 If yes, what is the name of the place?

Responses	Female	Male	Total
Norway	2	4	6
Sweden			1
Finland		1	1
Don't Know		1	1
No Response	2	1	3

Table 6.17 a If yes, how is it similar?

Similarities	Female	Male	Total
Climate	2	6	8
Topography	2	7	9
Fish	2	3	5
Fishing style	2	6	8
Language		3	3
Culture	1	3	4

While the majority of respondents identified Norway as their ancestors' homeland, all of the responses indicated a Scandinavian country. The greatest similarities between Isle Royale and their homelands are found in the climate, topography, and fishing of Isle Royale. Details of local environments, fish species, fishing technology, and fishing styles varied somewhat but overall the environment and lifestyle are the same for both places. Some respondents indicated similarities of the language and culture due to the formation on the mainland and on Isle Royale of Scandinavian communities.

Q31: If yes, how is it similar?

Male *Norway. The fjords and harbors are similar; the fishing lifestyle, though not the same species of fish. They brought the old ways of fishing with them which made them very successful fishing these waters. Not the language though; there was a language barrier.*

Male *Sweden.*

Male *Larsmo, Finland. It was a part of Finland that was once Sweden. Both sets of my grandparents, early fishing families on Isle Royale, were Swedish-speaking and came from the Larsmo area on the west coast of Finland. Some Swedish families remained, some came to Isle Royale. Larsmo consists of 360 islands and islets and looks very much like Isle Royale with low rocky hills and abundant spruce, balsam, and birch trees down to the water's edge. The*

climate's similar, though Isle Royale winters are probably harsher. When they left there in the early 1880s, fishing was the major industry and they brought that expertise, including gill nets, with them to the Lake Superior region. Many families from the Larsmo area settled and fished from Duluth, along the North Shore, and on Isle Royale. For those seasonal on Isle Royale, they wintered back on the mainland with their Swedish-speaking friends and relatives. The language and culture were similar because there were a lot of Scandinavians in the area.

Male — *Norway. Chippewa Harbor is like a fjord. Other places have long, narrow bays, and easy access to fishing. The herring, but it's a different species there. Smelt were brought from Norway to Michigan for inland lakes around 1907 or 1917; and they also introduced Atlantic salmon. The Norwegians adapted their fishing ways to Lake Superior waters. Norwegian was spoken at Isle Royale and along the north shore of Minnesota, and the culture was similar too. Also, similar vegetation like birch, and the conifers.*

Male — *Norway. I've been there, in 1986, but it is all rock there and a few trees. There isn't a decent tree anywhere. The fishing style was different. I didn't see a gill net anywhere.*

Male — *Egersund and Egeroy (oy means island) in southern Norway. --- Township is where the family is from. They had owned the only sandy beach and the town bought it from them for a public beach. There are taller hills there, actually mountains, big cliffs. It's farther north, only about 6 hours of twilight in the summers, and temperate winters due to the Baltic Sea. Totally different fish because they're on the ocean. It's restricted to about four species here. They used nets but they were a different kind - length, depth, mesh, and cotton - and set differently. The Scandinavians stuck together when they came here because they spoke the same language. When English got tough, they fell back on Norwegian. They formed communities and made the same kinds of food, had the same style of thinking, the same work ethic. They shared what they did and what they thought, made it easier to get along and know what to expect out of others.*

Female — *Norway. The fjords and harbors are similar; the fishing lifestyle, though not the same species of fish. They brought the old ways of fishing with them which made them very successful fishing these waters. Not the language though; there was a language barrier.*

Female — *Norway. I went there, in 1986, but it's all rock there and a few trees. There isn't a decent tree anywhere. The fishing style was different. I didn't see a gill net anywhere.*

Table 6.18 Do you believe the similarity with where they came from in Europe influenced their decision to become fishermen near Isle Royale?

Responses	Female	Male	Total
Yes	1	6	7
No	1	2	3
No Response	2		2

Several of the factors influencing fishermen to come to Isle Royale are the similarities between the Island and the homelands – environmental, geological, and the fish – that respondents identified. Some of the "push-pull" factors discussed in Chapter Four were mentioned such as the need and desire for a place of their own where they could make a living.

Q33: How did the similarity of places influence their decision?

Male *The fish, the water, and the geography.*

Male *It was a place to get staked, to get started.*

Male *They were used to the rocky shores and islands of Sweden and Norway.*

Male *They settled here because of the similarity to home, the general landscape, not because of the fishing.*

Male *Some came from fishing families and adapted their ways to this area.*

Male *I think it was probably the climate and the terrain. It just felt like home and I'm not sure how that went. If it was the terrain that made them become fishermen or they were fishermen and this is a natural place for fishermen to be. I'm not sure which came first there. You know, maybe they just liked the area so much, you know, you're either going to be a logger or you're going to be a fisherman, I'm not sure how that went.*

Female *It was like coming home. They were brave people to leave land and family to come to this country. Naturally, they'd like familiar surroundings. Incidentally, I feel they left the 'old country' to escape persecution and established homes on Isle Royale only to be persecuted by the land acquisitions for the Park.*

Female *It was a place to get staked, to get started.*

Table 6.19 Is Isle Royale connected to any places or events in the Great Lakes area that we have not already talked about?

Responses	Female	Male	Total
Yes	1	4	5
No	1	2	3
Don't Know		1	1
No Response	2	1	3

Connections respondents identified between Isle Royale and other places and events were based on the same social and economic ties identified earlier. Isle Royale, as a tourist destination, is connected also with many other places on and off the North American continent through visitors from those areas. Connections with events were historic including the Island becoming part of the United States and the development of lochs to connect the Great Lakes.

Q35: If yes, what are these places and/or events and how are they connected?

Male *Keewanaw, Michigan. A family member lived there.*

Male *Isle Royale inclusion in the boundary settlement of the U.S., and Ben Franklin.*

Male *Isle Royale was a tourist destination and connected to many areas. Also the Minnesota and Michigan shores. Through resorts and tourists. It's connected by steamships like the AMERICA, the GEORGE M. COX, and the ALGOMA.*

Male *Shipwrecks along the shipping lanes. It's one of the biggest grave yards in the Great Lakes. Like Whitefish Point in Michigan near Sault Ste. Marie.*

Male *Those were the years before the lochs were built and they were connected to the ocean. Each lake was pretty well isolated and there wasn't much contact from lake to lake.*

Female *Shipwrecks along the shipping lanes. It's one of the biggest grave yards in the Great Lakes. Like Whitefish Point in Michigan near Sault Ste. Marie.*

Female *Mandela visited here.*

Table 6.20 Is there anything else you would like to add to this landscape discussion?

Responses	Female	Male	Total
Yes	1	1	2
No	1	4	5
No Response	2	3	5

Q37: What else would you add to this landscape discussion?

Male *Not about the fishing landscape but there were also mining and lumbering landscapes.*

Female *Fisherman families lived in French River and Palmers areas during the winter months. My father died in 1953, when I was about 20 years old, so I wasn't able to get a lot of his history. He was born in Larsmo, Finland but is of Swedish descent. He fished from Palmers from about 1918 to the late 1940s and was at Isle Royale a few years before that. He also served in the 1st World War and bought the land at Palmers with his army bonus money.*

The Persistence of the Cultural Landscape

As discussed in Chapter Four, three events had significant impacts on the Scandinavian folk fishermen and their landscapes: the establishment of Isle Royale National Park in 1931, the introduction of sea lamprey to Lake Superior in the 1950s, and the Michigan DNR's 1965 regulation change to assessment fishing. The establishment of the Park did not appear to affect folk fishing and, consequently, caused little concern among the fishermen. Although fishing practices would change later, it was land ownership that was affected by Park establishment. Funds were appropriated in 1940 to purchase the private property on the Island. Fishing families who accepted the terms were granted life leases that gradually affected the terrestrial landscapes. The fishermen could no longer maintain the terrestrial landscape by removing volunteer saplings that sprouted in the clearings around the buildings. As the trees encroached on the open space, views of the lake were reduced. This impact was much more than aesthetic because traditionally wives and children had watched for their husbands and fathers to return from fishing. The

encroachment has escalated over the years in spite of urgings by fishermen to allow them to maintain their places properly.

The impacts of the sea lamprey were the most devastating to the fishermen. The lake trout, and later whitefish, populations were decimated to the point that the Michigan Department of Natural Resources curtailed lake trout fishing. Many of the Scandinavian fishermen were close to retirement age at this time. The lamprey invasion, on top of their struggles to adjust to Park regulations, was the final straw and most of them gave up their life of fishing. The lamprey, affecting both the maritime and underwater landscapes, had the greatest impact on the folk fishermen in that they lost their traditional relationships with those landscapes. Not only were the fishermen decimated economically, but also by a loss of identity that was so thoroughly intertwined with these landscapes.

With only five fishing families remaining when the Michigan DNR finally gained control of the lamprey problem and allowed assessment fishing, the renewed access to their fishing life was a pittance of their previous lives. Now assigned fishing areas and catch limits, the fishermen realized a loss of control over the management of the fish populations. In the past, they made adjustments to the locations and mesh size of their nets based on the size and number of fish they were catching. Areas that they identified as needing rest went unfished or mesh size was altered to allow the populations to rebuild. The assessment regulations took away that flexibility of decision-making and further altered the fishermen's relationship with their landscapes.

Today, the allotment program has all but ended and only one fisherman remains. The overgrowth of the terrestrial landscapes has continued and the maritime landscapes are fading away as buildings are destroyed or left to deteriorate. The underwater landscapes remain for those who continue to visit their places by boat but the use of those landscapes is much less intimate and limited now to sport fishing, chartering, and the stories the descendants share with their grandchildren and visitors.

Descendants of fishermen still consider and refer to Isle Royale as home. They retain much of the knowledge recorded by the Park Service with fishermen over forty years ago, and much more. They remain in touch with their cultural landscapes by continuing to visit the Island whenever possible. Social relationships survive, although, sometimes in the form of just knowing where people are rather than actually visiting with

them. Several of the fishermen continue marine-based livelihoods that allow them to stay in touch with the Island and their landscapes on a regular basis. One fishing family owns and operates, with the help of other descendants of the Isle Royale fishing families, two of the commercial ferries that operate between Grand Portage and Isle Royale. Others work as charter captains for tourists and recreationists. Even the Fourth of July celebrations that were such a significant part of the social relationships within the cultural landscapes survive. Though not as intimate as in the past, nor of the same activities, and observed in August rather than July, "Grand Marais has 'Fisherman's Picnic' in early August that is based on the old 4th of July celebrations on Isle Royale. But it's far from what those were."

The persistence and importance of the cultural landscapes of the Scandinavian folk fishermen is not easily observed by those uninformed about and unfamiliar with them. The landscapes, although mostly dormant, are not dead. Surviving fishermen and their descendants remain interested in, knowledgeable and capable of reviving and caring for these landscapes. The next chapter examines the possibilities of how that might be achieved to the satisfaction of NPS mandates, the fishermen, and the visiting public.

CHAPTER SEVEN
RECOMMENDATIONS FOR THE FUTURE OF SCANDINAVIAN FOLK FISHING LANDSCAPE AT ISLE ROYALE NATIONAL PARK

Isle Royale is much more than a remote archipelago of northwoods wilderness; it is the product of at least 4,500 years of human activity from Native American uses to copper mining, fur trapping, logging, fishing, and tourism. Of these, fishing has proven the mainstay as a successful subsistent, economic, and cultural activity.

As described in the General Management Plan for Isle Royale National Park, Isle Royale is a northwoods wilderness *and* maritime park. The latter descriptor reflects the significance of Scandinavian folk fishing and the once thriving folk fishing communities that defined and sustained much of Isle Royale -- what historic accounts call commercial fishing -- to the history, condition, and integrity of the Park. Based upon this perspective, the various ethnographic and historic accounts, and respondents' comments during the summer 1999 interviews, several recommendations are made, the primary one being to nominate the terrestrial, maritime, and underwater landscapes of the Scandinavian folk fishermen of Isle Royale for listing on the National Register as a Cultural Landscape, as provided for in Sections 106 and 110 of the National Historic Preservation Act.

As previously noted in Chapter Three, some of the NPS policies for managing the Scandinavian folk fishing communities appear contradictory. NPS policy in 1955 went so far as to state that the agency would encourage continuation of twelve of the folk fishing operations (Figure 9.1), and, when fishing was uneconomical, make efforts to retain such operations at Washington Harbor and Rock Harbor as permanent exhibits of cultural significance (Baggley 1942). The importance of these provisions was emphasized further by their incorporation with "commercial" fishing regulations of the Park.

Table 7.1 Fish Camps Prioritized for Continued Use, 1955.
1) Belle Isle (Emil Anderson base)
2) Tobins Harbor (Art Mattson base)
3) Wright Island (Ed Holte base)
4) Fishermans Home (Sam Rude base)
5) Washington Island (Art Sivertson base)
6) Washington Island (Bert Nicoliasen base)
7) Washington Island (John H. Torgersen base)
8) Washington Island (Tom Eckel base)
9) Crystal Cove (Robert Johnson base)
10) Hay Bay (John Skadberg base)
11) Star Island, Rock Harbor (Milford Johnson base)
12) Old Lighthouse, Rock Harbor (Peter Edisen base)

> *There does not seem to be any evidence that early commercial fishing has been detrimental to the establishment and use of the area as a national park. Actually, I believe that the presence of commercial fishermen (i.e. Scandinavian folk fishermen) at Isle Royale has to some extent helped to preserve and protect the area during the years preceding its establishment as a park ... Although there was no organized opposition to the park from the commercial fishermen, their united effort could easily have blocked or delayed the project for many years.* (Baggley 1942:3)

Baggley considered the lack of environmental harm and opposition to the establishment of the park as a basis for continuing the Scandinavian folk fishing operations until a long range program could be worked out. The overall tone of pre-lamprey park policies for folk fishing was one of compromise and cooperation. The Park's management direction was aimed at reducing folk fishing, as fishermen passed on or changed occupations, to a dozen or so sustainable operations rather than completely eliminating folk fishing altogether.

> *The hardy fishermen provided a reliable means of communication from the mainland ports to various points on Isle Royale. Their picturesque bases are a source of enjoyment and interest for park visitors. In view of*

this it seem desirable to continue commercial fishing activity on a modest but representative scale. (Wirth 1955)

Although numerous policy statements have been made over the years, it would seem that today the NPS is faced with an incredible opportunity to clarify and implement the best of those policies for an effective partnership of some of Isle Royale's most important natural and cultural resources and history. The remaining descendants who have leases are faced with losing their places over the next couple of years. Gone with them will be their knowledge of the folk fishery and its role in the protection and management of natural and cultural resources. These are the very people who are most able to aid the Park in achieving its preservation mandate with regard to the cultural resources. They are also the most able to aid the Park and Michigan DNR with the management of the fish populations in the Park's waters.

Another factor contributing to the possibility and practicality of a partnership is that the site and island cultural landscape levels are ecoscapes. In spite of these levels being of different spatial scales, they are comprised of resources, uses, and meanings that are conducive to ecosystem preservation efforts. The potential benefits are far-reaching and include natural and cultural resources of the terrestrial, maritime, and underwater cultural landscapes.

Such benefits have been documented already in historic and scientific documents (Baggley 1942; Goodier 1995; Hansen 1996; Jensen 1976 and 1978; Rakestraw 1968; Taylor 1995; Wallis 1960). The fishing lifestyles and routines of the Scandinavian folk fishermen had little negative impact on the terrestrial and aquatic environments. Their activities on shore attracted eagles and gulls that benefited from the discards of fish processing. The populations of several lacustrine fish species were monitored through constant interaction. As changes in the size and numbers of a species at a particular location was observed, the fishermen adjusted their fishing strategies to aid if not improve that population. Respondents addressed several aspects of environmental management including environmental ethics, negative impacts to the fishery, behavior changes in response to perceived resource needs, and the transfer of environmental knowledge within the fishing families.

Environmental Ethics

Male *I would like to suggest that the environmental ethic is due to the role that the environment played in the lives of the Isle Royale fisher folk. The environment controlled their lives and livelihood - one becomes an intimate part of the environment. For example, the "feel" Tobin's Harbor when we return from the north-side. That "feel" for the environment of Tobin's, a subtle change in smell and temperature, is part of me and tells me I'm home. And does so on perfect days or when navigating in dense fog. Fisher folk respected their environment which included the lake, the land, the air, and the natural resources - not like present day protection-at-all-cost-environmentalists but as an environment that they were a part of.*

Male *We only put nets out in spawning areas for two or three nights, then moved to another spawning area. It didn't make sense to take all the spawners from a particular area because they wanted the fish to come back the next year. They may have developed this strategy from observing fewer fish following a previous year of heavy fishing. There were some twenty separate fishing permits in Washington Harbor, especially in the fall. There had to be some over-fishing simply from overcrowding.*

Female *Fishermen of my knowledge were "environmentally friendly." As fish became more plentiful, SOME fishermen put out more nets than they could process. The fish would be in the water (the shallow water in late summer was the WORST) two or more nights (making rotten fish). At times, the nets, fish and all were thrown into the woods. My father disapproved of this and did not do it. I did not see waste, cruelty to animals, or deliberate destruction of the environment in my family. We used pulp logs, drifted from rafts onto the beach, for firewood and even building materials were recycled. I believe that some fishermen appreciated and valued Isle Royale for its beauty and because of this, returned there long after it was profitable as a fishing ground. My parents worked for three years as caretakers of a park because Isle Royale simply had no fish (due to the lamprey eel, etc.). As soon as they obtained social security, they quit their jobs and went to Isle Royale where they remained until my father died there.*

Negative Impacts to the Fishery

Male *The greatest negative impact on the Isle Royale fishery, during my time, was a whole lake event related to the lamprey/smelt "invasion" of Lake Superior. This occurred near the end of my father's fishing and was a factor in my decision not to continue the family fishing tradition.*

Behavior Changes in Response to Perceived Resource Needs

Male *Four and three-quarter inch mesh was widely used in the spring and early summer. Fall mesh sizes went to 6", 6 1/2", 6 3/4", and up to 8". Dad went from 4 3/4" mesh nest to 5 1/4" mesh in order to let the fish mature toward spawning age before being netted. As the trout dwindled off due to lampreys and possibly smelt, Dad concentrated more on herring and whitefish. He quit hooklines feeling that taking herring for bait was a waste of resources. He used crankcase oil, kerosene and mixed them with a light creosote to preserve the net reels and their supports from carpenter ants. He went from cedar corks to aluminum to plastic to save drying time and linseed oil.*

Male *I don't remember a negative impact on the fishery directly related to our activities and perhaps that's due to a conservation ethic already in place by my time. This would be reflected in nets spread over a relatively large area, not over-fishing one part of the area, and tending the nets on schedule to avoid wasted fish due to spoilage in the water. In addition, they recognized that they were harvesting a limited resource and were active participants in a State of Minnesota Fish Hatchery program to obtain trout and whitefish eggs for shipment to hatcheries. Don't know if the State of Michigan was also part of the program. I remember as a youth the large cases (roughly 3'x3'x4' high) with fine mesh trays that we would fill with fish eggs. Eggs would be stripped from the "ripe" females and my task as a kid was to keep the eggs fluid on the trays until the case was filled and sent on the boat back to the mainland. The only major change in our operation, that I know of, was from fishing deep-water siskiwit lake trout south of the Island to more shallow-water lean lake trout in near shore areas. This change was probably more a manpower and economic (better market price) driven decision than due to a negative impact on the deep-water resource.*

Female *My father brought the trout eggs, after fertilizing them, to the French River Hatchery to replace what he caught in his nets. He was a commercial fisherman from the early '20s to the late '40s.*

Transfer of Knowledge within Fishing Families

Male *Scandinavian people, in general, are not known to "tell all" and my family was no exception, so I doubt that a great deal was said. I expect that any changes were simply passed on "by example."*

Female *Live and let live. They didn't control each others behavior but I'm sure my father suggested that (setting more nets than could be harvested) was a wasteful and greedy way to fish.*

Suggestions for the future management of the Scandinavian folk fishing landscape are based on information provided by respondents in the summer of 1999. Overall, the suggestions reflect a unified interest in and concern for the cultural and natural resources of Isle Royale. Respondents indicated a desire to be included in the care of their landscape and a willingness to contribute in a variety of ways to the protection and preservation of the folk fishing resources.

Of the three main use areas (Table 7.2) – fish camps, fishing grounds, and recreational areas – respondents' concerns focused on the fish camps and fishing grounds. The following comments provide part of the basis for the recommendations for interpretation of the Scandinavian folk fishing landscape.

Table 7.2 Inventory of Ethnographic Resources and Resource Use Areas

- Fish camps as defined by the historic clearings around the main house, other associated buildings, the fish house, net house, net reels, docks, cribs, and sheltered harbor.
- Fishing grounds as identified by fishermen as those historically associated with their families' fish camps. These areas typically include rock reefs and deep waters.
- Recreational areas of nearby berry patches, beaches, picnic areas, and scenic areas.

Respondents' Comments

Q76: From the perspective of your family, how would you define the ideal future relationship between your family and Isle Royale National Park?

Male *I would like to get along. The history should be preserved, the buildings too, before the elders and interest die out. I'd like better historic preservation.*

Male *To have a fishing lifestyle like when my dad was fishing. But there are market-related problems. You'd have to have some kind of an income to stay in these places. You'd have to keep these places up. The thing to do is to fish and to have enough tags so you can keep up these places. Alternatively, I'd like to be able to stay at (the fish camp), to pass that along to kids along with the assessment fishing permit.*

Male *Probably not to be treated any different than other visitors. If we could help with historical information, it would be welcome.*

Male *Even if they could not commercial fish, it would be neat to have the experience of Isle Royale and the visit to the family homestead.*

Male *This time here is something I always want to remember. I had an excellent childhood. I could not do certain things. I have my grandson here today and I wanted him to see this.*

Male *I'd like to be able to see [the] fish house over there and the house up there ... where the grandkids could all come visit. And like Wright's Island. It'd be a nice place to visit but I wouldn't want to live there. How can you really maintain it? If you want to look at it in a logical way. Wright's Island is hard to maintain. But we could help them take care of the place, if we could go there, you know. But the Park Service won't even think about it. And personally I think those people are being treated unfairly anyway.*

Male *To coexist in a symbiotic relationship with the same degree of autonomy afforded me as afforded my grandfather. Autonomy relative to the fishery and the grounds at Fisherman's Home.*

Male *Those who used to live here should have a green card so we could come and go as we want. It is our home, our main street. I do not want this for everyone, just the dozen of us who lived here. Let us come and go as we please. I want more access with fewer regulations. At least those of us who lived here, I'd just as soon get a green card so we could come and go as we want. We're only talking a few people. It isn't like, uh, I'm saying they should turn it, open it up to the public. I'm just saying there's only maybe a dozen people total. When I said a green card, just a card that, you know, that if we want to tie up at a dock, we don't have them chasin' us the hell out of here because either we been there too long or we got no business there. And some of these docks we have tied up at. Like Wright Island and Fisherman's Home and maybe over in Crystal Cove at Milford's old place. I guess they're considered private docks but, I mean, hell, they're old friends, you know. Places we used to go, hang out.*

Male *I would like to see my family be able to maintain direct connection with the land there, to get a longer term arrangement where we could make improvements to the property. I would like to be able to improve it more, visit the place, be over there, perhaps retire over there and help others to enjoy the islands. What the park needs are PEOPLE WITH AN EMOTIONAL COMMITMENT TO THE ISLAND, TO BE THERE AND TAKE CARE OF IT,*

enclaves like Washington Harbor and Barnum Island where there are no camps. People could be there and keep their cultural connections with places. There should be real fishing, several families, so people could see the cooperation, development, and evolution of fishing practices continued. All men adapt to difficult situations, but through cooperation and evolution they can continue to cooperate with nature and the environment. And then there was a marvelous relationship.

Female *To have a fishing lifestyle like when [my father-in-law] was fishing ... there are market-related problems ... to be able to stay at [our fish camp], to pass that along to the kids along with the assessment fishing permit.*

Female *I'm trying to faze out of here, trying to emotionally detach from here. I could be here forever but at my age it is dumb to try to stay here alone or with company. If the park wants to make this a home for guests, then it's okay.*

Female *I don't think that we should have to report into the park that we're here. And waive our $4 a day.*

Female *I would simply like my children and their children to be allowed to visit here, to maintain the cabin we finally have a special permit to use. We have been here as the guest of our lifetime friend who had a special use permit. We feel they've been cheated of this lifestyle and legacy.*

Q77: From the perspective of your family, how would you like to see Isle Royale National Park manage the places traditionally used by commercial fishermen?

Male *Boaters do less damage than hikers. Make them more accessible to a wider variety of people. Preserve historic buildings, have better museums and interpretive programs. There was more to this Island before than it could ever be today. They need to redefine park constituency - who is this for?*

Male *I would like to see the places kept up. It would be better if the park would let us keep them up but only if we can stay in them. We've already done a lot to keep the places up.*

Male *If not some primary preservation of buildings, at least keep the dock cribbing undisturbed. To me, they are historical structures and should be listed and described for the education of visitors.*

Male *Personally, I would like to keep our home in our family. If we no longer have direct access, I would like to see it used. The beaver have sent the fish house into the lake and we have let it go because we are losing it.*

Male *I would like to maintain this place if the park would let me.*

Male *I wouldn't like to see them destroyed. Then again, the people that got 'em are going to have to keep them up, spend time there. And if they can't ... it'd be nice for the grandkids to visit to spend some time out there, to learn about their grandparents; but then again, I start thinking ... about the Indians ... their heritage and all that. I have very mixed emotions about it.*

Male *Providing that some entity (DNR, a university) would like to re-establish a more comprehensive assessment program, I would like to see the families who retain the knowledge and interest in commercial fishing be invited to participate in the assessment program and continue to use their traditional grounds. The immediate benefit is to take advantage of the local knowledge relative to the resource that the few remaining fishermen have.*

Male *The home is gone, the dock is gone, everything is gone so there's nothing left to manage. Our house is gone, so what' there to manage? Everything's gone. (But the) user's fee and uh this dock for what it's worth, if that four bucks is puttin' that dock in there I guess I'll pay for it.*

Male *I can't envision the park preserving traditional places. The solution would be if families can retain some kind of ownership relationship, then they can maintain things by themselves. A lot of funding can come from within the families; the docks, the houses, buildings are a problem to maintain otherwise. If we get too much government money to preserve it, it would ruin the place.*

Female *I have yet to see them preserve something. Things are still up because of me and my friends' efforts. It irritates me that they haven't done it.*

Female *I don't think we should have to pay that $4 a day. That really gripes me. It's Windigo and Rock Harbor that's getting it. That's where the money's being spent.*

Female *To be restored and maintained by our family members. The Park destroyed most of our harbor, indeed, Isle Royale.*

Q78: From the perspective of your family, how would you like to see Isle Royale National Park manage commercial fishing in its waters in the future?

Male *Hard to say. Unless you have infrastructure (processing, transportation, etc.) you can't do that; can't be opened up completely, but with reasonable control or permit, proper management, not selfish management.*

Male *I would like to see the park manage commercial fishing for a living, an occupation like charter fishing is, that is, both kinds of fishing or none. So a person could make a living.*

Male *I don't feel there are any potential fishermen in my family, but for those families that do have people interested, it would be nice to allow them to fish.*

Male *Reinstate commercial fishing. I would hesitate to see the whole island returned to its former commercial fishing state. (Although, there are) a lot of fish around for sport fishing. The island could probably support a half dozen commercial fishermen but areas would have to be set aside for it and sport fishing banned from those places. You would certainly have to designate areas as commercial or sport. Not knowing what they might sell for these days, it would take a lot of work to even make the poverty level of income. But if the opportunity were there, there would be folks interested in doing it. You would have to look at kind of the last fishing families and there really aren't that many of them. You know, where as at one time there were all kinds of commercial fishermen on the island, at the end there really weren't that many. And uh, I guess my feeling is that for starters, you'd probably have to look at relatives of that group. I suppose maybe some of the relatives of some of the ones who quit earlier or quit when the park came, you know, they just sold out to the park. NPS's first concern when they found out I was retiring, or semi-retiring, was whether I was going to commercial fish. They were nervous.*

Male *I would like to see it managed for it's ... comparable to the sport fishing out here. I believe the DNR has put a tremendous emphasis on sport fishing because of the fact of the money that it pulls into the area. If you think of it, commercial fishing's put a lot into the area too, by people working, and so on. Tax dollars and whatever.*

Male *Management of the fishery is the responsibility of Michigan DNR, not part of the NPS mandate. There could be cross-enforcement between NPS and DNR of DNR's management of the fishery. We buy licenses from DNR and file reports with DNR now. DNR should be managing the fishery, not NPS.*

Male *I would never fish again, but would like to have the right to fish. If someone's been here and done it, then it should be okay to fish. If a generation is skipped, the children should not be fishing. There is only one license left and that's Stanley's. From my personal point of view, I guess it doesn't really matter but ideally, yeah, I think if one those old family members want to do that again, let 'em go to it. That's my personal opinion. If you've been here and done it once, fine and dandy but if you haven't, you're out. (Possibly) including family members but that may be pushing the envelope. Commercial fishing is sort of complicated, it's more than meets the eye. And I guess my personal opinion is that if they hadn't done it or fished with a father or a grandfather or something, they don't know what they're doing anyway so I guess if it skips a generation, forget it.*

Male *I would like to see more studies of water quality, nature, to know more about the Island. Also, the steamer AMERICA dock should be restored so that large research boats can dock there. The deep sea dock is in itself a cultural resource and could also be used. It has the cribbing still there. Some money should be placed to restore the dock. Studies of fish populations would help. Stuart has been working on computer simulation for fish population model for the western lake. It could help stocking strategies for areas where there are not as many fish. Also, most fish management is geared to sports fishing and that should be more balanced. Studies of spawning areas and stuff would help rebuild fish population as it was.*

Female *I would like to see the park manage commercial fishing for a living, an occupation like charter fishing is, that is, both kinds of fishing or none.*

Female *"Our children have not been able to participate in fishing as were their ancestors. They know little or nothing of the equipment, the fishing areas, etc. They were deprived of the opportunity to make a living fishing."*

Q79: From the perspective of your family, how would you like Isle Royale National Park interpret commercial fishing to the visiting public?

Male *More history, more museums, preserve family histories. Re-institute an interpretive fishery program and provide some infrastructure.*

Male *Interpretations should tell the truth, and show commercial fishing for the sustainable occupation that it was, not like mining.*

Male *I like the interpretation at the Edisen Fishery. Two or three more sites would be an educational benefit to people.*

Male *Commercial fishing lifestyle has something to offer that is interesting to people who visit the island. It has drawn in tourists over the years. I would like to see the home used for something, an interpretive center or artist in residence.*

Male *As it was.*

Male *I'm not real familiar with their programs but I think there should be a little more emphasis on the commercial fishing industry. Because actually commercial fishing is probably the second oldest profession in the world.*

Male *As honestly and straightforward as they can see fit to do. To interpret fishermen through the eyes, actions, and emotions of the fishermen - not through the Park's perception of the fishermen's values or status in the Park. They need to interpret the fishery and other cultural resources relative to how they actually existed - not the way the Park would like these to be perceived. The interpretation should show how fishermen lived and interacted with the fish resource and the few acres they occupied and how they interacted with indigenous species and the visiting public; the commercial fishermen's interrelationship with the whole ecosystem.*

Male *Commercial fishing is a very important part of this park and it should be emphasized. Let the public know we were here all over the island at one time. I think that commercial fishing was a very important part of this park and it should be emphasized.*

Male *Real fishing should be done for people to appreciate how it works.*

Female *Interpretation should tell the truth ... I'm not going to play fish. That's what it is. You play fish. Oh no, I'm not ever going to get that old; not just stand there and tell stories.*

Female *The Park doesn't wish to but they should make effort to interpret the lifestyle. It's not all wilderness. Even the lectures have changed; they're childish and not interesting or instructive for children or adults.*

Female *I agree that commercial fishing is a very important part of this park and it should be emphasized.*

Female *By having an active fishery in operation, not a mock up. A fishery where a man could make a living.*

Q80: Is there anything we have not asked about commercial fishing, its history, the lifestyle, or other aspect that you would like to talk about?

Male *The whole commercial fishing as we look at is that there's a tendency, for the whole lake ... they're just driving us out. They (commercial fishermen) started the charter boats. They (the Park) allow charter boats out there and that's an occupation too. Fishing below 90' to 100' like the sports fishermen do is not good for the fish; it's like getting the bends. If you throw them back like a lot of them do, the fish die. The regulations should be "cook and eat."*

Male *When the Park Service first came here, these people were misrepresented. (People said) if that's what the government says we have to do, this is what we have to do. Like John Skadberg ... I can not see that man not owning that home. He was an ornery cuss but he was a thorough person. And if he would have had that land, they couldn't have torn down that building. The family would have title to that. Same thing with Sam Johnson at Wright's Island. I can not see him not owning it ... when the Park Service came in ... I firmly believe that they told the people this is what they had to do and that was it. And if that could be proven, man, it would open up a whole can of worms and they'd have to change their whole policy. I think the people that came in here and acquired the land just snowed the hell out of the people that were here... just one big snow job.*

Male *The cooperative effort between Minnesota DNR and the Isle Royale commercial fishermen to collect spawn and roe was largely responsible for the replenishment of Lake Superior lake trout stocks. This needs more recognition. Ed Holte, Milford Johnson, Sr,. Sam Rude, Stanley Sivertson, maybe Pete Edisen, were all involved in this effort. You can get more information from the Minnesota DNR French River Hatchery. They are still using some of that brood stock today. Stanley Sivertson continued to do this (fish stock effort) in the 1980s at the Holte fishery at Wright's Island.*

Male *The solution should be environmentally friendly.*

Female *Michigan and Minnesota are making commercial fishing very difficult, trying to drive us out and commercial fishing is the root of everything. My Uncle would get upset ... he'd say, "The sportsmen go out and fish, they get the fish for themselves; the fishermen get the fish and they get it in the markets. The little old man and the little old lady and the people who can't afford these big boats, can't get fish if its not on the markets." Fishing below 90' to 100' like the sports fishermen do is not good for the fish; it's like getting the bends. If you throw them back like a lot of them do, the fish die. The fishermen don't like hook and release. The regulations should be "cook and eat."*

Female *Every part of island has been changed by people; this is all that's left. Periodically, people have come and done short, narrow studies like about wooden boats. The museum in Tofte about commercial fisheries took artifacts at risk. People (visitors) take off with artifacts. Edisen Fishery wasn't like that at all. I have told things to NPS but they keep forgetting, so I don't tell them anything anymore. Their lectures are ... simplistic ... I could have done it better. They are not even teaching wilderness; people don't learn anything. Perhaps the lectures could be geared to children explicitly to set up a future use. Wilderness is a luxury; there are issues of accessibility.*

Female *I could go on and on but we have been interviewed and interviewed but nothing comes of it. We're hoping this study will produce some results, some answers to the grave injustices done to our people.*

These comments are not motivated by unfounded ideals of privilege. Rather, these reflect the degree to which Scandinavian fishermen and their descendants maintain an identity and relationship with their Isle Royale landscape. They also indicate a high level of remaining integrity of both relationship with and condition of the cultural landscape, two aspects essential to nomination to the National Register. The following recommendations are made based on the respondents' comments, historic documentation, the remaining fishing families, and the present condition of sites. These suggestions, listed in decreasing priority, support our primary recommendation of the nomination of the terrestrial, maritime, and underwater landscapes of the Scandinavian folk fishermen of Isle Royale for listing on the National Register as a Cultural Landscape.

Recommendations for Interpretation of the Scandinavian Folk Fishing Cultural Landscape

- *Develop a Partnership for Cultural Interpretation.* Live-in Interpretive Stations, Folk Fishermen as Cultural Interpreters, Interpretive Fish Camps, and Interpretive Markers comprise the suggested characteristics of a partnership for cultural interpretation.
    - *Establish Live-in Interpretive Stations at Select Sites of Scandinavian Fish Camps.* Establish, at the following sites (if desired by the descendants), live-in interpretive stations where descendants of fishing families can stay during the open season of the Park under a cooperative agreement. Any of

these sites not selected for live-in interpretive stations should be placed on the previous site list for interpretive markers. At the live-in stations, respondents could maintain the fish camp in historic and functional condition and provide interpretive information about the fish camp to park visitors. These arrangements would not have to pair fishermen with their families fish camps in those cases where their fish camps are gone or in disrepair. The Sivertson/Barnum Island pairing, for example, is logical given the role of the Sivertson Fisheries in Duluth with the family fisheries at Isle Royale. The Park, in a long-range commitment to management and protection of the Scandinavian folk fishing cultural landscape, would develop an appropriate partnership that would allow the descendants to continue occupation of their families' sites. Other services provided by the descendant might include visitor or rescue/towing assistance.

- Sivertson's and others on Washington Island
- Sivertson/Strom's and others on Barnum Island
- Crystal Cove (re-establish)
- Anderson's on Johnson Island
- Mattson's in Tobin Harbor
- Wright's Island
- Hay Bay (re-establish)
- Fisherman's Home

- *Engage Scandinavian Folk Fishermen and Descendants as Cultural Interpreters.* As Wallis suggested (1960), fishermen could be "employed" as interpreters of the folk fishing story. Present day visitors already enjoy such opportunities, few as these are, as these arise.
- *Establishment of other Interpretive Fish Camps.* The Edisen Fishery, as the only interpretive fish camp, contributes to an impression of an idyllic, yet bygone, lifestyle. The establishment of other interpretive fish camps around the island would greatly enhance and bring to life the cultural history of Isle Royale. Visitors would have more opportunities for interaction not only with the cultural history but with the people of that

history. More interpretive fish camps and more interaction with visitors could remedy such misperceptions as (1) wilderness can only be obtained through the removal of consumptive human activities, and (2) "commercial" fishing as a destructive force. Both of these messages would contribute to a better understanding of how healthy, functional natural systems can be sustained by consumptive activities, just as Baggley (1942), Wirth (1955), and Wallis (1960) noted with regard to the Scandinavian fishermen.

- *Erect Interpretive Markers at Select Sites of Scandinavian Fish Camps.* Establish, at the following sites, interpretive markers that describe the fish camp including the families who used the site, when the site was used, other uses of the site (if any), the fishing grounds associated with the site, and a diagrammatic layout of the buildings and structures of the fish camp. Each site should have an adequate dock.
    - Sivertson, Nicoliasen, Torgerson, Eckel, and possibly other sites on Washington Island and its neighboring islands, including the Booth Company site
    - Swanson site in Little Todd Harbor
    - Green Isle
    - McCullough site in Todd Harbor
    - Birch Island
    - Scotland-Anderson
    - Crystal Cove
    - Belle Isle
    - Star Island
    - Swanson & Purdy, and Anderson sites in Rock Harbor
    - Bangsund site in Moskey Basin
    - Chippewa Harbor
    - Vodrey Harbor
    - Hat Island

- Malone Island
- Hay Bay
- Checker Point
- Francis Point
- Little Boat Harbor
- Long Point

- *Develop a Partnership for Fisheries Management and Research at Isle Royale.* In cooperation with the Michigan DNR, descendant fishermen, and interested universities, establish an assessment fishing program in which descendant fishermen could continue their lifestyle while providing the DNR and university researchers fish data relative to health, population, physical statistics, and species composition. Descendant fishermen could work with university students involved in the program, sharing with them the traditional knowledge of their ancestors. Such interaction would bring together traditional and western science knowledge from which adaptive management strategies could be developed. Benefits would reach the fish populations of Isle Royale, and assessment and sport fishermen. This research/management endeavor could become a model for other "commercial" fisheries in the Great Lakes.
- *Basic Interpretive Recommendations.* The following recommendations represent a basic model for cultural interpretation of Scandinavian folk fishing culture and landscape.
  - Interpretation should make and emphasize the distinction between commercial fishing and folk fishing.
  - All the interested descendants of Isle Royale Scandinavian folk fishermen should be invited to participate with Isle Royale National Park to renegotiate the future of their relationships with the Park, to develop site-specific management plans, and to determine future policy for the preservation of the folk fishing cultural history at Isle Royale.

- No-wake waters in the harbors of existing and former fish camps. This practice would protect the submerged and shoreline cultural resources and reflect the practices of the folk fishermen.

Nomination to the National Register as a Cultural Landscape could include the nomination of several remaining fish camps as Traditional Cultural Properties (TCPs). It is important to recognize that the extent of the Cultural Landscape of the Scandinavian Folk Fishermen precludes nominating only a few fish camps as TCPs. In order to adequately address the management potential and recommendations of a Scandinavian Folk Fishing Cultural Landscape, a nomination to the National Register should be compiled and submitted with the aid of those remaining fishermen and descendants who desire to assist such effort. Further documentation in support of this nomination is expected to be forthcoming.

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APPENDIX A

ORAL HISTORIES BY SUBJECT

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
Family & Origins	ORHI 3	Pete Edisen	8/3/82	Lawrence Rakestraw
	ORHI 5	Milford Johnson Pete Edisen &	1965	Lawrence Rakestraw
	ORHI 8	Westy Farmer Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 9	Johnson Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 10	Johnson Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 11	Johnson	9/17/74	Westy Farmer
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 64	Pete Edisen Violet Miller/	8/12/75	Jens Lund
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg Edwin C. "Steve"	7/30/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen Ed & Ingeborg	7/29/77	Barbara Sommer
Tenure on ISRO	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen	8/3/82	Lawrence Rakestraw
	ORHI 5	Milford Johnson Pete Edisen &	1965	Lawrence Rakestraw
	ORHI 8	Westy Farmer Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 9	Johnson Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 11	Johnson	9/17/74	Westy Farmer
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise Violet Johnson	1978	Peter Welch
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg	1/87	Dave Snyder
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson Olga Johnson &	3/26/90	Tim Cochrane
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg Milford & Myrtle	12/8/90	Tim Cochrane
Life on ISRO	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	ORHI 22	Pete & Laura Violet Johnson	9/3/65	Lawrence Rakestraw
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 67	Stan Sivertson Olga Johnson &	10/88	Tim Cochrane
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
Isle Royale	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson Ed & Ingeborg	7/27/77	Barbara Sommer
Homes, homesteading	ORHI 2	Holte Milford & Myrtle	9/10/65	Lawrence Rakestraw
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 17	Herb Melby Ingeborg Holte &	8/10/82	?
	ORHI 25	Elaine Rude	?	video tape
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
Work of Women	ORHI 45	Milford Johnson	1978	Peter Welch
	NEMN 3	Ingaborg Holte Conrad and Fern	7/6/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
Children's Activities	ORHI 45	Milford Johnson	1978	Peter Welch
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Clothing	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Conrad and Fern	7/6/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
Family Recreation	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
Health / Illness	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 65	Violet Miller/ Kenyon Johnson	10/86	Tim Cochrane
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
	NEMN 9	George Torgeson Ed & Ingeborg	7/27/77	Barbara Sommer
Wildlife	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson Pete Edisen &	1965	Lawrence Rakestraw
	ORHI 8	Westy Farmer Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 9	Johnson Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 11	Johnson	9/17/74	Westy Farmer
	ORHI 17	Herb Melby	8/10/82	?
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 46	Pete Edise Violet Johnson	1978	Peter Welch
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg	1/87	Dave Snyder
	ORHI 64	Pete Edisen Violet Miller/	8/12/75	Jens Lund
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	ORHI 86	Gene Skadberg Ed & Ingeborg	12/8/90	Tim Cochrane
Livestock, farming, gardening	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 46	Pete Edise Violet Miller/	1978	Peter Welch
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 86	Gene Skadberg Ed & Ingeborg	12/8/90	Tim Cochrane
Pets	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 64	Pete Edisen Violet Miller/	8/12/75	Jens Lund
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	ORHI 86	Gene Skadberg Ed & Ingeborg	12/8/90	Tim Cochrane
Natural Disasters	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 7	Milford Johnson Pete Edisen &	1965	Lawrence Rakestraw
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 46	Pete Edise Violet Johnson	1978	Peter Welch
	ORHI 55	Miller Violet Miller/	3/10/85	Dave Snyder
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg Olga Johnson &	10/88	Tim Cochrane
	ORHI 85	Ron Johnson Ed & Ingeborg	12/6/90	Tim Cochrane
Winter and Winter Activities	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise Violet Johnson	1978	Peter Welch
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg Violet Miller/	1/87	Dave Snyder
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson Olga Johnson &	3/26/90	Tim Cochrane
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
Move to North Shore	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
		Edwin C. "Steve"		
	NEMN 4	Johnson	6/22/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
		Ed & Ingeborg		
Fish camps	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
		Milford & Myrtle		
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
		Pete Edisen &		
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
		Milford & Myrtle		
	ORHI 9	Johnson	9/17/74	Westy Farmer
	ORHI 17	Herb Melby	8/10/82	?
		Milford & Myrtle		
	ORHI 18	Johnson	?	video tape
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 45	Milford Johnson	1978	Peter Welch
		Violet Johnson		
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg	1/87	Dave Snyder
		Olga Johnson &		
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
		Ed & Ingeborg		
Fishing routine, prep, maintenance	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen	8/3/82	Lawrence Rakestraw
		Milford & Myrtle		
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
		Milford & Myrtle		
	ORHI 9	Johnson	9/17/74	Westy Farmer
	ORHI 17	Herb Melby	8/10/82	?
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
		Ingeborg Holte &		
	ORHI 25	Elaine Rude	?	video tape
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
		Violet Miller/		
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	ORHI 84	Stan Sivertson	12/6/90	Tim Cochrane
		Olga Johnson &		
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
When & Where Caught				
(Yearly Schedules)	ORHI 5	Milford Johnson Milford & Myrtle	1965	Lawrence Rakestraw
	ORHI 9	Johnson Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 11	Johnson	9/17/74	Westy Farmer
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise Violet Miller/	1978	Peter Welch
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Types of Fish Caught	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 64	Pete Edisen Violet Miller/	8/12/75	Jens Lund
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Amount Caught	ORHI 45	Milford Johnson	1978	Peter Welch
	NEMN 2	Roy Oberg Edwin C. "Steve"	7/30/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Deep Sea Fishing	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	NEMN 5	Milford Johnson, Jr.	7/14/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
Daily Fishing Schedule	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Preparation of Fish for Sale	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson Conrad and Fern	6/22/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Fish Boxes and Kegs	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 64	Pete Edisen	8/12/75	Jens Lund
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson Ed & Ingeborg	7/27/77	Barbara Sommer
Boats	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	ORHI 7	Milford Johnson Pete Edisen &	1965	Lawrence Rakestraw
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
	ORHI 17	Herb Melby	8/10/82	?
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura Ingeborg Holte &	9/3/65	Lawrence Rakestraw
	ORHI 25	Elaine Rude	?	video tape
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise Violet Johnson	1978	Peter Welch
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 64	Pete Edisen Violet Miller/	8/12/75	Jens Lund
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 84	Stan Sivertson Olga Johnson &	12/6/90	Tim Cochrane
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
Fishing Rigs	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Techniques- Emptying Nets	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 2	Roy Oberg Edwin C. "Steve"	7/30/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
Types of Nets Used	ORHI 5	Milford Johnson Milford & Myrtle	1965	Lawrence Rakestraw
	ORHI 9	Johnson	9/17/74	Westy Farmer
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 64	Pete Edisen	8/12/75	Jens Lund
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Net Assessories	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg Edwin C. "Steve"	7/30/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
Net Care	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson Conrad and Fern	6/22/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
Net Markers	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
Use of Hook (set) lines)	ORHI 45	Milford Johnson	1978	Peter Welch
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Conrad and Fern	7/6/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Use of Hired Hands	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
Attitudes Toward Fishing / Lake	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	NEMN 3	Ingaborg Holte Conrad and Fern	7/6/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Comments re: Fishing in Europe	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 2	Roy Oberg Edwin C. "Steve"	7/30/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Fish/ecology	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson Milford & Myrtle	7/10/75	Lawrence Rakestraw
	ORHI 9	Johnson Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 10	Johnson Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 11	Johnson Milford & Myrtle	9/17/74	Westy Farmer
	ORHI 18	Johnson	?	video tape
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura Ingeborg Holte &	9/3/65	Lawrence Rakestraw
	ORHI 25	Elaine Rude	?	video tape
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 64	Pete Edisen Violet Miller/	8/12/75	Jens Lund
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson Olga Johnson &	3/26/90	Tim Cochrane
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
Taking Spawn	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 45	Milford Johnson Violet Miller/	1978	Peter Welch
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Weather, Storms, Lake Dangers and Conditions	ORHI 2	Ed & Ingeborg Holte Milford & Myrtle	9/10/65	Lawrence Rakestraw
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	ORHI 84	Stan Sivertson Olga Johnson &	12/6/90	Tim Cochrane
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Market/Industry	ORHI 45	Milford Johnson	1978	Peter Welch
Dealers	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson Conrad and Fern	6/22/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Start in the Industry	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr. Conrad and Fern	7/14/77	Barbara Sommer
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Supplies/Credit to Fishermen	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
Supply Boats/ Pick up				
Fish	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Fish Prices	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
		Edwin C. "Steve"		
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr.	7/14/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Local Markets	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
		Edwin C. "Steve"		
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr.	7/14/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
National Markets	ORHI 45	Milford Johnson	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
		Edwin C. "Steve"		
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr.	7/14/77	Barbara Sommer

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
State Regulations	ORHI 45	Milford Johnson	1978	Peter Welch
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
The Depression	ORHI 46	Pete Edise	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
End of the Industry	ORHI 45	Milford Johnson	1978	Peter Welch
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr.	7/14/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
Other Work Done by Fishermen	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 3	Ingaborg Holte Edwin C. "Steve"	7/6/77	Barbara Sommer
	NEMN 4	Johnson	6/22/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr.	7/14/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
People				
		Ed & Ingeborg		
Other Fishermen	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
		Pete Edisen &		
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
		Milford & Myrtle		
	ORHI 9	Johnson	9/17/74	Westy Farmer
		Milford & Myrtle		
	ORHI 11	Johnson	9/17/74	Westy Farmer
	ORHI 17	Herb Melby	8/10/82	?
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
		Ingeborg Holte &		
	ORHI 25	Elaine Rude	?	video tape
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
		Violet Johnson		
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg	1/87	Dave Snyder
	ORHI 64	Pete Edisen	8/12/75	Jens Lund
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	ORHI 84	Stan Sivertson	12/6/90	Tim Cochrane
		Olga Johnson &		
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
Other Names				
Associated with the				
Fishing Industry	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
		Pete Edisen &		
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	NEMN 1	Aleck Christiansen	7/22/77	Barbara Sommer
	NEMN 3	Ingaborg Holte	7/6/77	Barbara Sommer
	NEMN 5	Milford Johnson, Jr.	7/14/77	Barbara Sommer
		Conrad and Fern		
	NEMN 6	Lorntsen	6/29/77	Barbara Sommer
	NEMN 7	Hjalmer Mattson	7/11/77	Barbara Sommer
	NEMN 2	Roy Oberg	7/30/77	Barbara Sommer
	NEMN 8	Ragnvald Sve	7/15/77	Barbara Sommer
	NEMN 9	George Torgeson	7/27/77	Barbara Sommer
	NEMN 10	Chris Tormondsen	7/29/77	Barbara Sommer
		Ed & Ingeborg		
Other People	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen	8/3/82	Lawrence Rakestraw

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
		Milford & Myrtle		
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
		Pete Edisen &		
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
		Milford & Myrtle		
	ORHI 11	Johnson	9/17/74	Westy Farmer
	ORHI 17	Herb Melby	8/10/82	?
		Milford & Myrtle		
	ORHI 18	Johnson	?	video tape
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
		Ingeborg Holte &		
	ORHI 25	Elaine Rude	?	video tape
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 46	Pete Edise	1978	Peter Welch
		Violet Johnson		
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg	1/87	Dave Snyder
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	ORHI 84	Stan Sivertson	12/6/90	Tim Cochrane
		Olga Johnson &		
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
Resorts	ORHI 3	Pete Edisen	8/3/82	Lawrence Rakestraw
		Milford & Myrtle		
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
		Milford & Myrtle		
	ORHI 11	Johnson	9/17/74	Westy Farmer
	ORHI 17	Herb Melby	8/10/82	?
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise	1978	Peter Welch
		Violet Johnson		
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 64	Pete Edisen	8/12/75	Jens Lund
		Violet Miller/		
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
		Olga Johnson &		
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
		Ed & Ingeborg		
Indians	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
		Pete Edisen &		
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer

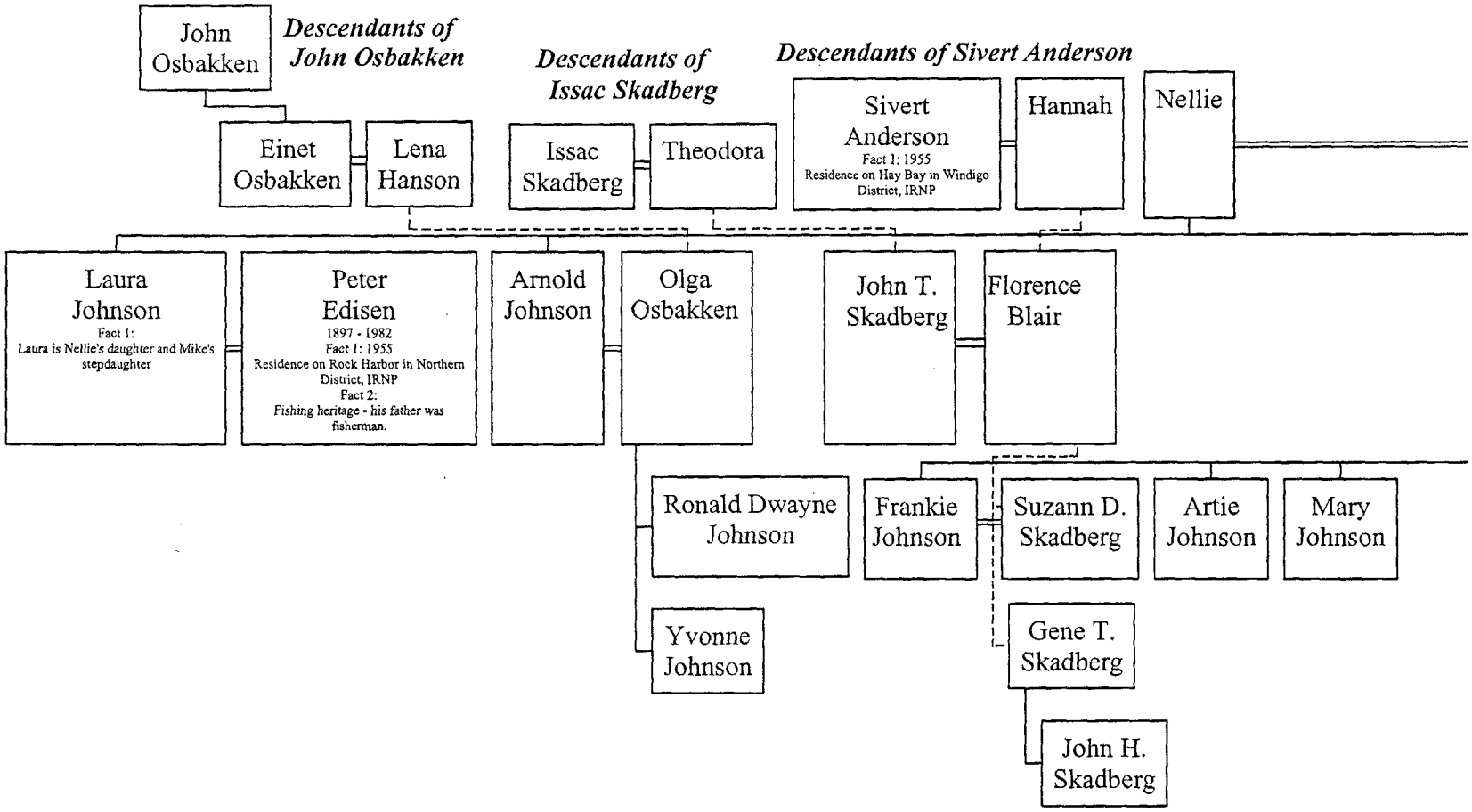
Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 46	Pete Edise Violet Johnson	1978	Peter Welch
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg Violet Miller/	1/87	Dave Snyder
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 84	Stan Sivertson Ed & Ingeborg	12/6/90	Tim Cochrane
CCC	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen	8/3/82	Lawrence Rakestraw
	ORHI 7	Milford Johnson Pete Edisen &	1965	Lawrence Rakestraw
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson Violet Johnson	3/26/83	Carol Maass
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson Olga Johnson &	3/26/90	Tim Cochrane
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
NPS	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson Pete Edisen &	7/10/75	Lawrence Rakestraw
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 45	Milford Johnson	1978	Peter Welch
	ORHI 46	Pete Edise Violet Johnson	1978	Peter Welch
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg Violet Miller/	1/87	Dave Snyder
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson Olga Johnson &	3/26/90	Tim Cochrane
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
Problems with Other People	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson Pete Edisen &	7/10/75	Lawrence Rakestraw
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
	ORHI 45	Milford Johnson Violet Johnson	1978	Peter Welch
	ORHI 55	Miller	3/10/85	Dave Snyder

Topic / *Sub-topic*	Interview	Name	Date	Interviewer
		Violet Miller/		
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
Rescues	ORHI 3	Pete Edisen	8/3/82	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 64	Pete Edisen	8/12/75	Jens Lund
		Ed & Ingeborg		
Places, Place Names	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
		Milford & Myrtle		
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
		Pete Edisen &		
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
		Milford & Myrtle		
	ORHI 9	Johnson	9/17/74	Westy Farmer
		Milford & Myrtle		
	ORHI 10	Johnson	9/17/74	Westy Farmer
		Milford & Myrtle		
	ORHI 11	Johnson	9/17/74	Westy Farmer
	ORHI 17	Herb Melby	8/10/82	?
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 22	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 23	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 29	Inez Mattson	3/26/83	Carol Maass
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 60	John T. Skadberg	1/87	Dave Snyder
	ORHI 64	Pete Edisen	8/12/75	Jens Lund
		Violet Miller/		
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
		Olga Johnson &		
	ORHI 85	Ron Johnson	12/6/90	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
Foot Travel, Trails	ORHI 3	Pete Edisen	8/3/82	Lawrence Rakestraw
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 86	Gene Skadberg	12/8/90	Tim Cochrane
		Ed & Ingeborg		
Shipwrecks	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 17	Herb Melby	8/10/82	?
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
		Violet Johnson		
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg	1/87	Dave Snyder

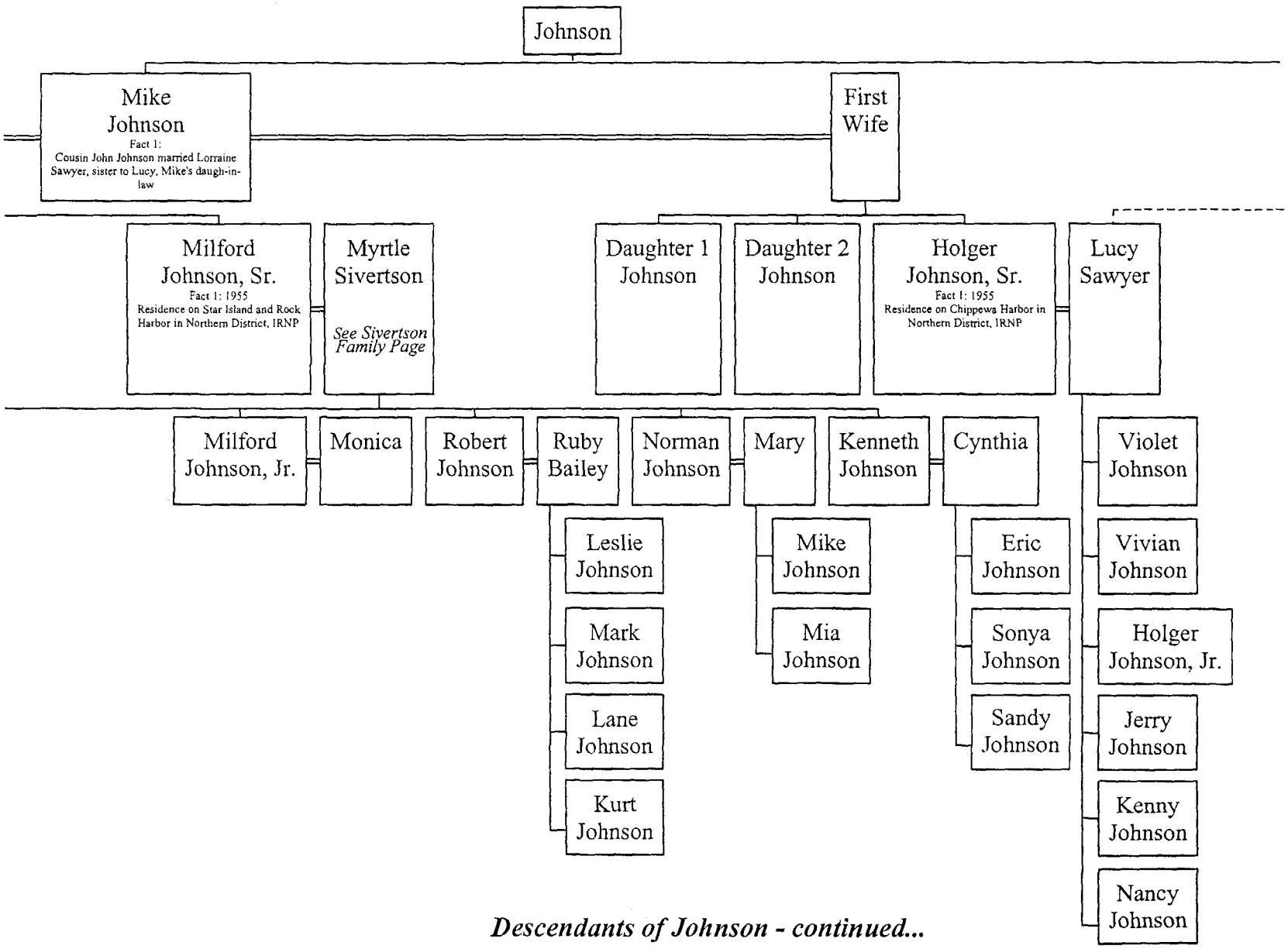
Topic / *Sub-topic*	Interview	Name	Date	Interviewer
	ORHI 64	Pete Edisen Olga Johnson &	8/12/75	Jens Lund
	ORHI 85	Ron Johnson Ed & Ingeborg	12/6/90	Tim Cochrane
Trapping, Hunting	ORHI 2	Holte Milford & Myrtle	9/10/65	Lawrence Rakestraw
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 7	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 46	Pete Edise	1978	Peter Welch
	ORHI 60	John T. Skadberg Violet Miller/	1/87	Dave Snyder
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 69	John T. Skadberg	10/88	Tim Cochrane
	ORHI 76	Clifford Swenson	3/26/90	Tim Cochrane
	ORHI 84	Stan Sivertson Olga Johnson &	12/6/90	Tim Cochrane
	ORHI 85	Ron Johnson Ed & Ingeborg	12/6/90	Tim Cochrane
Mines, Mining, Minerals	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson	7/10/75	Lawrence Rakestraw
	ORHI 5	Milford Johnson	1965	Lawrence Rakestraw
	ORHI 17	Herb Melby	8/10/82	?
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 46	Pete Edise Violet Johnson	1978	Peter Welch
	ORHI 55	Miller	3/10/85	Dave Snyder
	ORHI 60	John T. Skadberg Violet Miller/	1/87	Dave Snyder
	ORHI 65	Kenyon Johnson	10/86	Tim Cochrane
	ORHI 66	Violet Miller	10/88	Tim Cochrane
	ORHI 67	Stan Sivertson Ed & Ingeborg	10/88	Tim Cochrane
Logging	ORHI 2	Holte	9/10/65	Lawrence Rakestraw
	ORHI 3	Pete Edisen Milford & Myrtle	8/3/82	Lawrence Rakestraw
	ORHI 4	Johnson Pete Edisen &	7/10/75	Lawrence Rakestraw
	ORHI 8	Westy Farmer	9/17/74	Westy Farmer
	ORHI 19	Sam & Elaine Rude	9/11/65	Lawrence Rakestraw
	ORHI 21	Stan Sivertson	9/13/65	Lawrence Rakestraw
	ORHI 24	Pete & Laura	9/3/65	Lawrence Rakestraw
	ORHI 60	John T. Skadberg	1/87	Dave Snyder

APPENDIX B

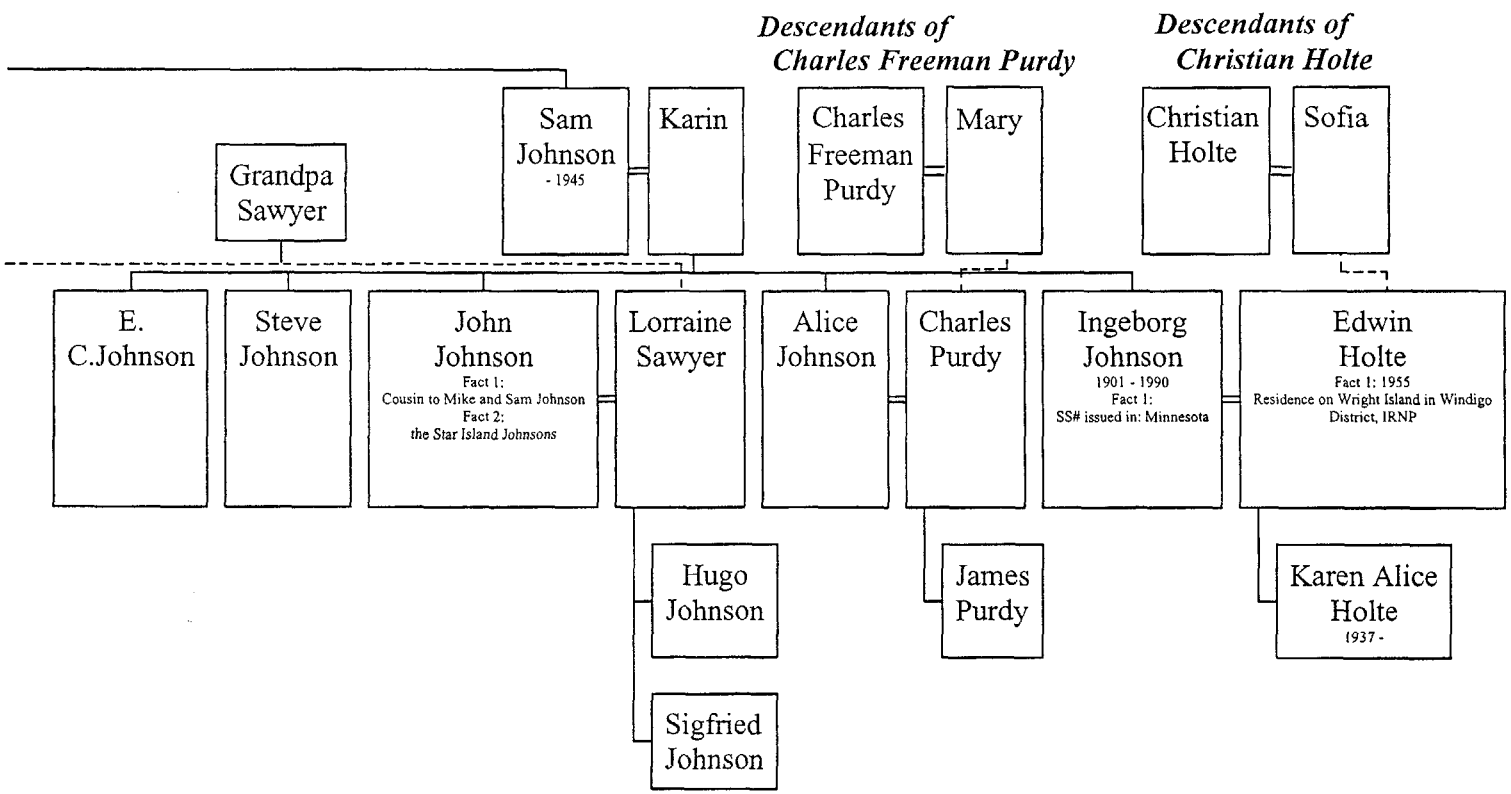
KINSHIP CHARTS



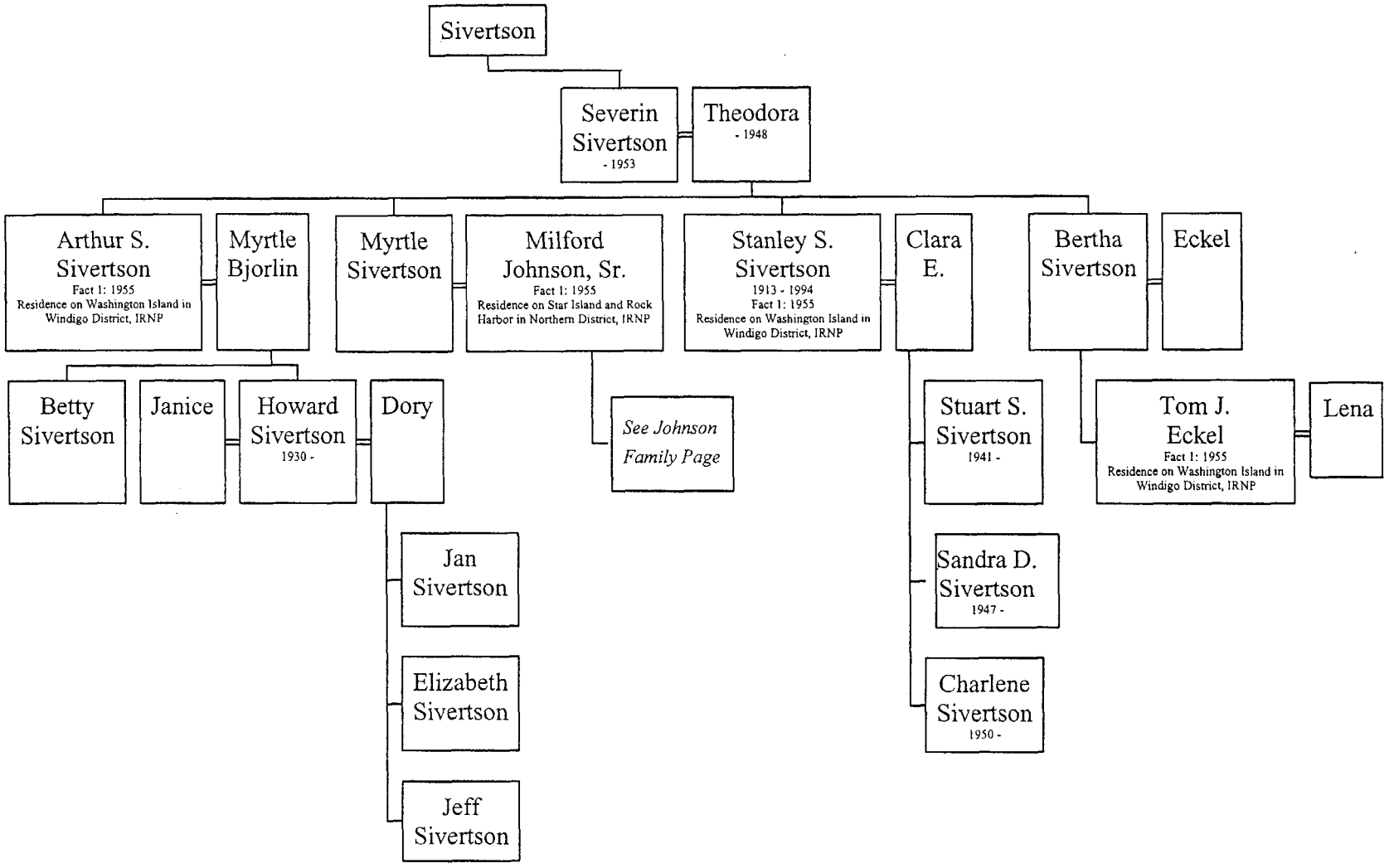
***Descendants of Johnson* with Extended Families**

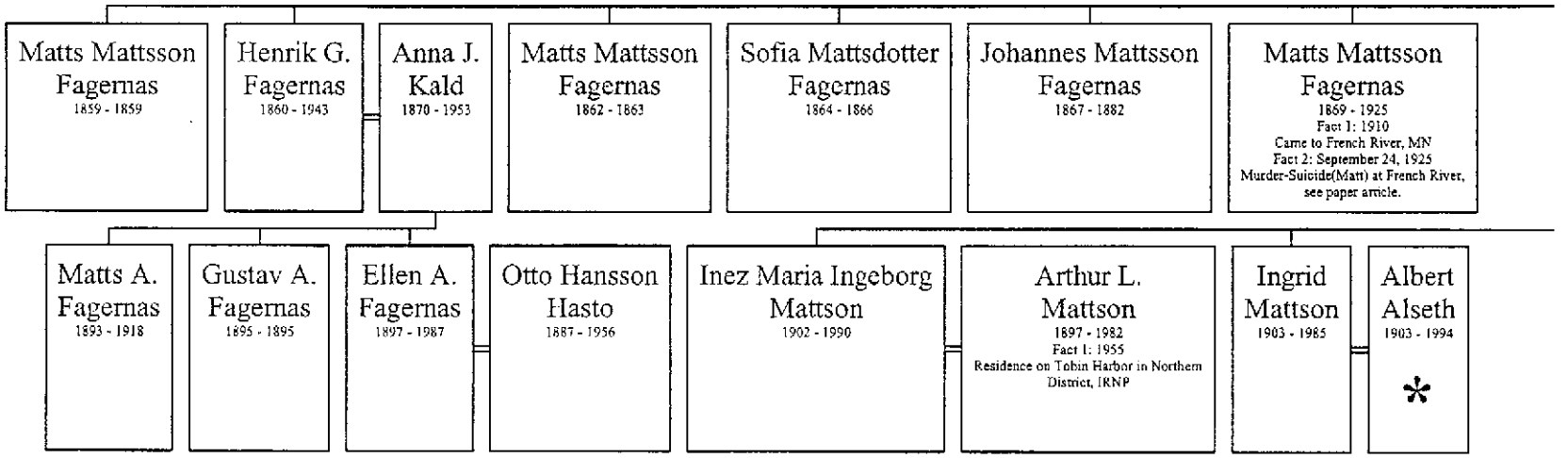


Descendants of Johnson - continued...

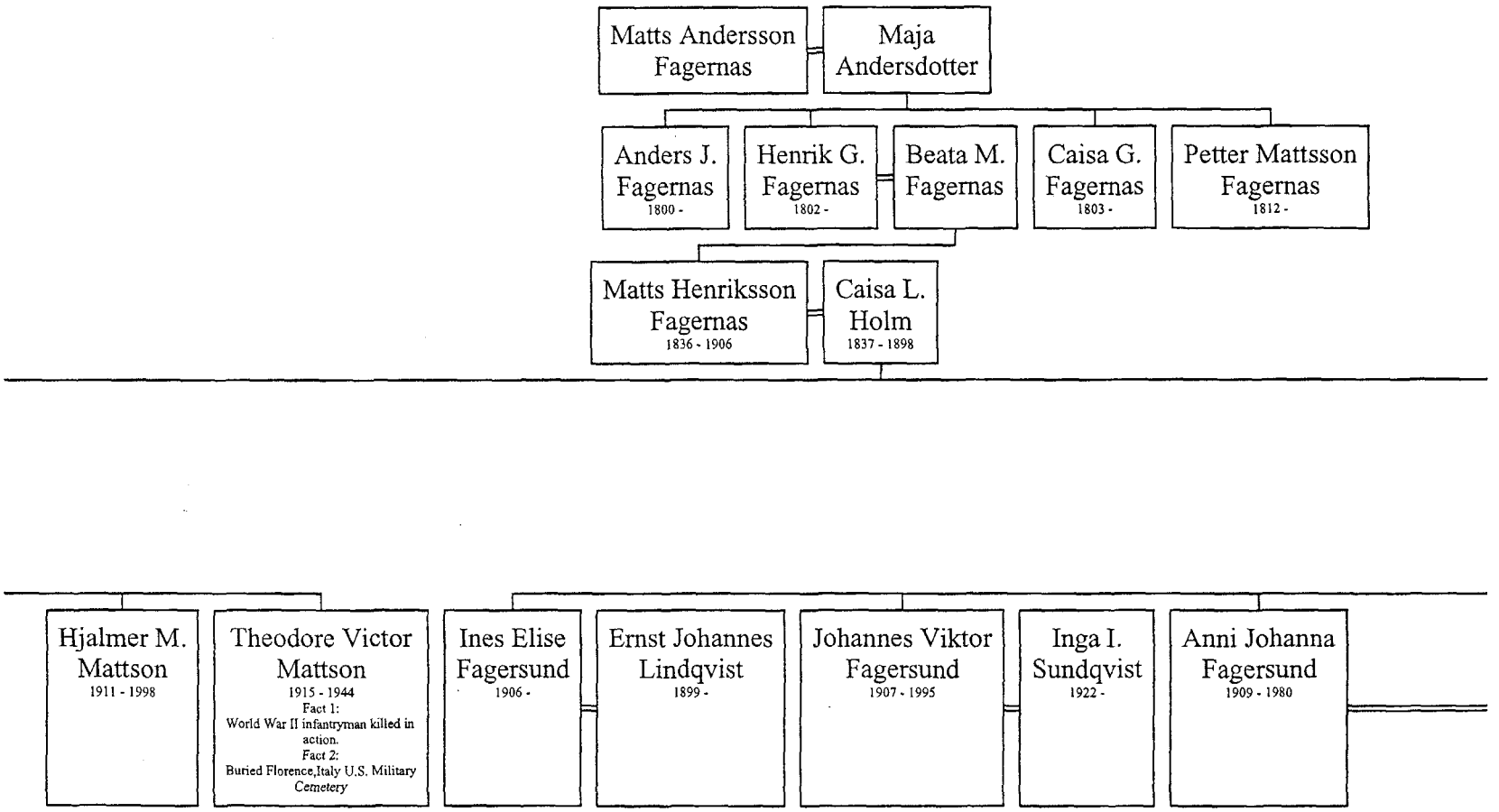


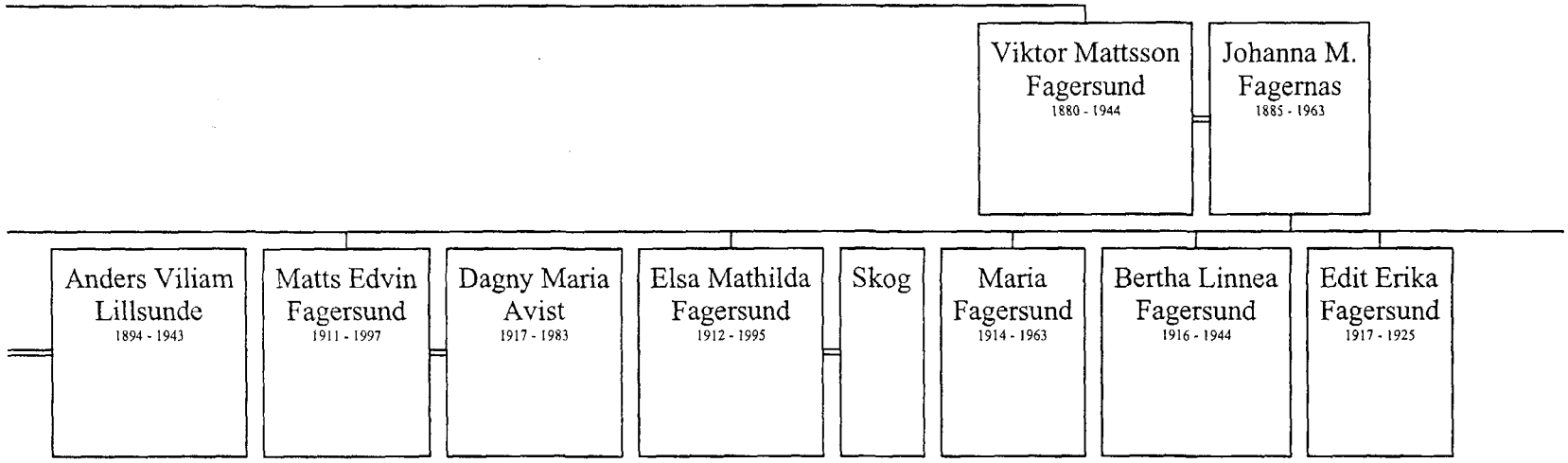
Descendants of Johnson - continued...

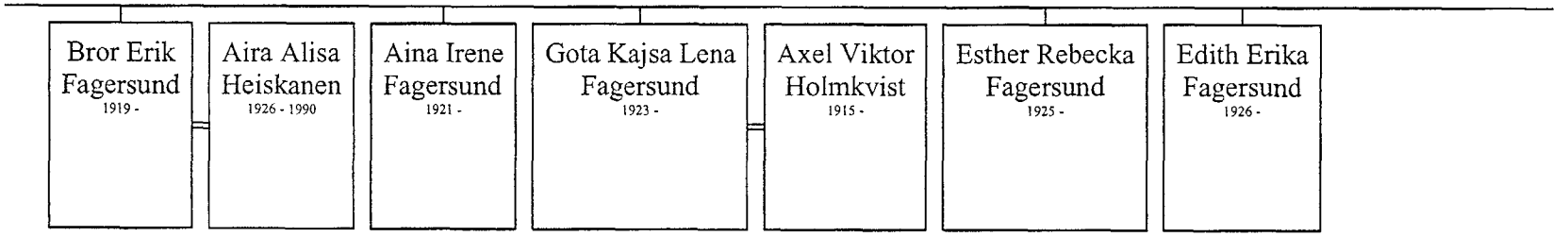

Sivertson
Severin Sivertson
- 1953
Theodora
- 1948
Arthur S. Sivertson
Fact 1: 1955
Residence on Washington Island in Windigo District, IRNP
Myrtle Bjorlin
Myrtle Sivertson
Milford Johnson, Sr.
Fact 1: 1955
Residence on Star Island and Rock Harbor in Northern District, IRNP
Stanley S. Sivertson
1913 - 1994
Fact 1: 1955
Residence on Washington Island in Windigo District, IRNP
Clara E.
Bertha Sivertson
Eckel
Betty Sivertson
Janice
Howard Sivertson
1930 -
Dory
See Johnson Family Page
Stuart S. Sivertson
1941 -
Tom J. Eckel
Fact 1: 1955
Residence on Washington Island in Windigo District, IRNP
Lena
Jan Sivertson
Sandra D. Sivertson
1947 -
Elizabeth Sivertson
Charlene Sivertson
1950 -
Jeff Sivertson


Matts Mattsson Fagernas
1859 - 1859
Henrik G. Fagernas
1860 - 1943
Anna J. Kald
1870 - 1953
Matts Mattsson Fagernas
1862 - 1863
Sofia Mattsdotter Fagernas
1864 - 1866
Johannes Mattsson Fagernas
1867 - 1882
Matts Mattsson Fagernas
1869 - 1925
Fact 1: 1910
Came to French River, MN
Fact 2: September 24, 1925
Murder-Suicide(Matt) at French River, see paper article.
Matts A. Fagernas
1893 - 1918
Gustav A. Fagernas
1895 - 1895
Ellen A. Fagernas
1897 - 1987
Otto Hansson Hasto
1887 - 1956
Inez Maria Ingeborg Mattson
1902 - 1990
Arthur L. Mattson
1897 - 1982
Fact 1: 1955
Residence on Tobin Harbor in Northern District, IRNP
Ingrid Mattson
1903 - 1985
Albert Alseth
1903 - 1994
*

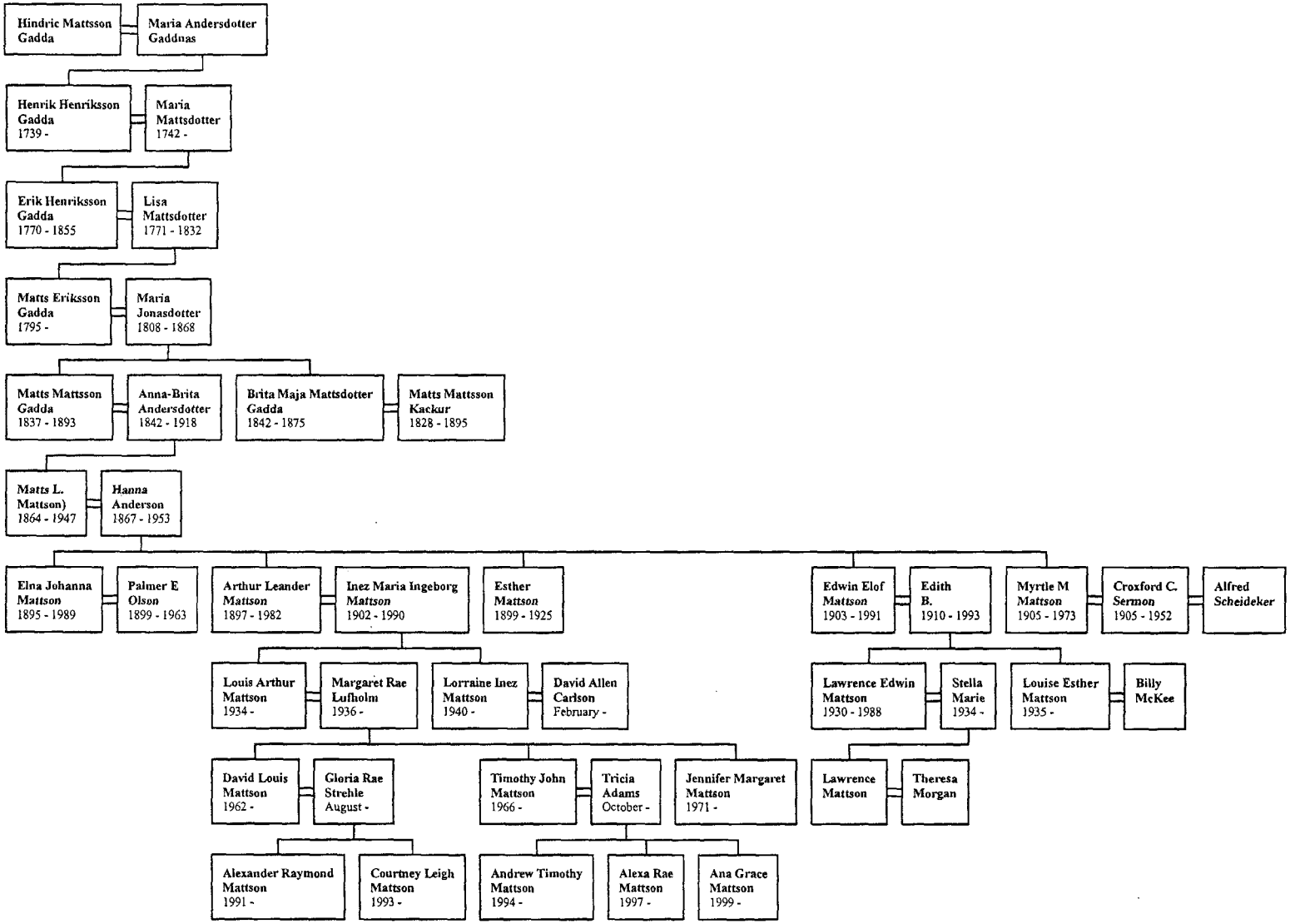

Anders Mattsson Fagernas
1871 - 1871
Leander M. Mattson)
1872 - 1958
Selma Lovisa Bergendahl
1876 - 1918
Anders Mattsson Fagernas
1875 - 1898
Maria S. Fagernas
1877 -
Fact 1: October 03, 1915
Moved from Larsmo to Jakobstad, Finland
Fact 2: 1925
Lived in Portland, OR
Louis Johnson
Aina Irene Mattson
1904 -
Ralph S Alseth
1906 - 1969
*
Ellen Viola Mattson
1906 - 1992
Milton Alseth
1912 - 1996
*
Julia Celia Mattson
1907 -
Clarence William Alseth
1909 - 1969
*
Lillian M. Mattson
1909 -
Harry Gust Stromgren
1908 - 1965

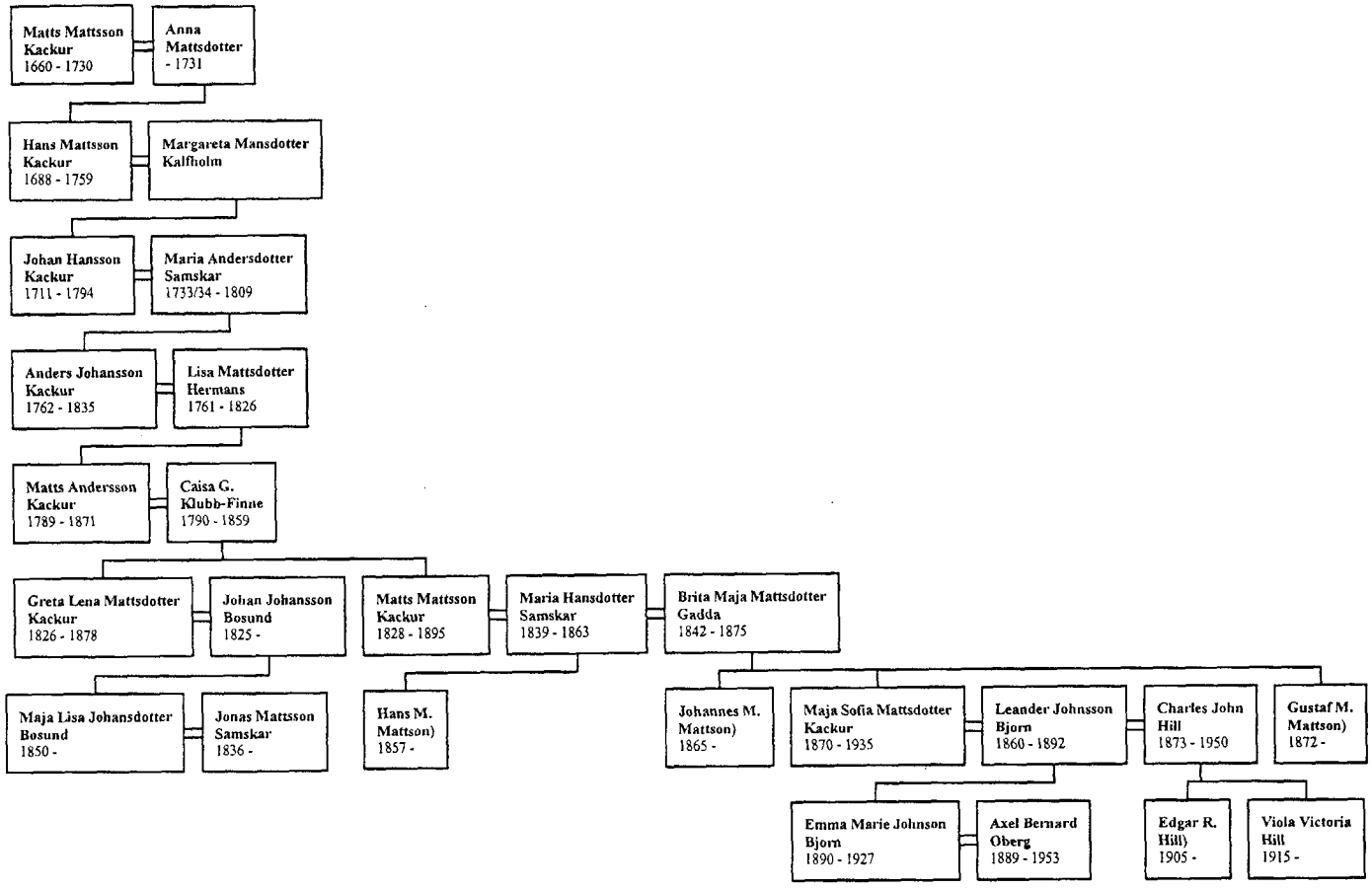

Matts Andersson Fagernas
Maja Andersdotter
Anders J. Fagernas
1800 -
Henrik G. Fagernas
1802 -
Beata M. Fagernas
Caisa G. Fagernas
1803 -
Petter Mattsson Fagernas
1812 -
Matts Henriksson Fagernas
1836 - 1906
Caisa L. Holm
1837 - 1898
Hjalmer M. Mattson
1911 - 1998
Theodore Victor Mattson
1915 - 1944
Fact 1:
World War II infantryman killed in action.
Fact 2:
Buried Florence,Italy U.S. Military Cemetery
Ines Elise Fagersund
1906 -
Ernst Johannes Lindqvist
1899 -
Johannes Viktor Fagersund
1907 - 1995
Inga I. Sundqvist
1922 -
Anni Johanna Fagersund
1909 - 1980


Viktor Mattsson Fagersund
1880 - 1944
Johanna M. Fagernas
1885 - 1963
Anders Viliam Lillsunde
1894 - 1943
Matts Edvin Fagersund
1911 - 1997
Dagny Maria Avist
1917 - 1983
Elsa Mathilda Fagersund
1912 - 1995
Skog
Maria Fagersund
1914 - 1963
Bertha Linnea Fagersund
1916 - 1944
Edit Erika Fagersund
1917 - 1925

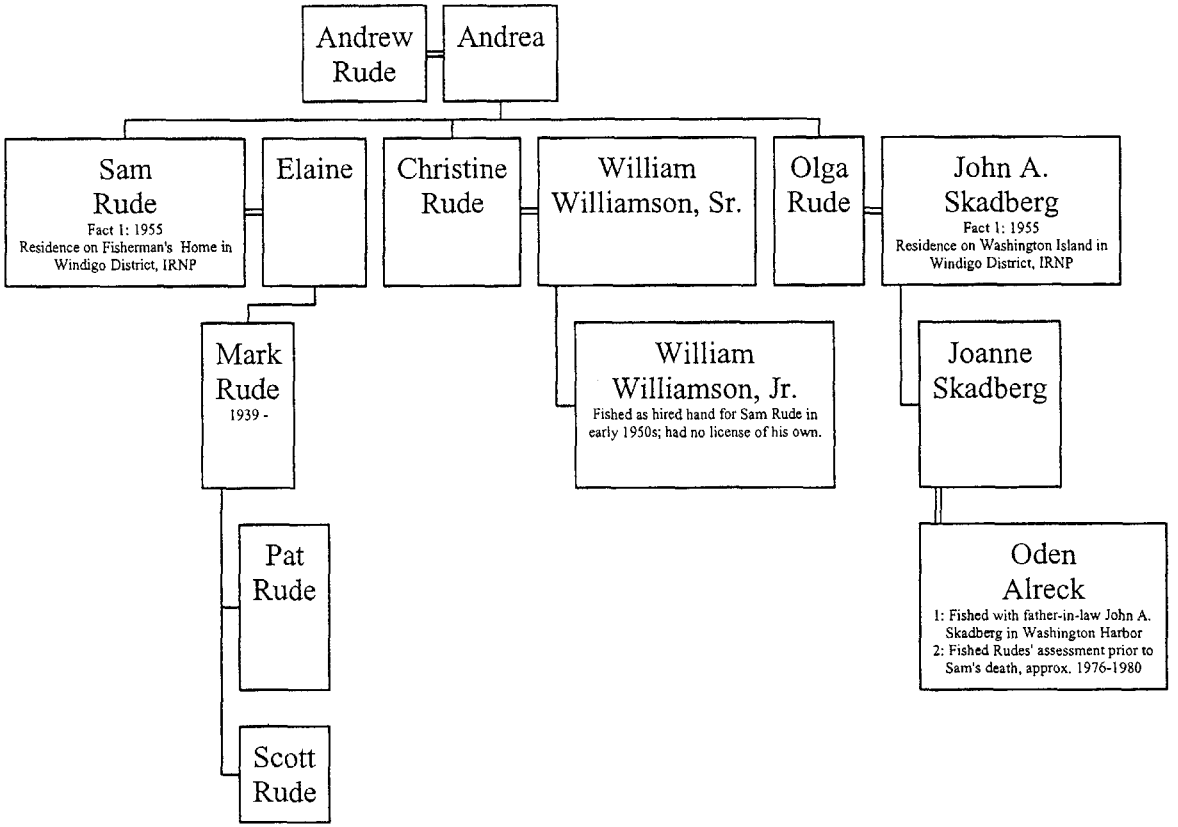

Bror Erik Fagersund
1919 -
Aira Alisa Heiskanen
1926 - 1990
Aina Irene Fagersund
1921 -
Gota Kajsa Lena Fagersund
1923 -
Axel Viktor Holmkvist
1915 -
Esther Rebecka Fagersund
1925 -
Edith Erika Fagersund
1926 -


Hjordis Marita Fagersund
1928 -
Ingvald Bjornvik
1928 - 1995
Hans Uno Fagersund
1930 -

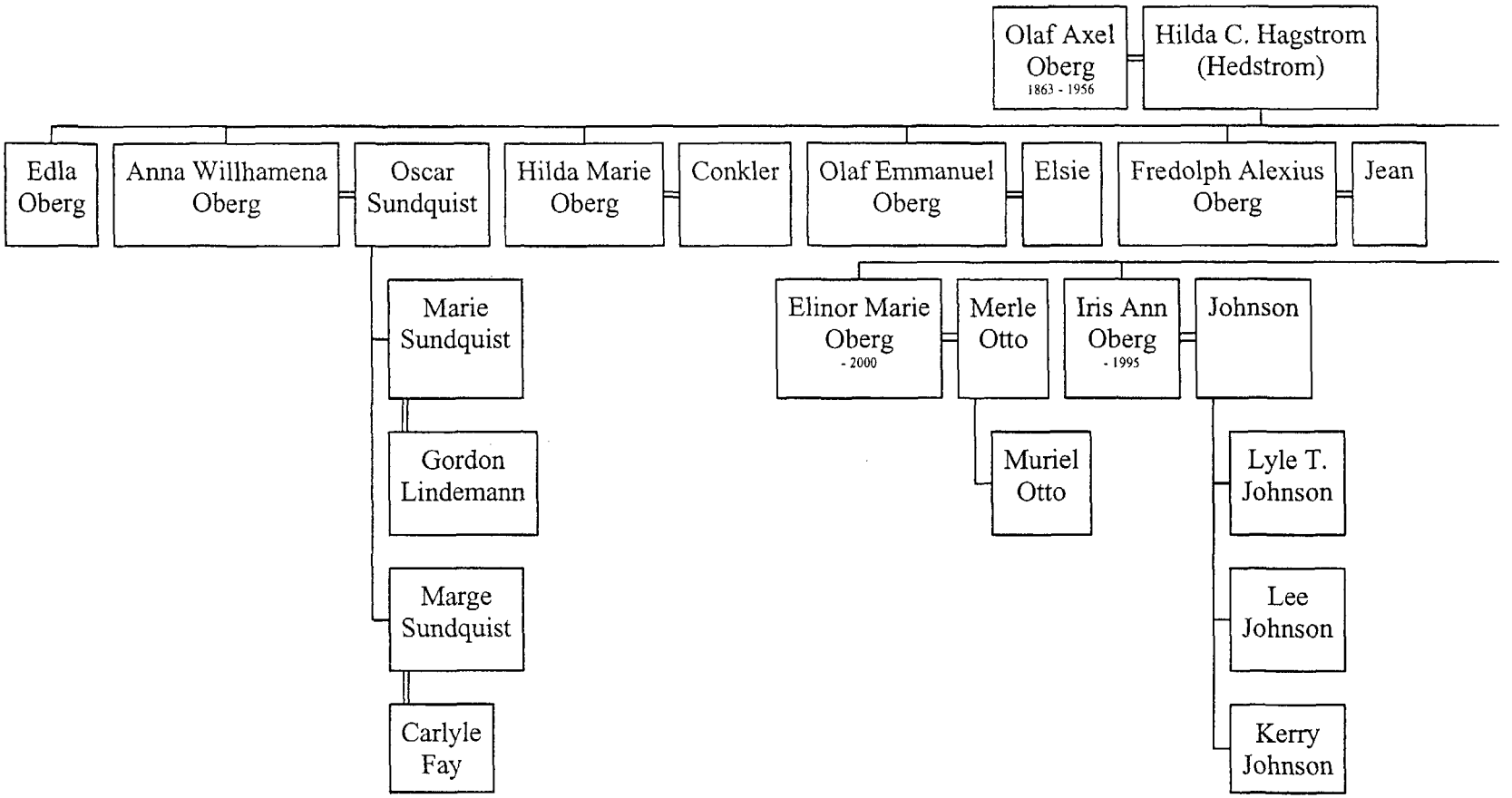

Hindric Mattsson Gadda
Maria Andersdotter Gaddnas
Henrik Henriksson Gadda 1739 -
Maria Mattsdotter 1742 -
Erik Henriksson Gadda 1770 - 1855
Lisa Mattsdotter 1771 - 1832
Matts Eriksson Gadda 1795 -
Maria Jonasdotter 1808 - 1868
Matts Mattsson Gadda 1837 - 1893
Anna-Brita Andersdotter 1842 - 1918
Brita Maja Mattsdotter Gadda 1842 - 1875
Matts Mattsson Kackur 1828 - 1895
Matts L. Mattson) 1864 - 1947
Hanna Anderson 1867 - 1953
Elna Johanna Mattson 1895 - 1989
Palmer E Olson 1899 - 1963
Arthur Leander Mattson 1897 - 1982
Inez Maria Ingeborg Mattson 1902 - 1990
Esther Mattson 1899 - 1925
Edwin Elof Mattson 1903 - 1991
Edith B. 1910 - 1993
Myrtle M Mattson 1905 - 1973
Croxford C. Sermon 1905 - 1952
Alfred Scheideker
Louis Arthur Mattson 1934 -
Margaret Rae Lufholm 1936 -
Lorraine Inez Mattson 1940 -
David Allen Carlson February -
Lawrence Edwin Mattson 1930 - 1988
Stella Marie 1934 -
Louise Esther Mattson 1935 -
Billy McKee
David Louis Mattson 1962 -
Gloria Rae Strehle August -
Timothy John Mattson 1966 -
Tricia Adams October -
Jennifer Margaret Mattson 1971 -
Lawrence Mattson
Theresa Morgan
Alexander Raymond Mattson 1991 -
Courtney Leigh Mattson 1993 -
Andrew Timothy Mattson 1994 -
Alexa Rae Mattson 1997 -
Ana Grace Mattson 1999 -

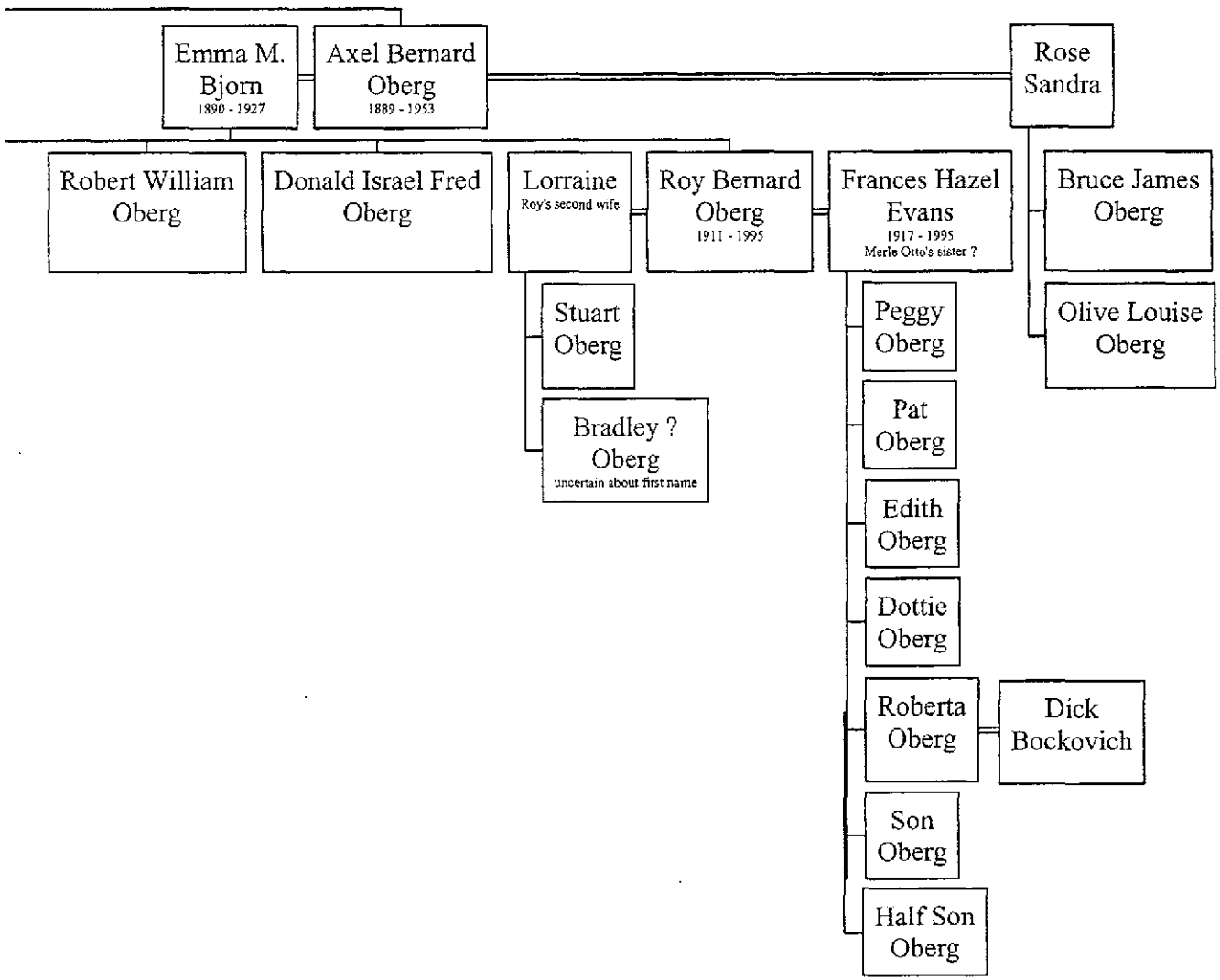


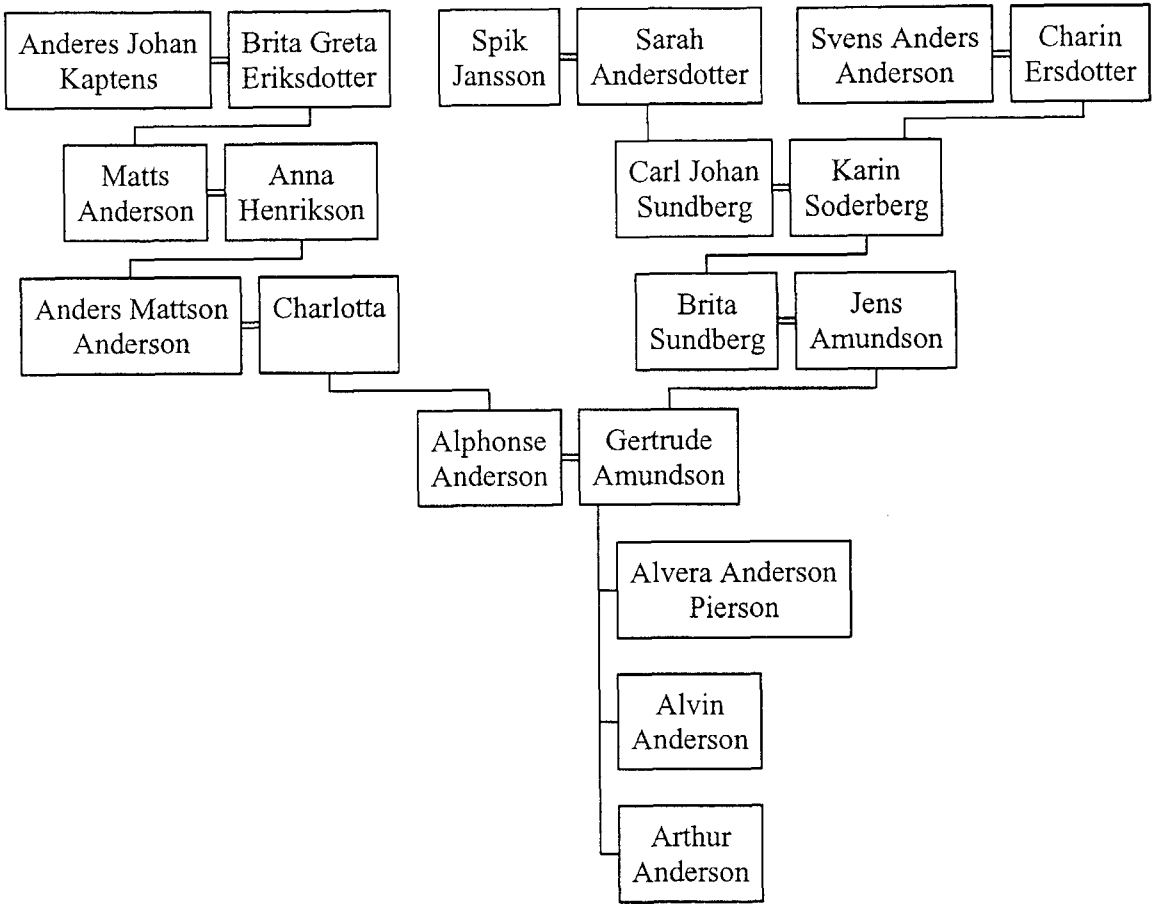
Matts Mattsson Kackur



Descendants of Andrew Rude

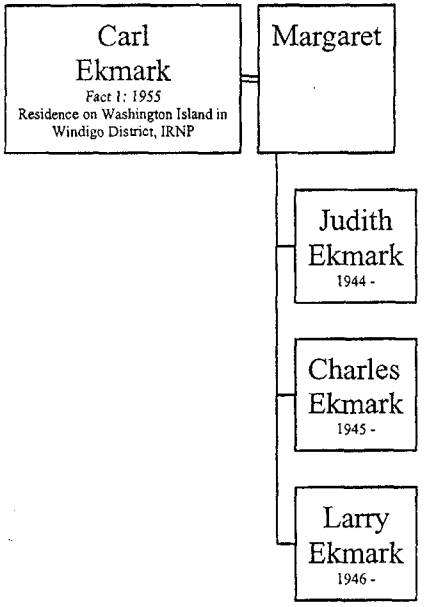

Olaf Axel Oberg
1863 - 1956
Hilda C. Hagstrom (Hedstrom)
Edla Oberg
Anna Willhamena Oberg
Oscar Sundquist
Hilda Marie Oberg
Conkler
Olaf Emmanuel Oberg
Elsie
Fredolph Alexius Oberg
Jean
Marie Sundquist
Gordon Lindemann
Marge Sundquist
Carlyle Fay
Elinor Marie Oberg
- 2000
Merle Otto
Iris Ann Oberg
- 1995
Johnson
Muriel Otto
Lyle T. Johnson
Lee Johnson
Kerry Johnson


Emma M. Bjorn
1890 - 1927
Axel Bernard Oberg
1889 - 1953
Rose Sandra
Robert William Oberg
Donald Israel Fred Oberg
Lorraine
Roy's second wife
Roy Bernard Oberg
1911 - 1995
Frances Hazel Evans
1917 - 1995
Merle Otto's sister ?
Bruce James Oberg
Olive Louise Oberg
Stuart Oberg
Bradley ? Oberg
uncertain about first name
Peggy Oberg
Pat Oberg
Edith Oberg
Dottie Oberg
Roberta Oberg
Dick Bockovich
Son Oberg
Half Son Oberg

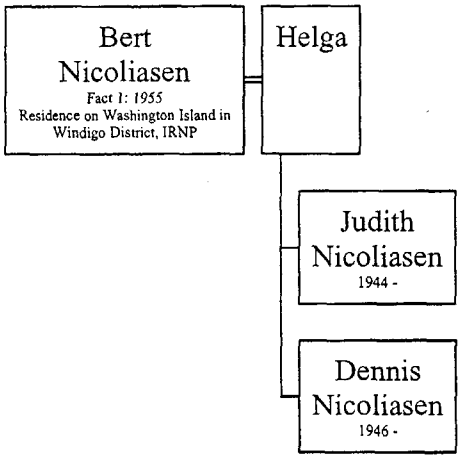


Descendants of Anderes Johan Kaptens *Descendants of Spik Jansson* *Descendants of Svens Anders Anderson*

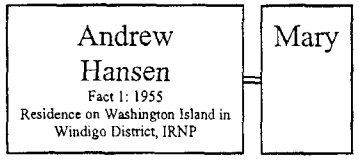
Descendants of Carl Ekmark



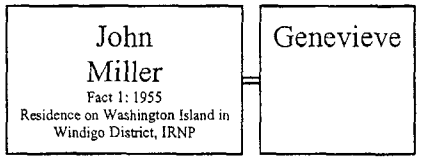
Descendants of Bert Nicoliasen



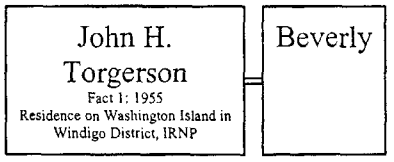
Descendants of Andrew Hansen



Descendants of John Miller



Descendants of John H. Torgerson



APPENDIX C

OVERVIEW FORM

COMMERCIAL FISHERMEN STUDY, ISLE ROYALE NATIONAL PARK
LAKE SUPERIOR, MICHIGAN

University of Arizona Commercial Fishing Interview Form

NOTE: You must record a response for every question asked in order for data to be correctly coded

Interview Number: _____ Tape Number _____ Ethnographer's Name _____

1. Date: _____

2. Respondent's Name _____

3. Company Name: _____ 3a. Ethnic Group: _____

4. Gender: Male Female

5. Date of Birth: ____/____/____ 5a. Age _____

6. Place of Birth (Town): _____ 6a. Country of Birth _____

7. Study Area Site Number (ethnographer fills this in): _____

***TO READ: In this interview, we want to ask you about the history of commercial fishing over four time periods that our research has indicated are important to the history of commercial fishing of Isle Royale. Please let us know if you disagree with these time periods which are:
(1) Open Access, 1880s to 1931, (2) 1931 to 1965, (3) 1965 to the present, and (4) the future.

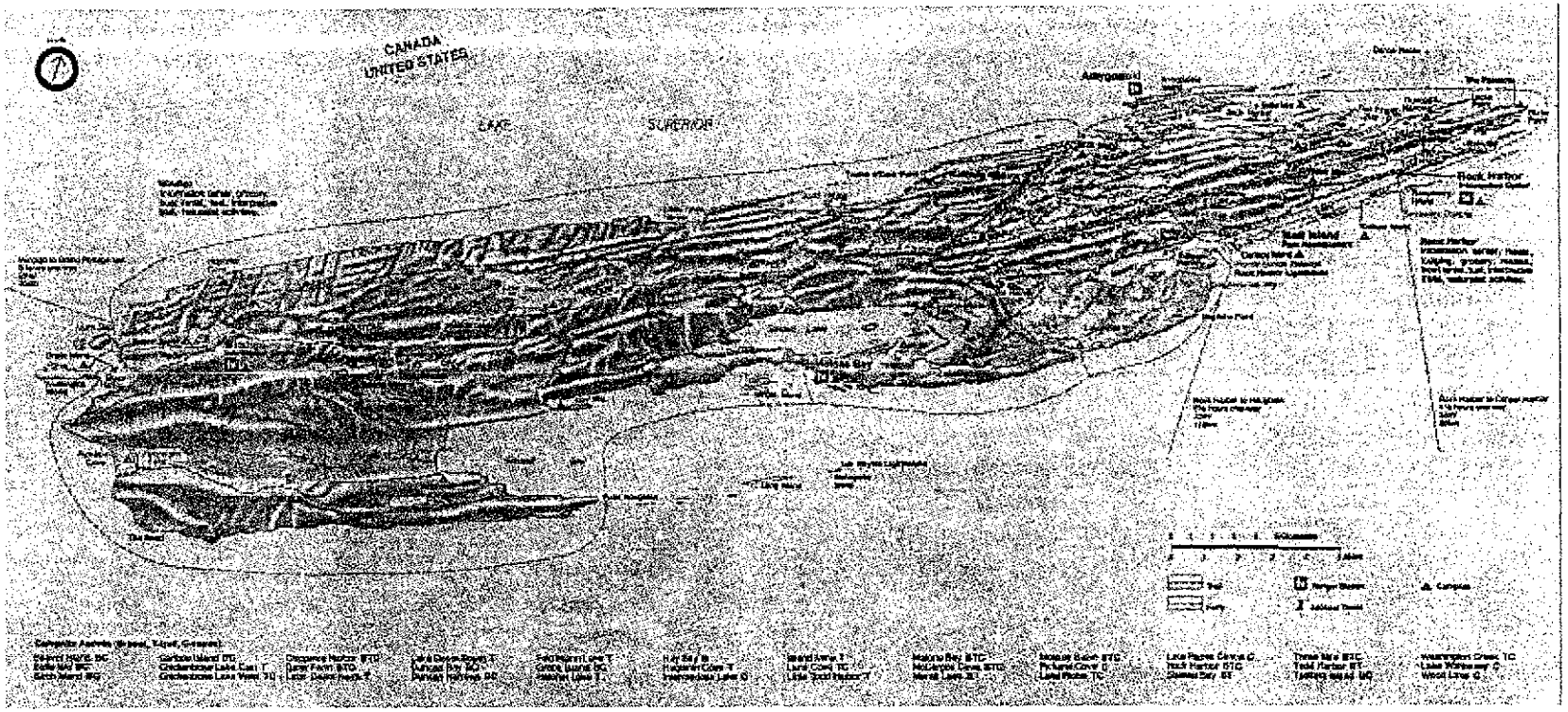
Before we begin the questions, we would like to take a general look at places and functions related to commercial fishing at Isle Royale.

COMMERCIAL FISHING PLACE-FUNCTION MATRIX

NOTE: Place a check in the corresponding box for each activity that occurred at the places listed in the left-hand column.
Show the areas of the activities on the map.

ACTIVITIES / PLACES	Live	Fish	Process	Market	Camp	Farm/ garden	Hunt	Gather plants	Mine	Log	Recreate	Religious	Political	Other
Washington Harbor														
McCormick Reef														
Fisherman's Home														
Hay Bay														
Wright's Island														
Long Island														
Menagerie Island														
Chippewa Harbor														
Rock Harbor														
Tobin Harbor														
Amygdaloid Area														
McCargoe's Cove														
Todd Harbor														
Little Todd Harbor														

Other Activities and Places?


CANADA
UNITED STATES
LAKE
SUPERIOR

OPEN ACCESS PERIOD – 1880s to 1931

TO READ: This is the period when commercial fishermen had open access to the fisheries of Isle Royale. It extends from the late 1800s when the commercial fishing industry began to grow until 1931 when the Isle Royale National Park was established.

FAMILY AND COMMUNITY

8. When did your family first come to Isle Royale? _____

9. Why did they come to Isle Royale? _____

10. Where did they come from? _____

11. Were they from fishing families? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

12. Who in your family fished at Isle Royale? _____

13. Who in your family lived on Isle Royale? _____

14. What time of year did your family fish? _____

15. What time of year did your family live on Isle Royale? _____

16. What did the non-fishing members of your family do on Isle Royale?

17. Did the fishers in your family fish alone? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

17a. If no, who did they fish with? _____

18. Did your family have close relationships with other fisher families? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

18a. If yes, with which families? Please describe the relationships between them

19. Did your family help other fishing families? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

19a. If yes, how did they help them?

20. Did your family share or exchange equipment with other fishing families? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

20a. If yes, what kinds of equipment?

21. Would you agree or disagree with the statement that fishing is a way of life for the fishermen, their families, and their communities?

1 = Agree 2 = Disagree 8 = Don't Know 9 = No Response

PLACE, KNOWLEDGE, AND VALUES

22. Where did your family live on Isle Royale? _____

23. Where did your family fish? _____

24. Were there any **natural features** on Isle Royale, or in the surrounding waters, of particular interest or importance to your family?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

24a. If yes, what were these features and why were they interesting or important?

25. Were there any **man-made** features on Isle Royale, or in the surrounding waters, of particular interest or importance to your family?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

25a. If yes, what were these features and why were they interesting or important?

26. Were there any places on Isle Royale, or in the surrounding waters, that your family avoided?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

26a. If yes, what were these places and why were they avoided?

27. Did your family make use of any of the **plants or animals** on Isle Royale, or in the surrounding waters,?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

27a. If yes, what plants and/or animals and for what purposes?

28. Did your family have other kinds of interactions with any of the plants or wildlife?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

28a. If yes, what kinds of interactions did your family have?

29. Were there any other plants or animals on Isle Royale, or in the surrounding waters, that your family was aware of?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

29a. If yes, what were they?

RISK AND MANAGEMENT

30. When members of your family were fishing, how many other Isle Royale fishermen were there? _____

31. What kind of fish did your family fish for, and why?

32. Briefly describe a typical fishing day for the fishers in your family, i.e. from starting out to returning and kinds of equipment.

33. Was there any danger involved with fishing? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

33a. If yes, please describe?

34. Was there any danger involved with living on Isle Royale? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

34a. If yes, please describe?

35. Did your family learn things from the lake and/or the island that made life easier or less dangerous?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

35a. If yes, please describe what was learned?

36. Did anyone in your family ever need rescued? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

36a. If yes, who? Please describe?

37. Did anyone in your family ever rescue anyone? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

37a. If yes, who? Please describe.

38. What kinds of weather affected fishing and how?

39. Did such weather occur in a predictable fashion? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

39a. If yes, how did you prepare for predictable weather?

39b. If no, how did you prepare for unpredictable weather?

40. Do you recall any climate changes, such as long-term shifts in rainfall and temperature, that affected the Isle Royale fishery and/or commercial fishing of these waters?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

41. If yes, what climate changes have occurred and how have these affected the fishery and/or commercial fishing?

ECONOMICS

42. What were the profitable fish species? _____

43. Who marketed the fish? _____

44. How did your family get its catch to market? _____

45. Did your family do anything else on Isle Royale to earn income? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

45a. If yes, what:

46. Did your family have any income during the winters on the mainland? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

46a. If yes, from what:

47. Would you describe the fishing as profitable? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

SCHOOLS

48. Where did the children in your family attend school? _____

49. Was their curriculum the standard "reading-writing-arithmetic" or did it include issues related to fishing as a way of life?

1 = Standard 2 = Adapted to fishing 3 = other _____ 8 = Don't Know 9 = No Response

50. Was the curriculum adjusted to fishing as a way of life? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

50a. How was the curriculum adjusted?

51. Was the school schedule adjusted to fishing as a way of life? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

51a. How was the school schedule adjusted?

CHURCH

52. Where did your family attend church or participate in religious services on Isle Royale? _____

53. Where did your family attend church or participate in religious services on the mainland? _____

54. Did your family participate in any church-related activities? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

POLITICS

55. Did anyone in your family hold political office? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

55a. If yes, what office:

56. Did political activities or events affect your family business of commercial fishing? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

56a. If yes, what were the activities or events and how did they affect your family business of commercial fishing?

SHIFTING VALUES PERIOD – 1931 to 1965

TO READ: This period reflects a shift in the values that govern the use of Isle Royale and its waters from commercial fishing to a national park. This period extends from 1931 when Isle Royale National Park was established until 1965 when commercial fishing was restricted to assessment fishing licenses.

FAMILY AND COMMUNITY

57. Was your family affected by the establishment of Isle Royale National Park? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

57a. If yes, how was your family affected by the establishment of Isle Royale National Park?

58. Did fishing as a way of life change for your family when Isle Royale National Park was established?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

58a. If yes, how did fishing as a way of life change?

PLACES, KNOWLEDGE, AND VALUES

59. Were any places that were used by commercial fishermen affected by the establishment of Isle Royale National Park?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

59a. If yes, what were these places and how were they affected by the establishment of Isle Royale National Park?

59b. If yes, did any of these changes in places directly affect your family's commercial fishing activities?

RISK AND MANAGEMENT

60. Did establishment of Isle Royale National Park change the hazards you faced on Isle Royale or when you were fishing in the area?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

60a. If yes, how did establishment of the Park change the hazards?

61. Did establishment of Isle Royale National Park change the way your family used the resources on Isle Royale and/or in the waters they fished?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

61a. If yes, how did establishment of Isle Royale National Park change the ways your family used the resources on Isle Royale and in the waters they fished?

ECONOMICS

62. Did the establishment of Isle Royale National Park affect your family's livelihood from fishing?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

62a. If yes, how did the establishment of Isle Royale National Park affect your family's fishing livelihood?

SCHOOLS

63. Did the schooling methods for the children of fisher families change after Isle Royale National Park was established?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

63a. If yes, how did their schooling change?

CHURCHES

64. Did the establishment of Isle Royale National Park change your family's church-related or religious activities?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

64a. If yes, how did these activities change?

POLITICS

65. Did establishment of Isle Royale National Park affect your family's involvement in political activities?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

65a. If yes, how?

PRESERVATION AND ASSESSMENT FISHING PERIOD – 1965 to the Present

TO READ: This period reflects an enhancement in the preservation values of Isle Royale National Park and a shift from limited entry commercial fishing to assessment commercial fishing. This period extends from 1965 to the present.

FAMILY AND COMMUNITY

66. Was your family affected by the shift from limited entry fishing to assessment fishing caused by the Michigan Department of Natural Resources?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

66a. If yes, how was your family affected by the shift to assessment fishing?

67. Did your family experience any legal changes or property changes as a result of the shift to assessment fishing?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

67a. If yes, what were these changes?

PLACES, KNOWLEDGE, AND VALUES

68. Were places affected by the shift to assessment fishing?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

68a. If yes, how were these places affected by the shift to assessment fishing?

69. Did the shift to assessment fishing affect your family's fishing lifestyle?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

69a. If yes, how did the shift affect your family's lifestyle?

RISK AND MANAGEMENT

70. Did the shift to assessment fishing change the hazards you faced living on Isle Royale or when you were fishing?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

70a. If yes, how did the shift to assessment fishing change the hazards?

71. Did the shift to assessment fishing change the way your family used the resources on Isle Royale and/or in the waters they fished?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

71a. If yes, how did the shift to assessment fishing change the ways your family used the resources on Isle Royale and in the waters they fished?

ECONOMICS

72. Did the shift to assessment fishing affect your family's livelihood from fishing?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

72a. If yes, how did the shift affect your family's livelihood from fishing?

SCHOOLS

73. Did the schooling methods for the children of fisher families change after the change to assessment fishing?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

73a. If yes, how did their schooling change?

CHURCHES

74. Did the shift to assessment fishing change your family's religious practices?

1 = Yes 2 = No 8 = Don't Know 9 = No Response

74a. If yes, how did these practices change?

POLITICS

75. Did the shift to assessment fishing affect your family's political activities? 1 = Yes 2 = No 8 = Don't Know 9 = No Response

75a. If yes, how were your family's political activities affected?

THE FUTURE

***TO READ: This period includes both short-term and long-term management goals for Isle Royale National Park and the potential effects on commercial fishermen, their descendants, and the physical and historic resources associated with commercial fishing. ***

76. From the perspective of your family, how would you define the ideal future relationship between your family and Isle Royale National Park?

77. From the perspective of your family, how would you like to see Isle Royale National Park manage the places traditionally used by commercial fishermen?

78. From the perspective of your family, how would you like to see Isle Royale National Park manage commercial fishing in its waters in the future?

79. From the perspective of your family, how would you like Isle Royale National Park interpret commercial fishing to the visiting public?

80. Is there anything we have not asked about commercial fishing, its history, the lifestyle, or other aspect that you would like to talk about?

APPENDIX D

LANDSCAPE FORM

COMMERCIAL FISHERMEN STUDY, ISLE ROYALE NATIONAL PARK
LAKE SUPERIOR, MICHIGAN

University of Arizona Landscape Interview Form

Interview Number: _____ Tape Number _____

Ethnographer's Name _____

1. Date:_____

2. Respondent's Name: _____

3. Company Name: _____ 3a. Ethnic Group: _____

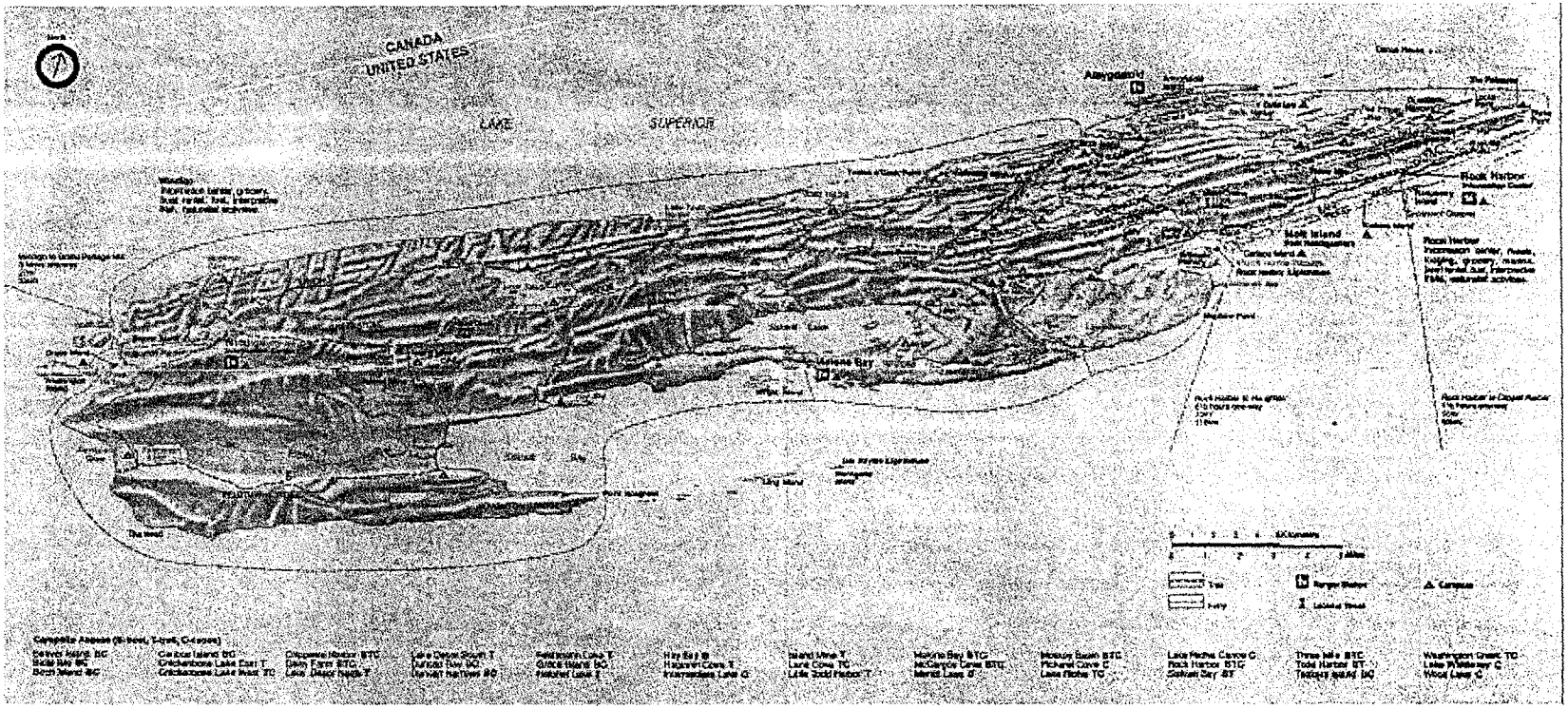
4. Gender: Male Female

5. Date of Birth: ___/___/___ 5a. Age _____

6. Place of Birth (Town): _____ 6a. Country of Birth _____

7. Where were the commercial fishing communities located on Isle Royale?

   [NOTE: use attached map to mark these]


CANADA
UNITED STATES
LAKE
SUPERIOR
Rock Harbor
Rock Island
Lake Richie Camp G
Rock Harbor STG
Three Isle STG
Todd Harbor ST
Washington Creek TG
Lake Richie Camp C
Lake Richie TG
Tesoro Island SG
Wood Lake C

8. Were these Isle Royale fishing communities connected with communities elsewhere in the GREAT LAKES AREA?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

9. If yes, where are those communities and how were they connected?
[NOTE: mark other communities on attached regional map]

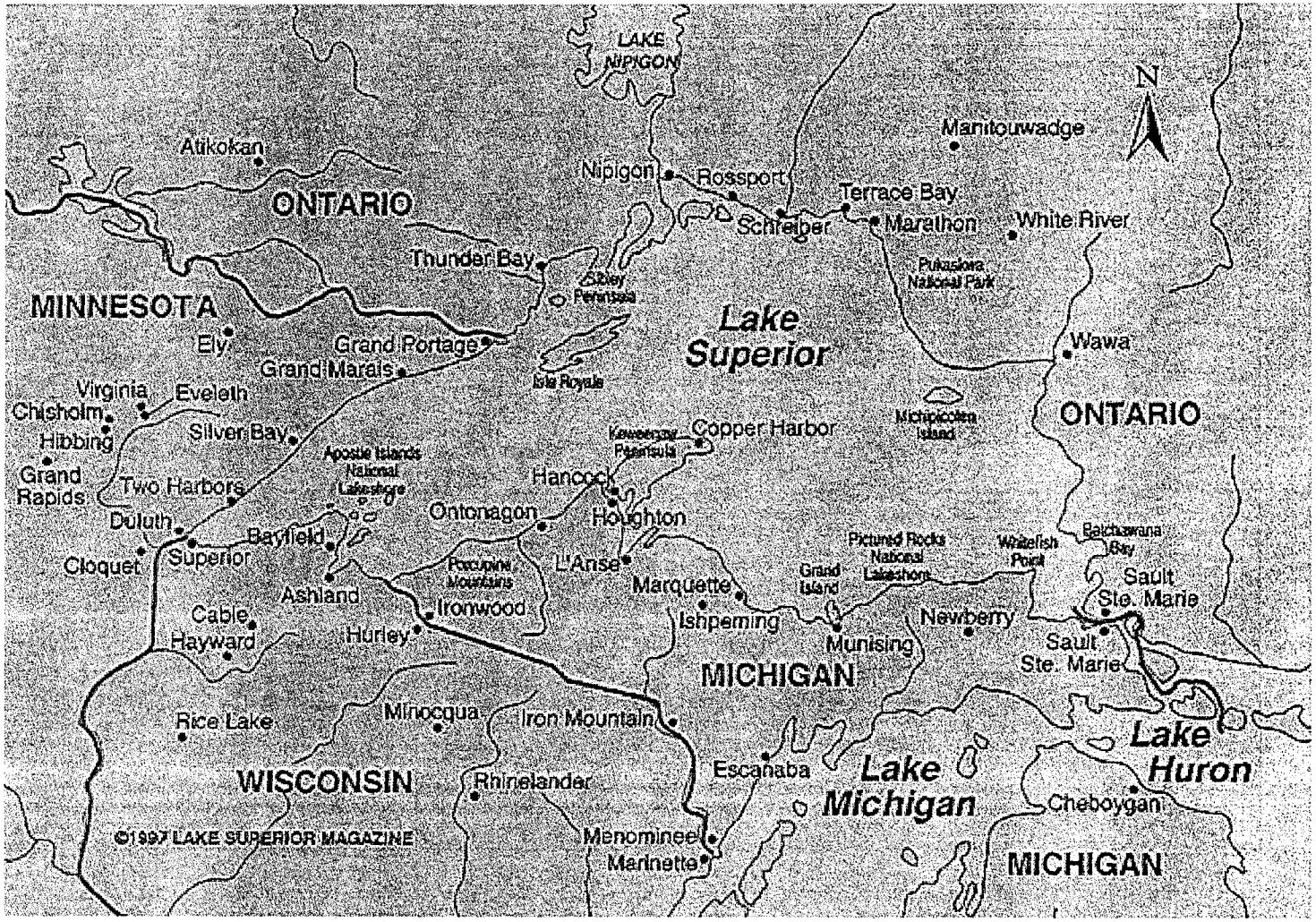
a. Community A : _____, how connected _____
b. Community B: _____, how connected _____
c. Community C: _____, how connected _____
d. Community D: _____, how connected _____

10. Did fishermen from different national (ethnic) backgrounds fish and live on Isle Royale?
1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response

10a. If yes, from what national or ethnic backgrounds? 1 _____, 2 _____, 3 _____, 4 _____, 5 _____, 6 _____, 7 _____

10b. Did they form their own ethnic-based communities or were they intermixed with each other?

1 = ethnic-based communities, 2 = formed intermixed communities, 8 = don't know, 9 = no response


LAKE NIPIGON
N
Manitouwadge
Atikokan
Nipigon
Rossport
Terrace Bay
Schreiber
Marathon
White River
ONTARIO
Thunder Bay
Sibley Peninsula
Pukaskwa National Park
MINNESOTA
Lake Superior
Ely
Grand Portage
Grand Marais
Wawa
Virginia
Eveleth
Chisholm
Hibbing
Silver Bay
Isle Royale
Michipicoten Island
ONTARIO
Keweenaw Peninsula
Copper Harbor
Apostle Islands National Lakeshore
Grand Rapids
Two Harbors
Hancock
Houghton
Duluth
Ontonagon
Bayfield
Superior
Pictured Rocks National Lakeshore
Whitefish Point
Batchawana Bay
Cloquet
L'Anse
Porcupine Mountains
Marquette
Grand Island
Sault Ste. Marie
Ashland
Ironwood
Ishpeming
Newberry
Cable
Hayward
Hurley
Munising
Sault Ste. Marie
MICHIGAN
Rice Lake
Minocqua
Iron Mountain
Lake Huron
Escanaba
Lake Michigan
WISCONSIN
Rhinelander
Cheboygan
©1997 LAKE SUPERIOR MAGAZINE
Menominee
Marinette
MICHIGAN

11. Did the fishermen and their families of one community have certain territory and activities that were uniquely attached to their community when they were on Isle Royale?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

12. If yes, what kinds of territory and activities were always attached to each community?

a . fishing
b. hunting,
c. farming/gardening,
d. mining,
e. logging,
f. gathering plants,
g. recreation,
h. gambling,
i. ceremonies/"church",
j. political meetings,
k. other?

[NOTE: to mark on Map A]

13. Did the commercial fishermen of Isle Royale have special activities and territories they all shared?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

14. If yes, what kinds of special activity and territories did they all share? They shared …

a . fishing areas,
b. hunting areas,
c. farming/gardening areas,
d. mining areas,
e. logging areas,
f. gathering plants areas,
g. recreation areas,
h. gambling areas,
i. ceremonies/"church" areas,
j. political meetings areas,
k. other areas?

[NOTE: to mark on Map A]

15. Do you know of any land trails [existing before the park] that were used by commercial fishermen and their families while on Isle Royale?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response

16. If yes, can you tell me something about those trails – like:

a. Where did the trails go? [can use Map One to Mark]

b. Why did people travel these trails?

c. Were these trails somehow special to the fishermen and their families?

17. Did commercial fishermen establish [by customary use] water routes [trails in the water] that connected Isle Royale with other places?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response

18. If yes, can you tell me something about those water routes – like:
a. Where did the routes go?

b. Why did people travel these routes?

c. Were these water routes somehow special to fishermen and their families?

19. Do you know of any songs or stories associated with the water routes associated with Isle Royale?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

20. If yes, can you tell me something about these songs and/or stories – like:

a. What trails and/or water routes are these about?

b. Who first told you about these songs and/or stories?

c. Did they originate within your family or a family you know?

d. Are the songs or stories somehow special to the fishermen and their families?

21. Do you know of any stories about the first members of your family coming to Isle Royale?

1 = Yes, places 2 = Yes, stories 3 = Yes, Both 4 = No 8 = Don't Know, 9 = No Response

22. If yes, can you tell me something about those stories?

23. Do you know of any ceremonies that were conducted at or near Isle Royale?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

24. If yes, can you tell me something about these ceremonies?

Ceremony #1 - place _____, when _____, why _____

Ceremony #2 - place _____, when _____, why _____

25. Do you recall or have you heard about historic events involving commercial fishermen that occurred at or near Isle Royale?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

26. Can you tell me something about those events?

Event #1 - date _____, place _____, what happened _____?
Event #2 - date _____, place _____, what happened _____?

27. Is there any connection between Isle Royale and the mountains, lakes, and rivers of the GREAT LAKES AREA?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

28. If yes, what "mountains" and how are they connected to Isle Royale?

Mainland #1: name in English _____, how connected _____?

Mainland #2: name in English _____, how connected _____?

Mainland #2: name in English _____, how connected _____?

29. If yes, what rivers or lakes are connected to Isle Royale and how?

River/Lake #1: name in English _____, how connected _____?

River/Lake #1: name in English _____, how connected _____?

River/Lake #1: name in English _____, how connected _____?

30. Is Isle Royale similar to the place in Europe [_____] that your family came from?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

31. If yes, how is it similar?
    A. climate,
    B. topography,
    C. fish
    D. fishing style,
    E. language,
    F. culture

32. If yes, do you believe the similarity with where they came from in Europe influenced their decision to become fishermen here near Isle Royale rather than some place else like in the Gulf of Mexico or near Southern California.

    1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response

33. If yes, how did the similarity of places influence their decision?

34. Is Isle Royale connected to any places or events in the GREAT LAKES AREA that we have not already talked about?

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response.

35. If yes, what are these places and/or events and how are they connected?

Connection #1 - place _____, event _____, connection _____
Connection #2 - place _____, event _____, connection _____

36. Is there anything else you would like to add to this landscape discussion.

1 = Yes, 2 = No, 8 = Don't Know, 9 = No Response

37. If yes, what is it?

APPENDIX E

SITE FORM

COMMERCIAL FISHERMEN STUDY, ISLE ROYALE NATIONAL PARK
LAKE SUPERIOR, MICHIGAN
University of Arizona Site Interview Form
NOTE: You must record a response for every question asked in order for data to be correctly coded

Interview Number: _____ Tape Number _____

Ethnographer's Name _____

1. Date:_____

2. Respondent's Name: _____

3. Company Name: _____ 3a. Ethnic Group: _____,

_____, _____

4. Gender: Male Female

5. Date of Birth: ___/___/___ 5a. Age _____

6. Place of Birth (Town): _____ 6a. Country of Birth _____

7. Study Area Site Number (ethnographer fill this in): _____

8. What is the name of this place in English?

8a. Does this place have any other names?

_____ _____

9. Please describe this area – what is it made up of and what are its boundaries.

10. What impresses you about the geography of this place?

10a. Did commercial fishermen use this place ? 1= YES 2= NO 8= Don't Know 9= No Response

10b. (IF YES) Why or for what purpose would commercial fishermen use this place?

1= [permanent]LIVING 2= HUNTING 3= FISHING 4 = GATHERING FOOD 5 = [seasonal]CAMPING

6= CEREMONY/CELEBRATION 7= OTHER 8= Don't Know 9= No Response

10b. What characteristics make this place suitable for the activities you just mentioned? (OR Why did commercial fishermen perform these activities at this specific place?)

- LIVING
- HUNTING
- FISHING
- GATHERING FOOD
- [seasonal] CAMPING
- CEREMONY/CELEBRATION
- OTHER

10c. (If yes, place was used) Was this place used by all commercial fishermen or was it used exclusively by some fishermen? 1 = all, 2 = used by some, 8 = Don't Know, 9 = No Response.

10d. (If used by some) Who and why?

10e. (IF NO) Did fishermen avoid this place or deliberately not use it? 1=YES 2= NO 8= Don't Know 9= No Response

10f. (IF they did avoid) For what reason did they deliberately avoid this place?

11. Is this place part of a group of connected places (i.e., Is this place connected to other places?) 1=YES 2= NO 8= Don't Know 9= No Response

11a. (IF YES) What kinds of other places might this place be connected with and where are they? 1= Comment given

8=Don't Know 9= No Response

11aa. (IF ANSWERED 1 to 11a.) Comments given:

11b. (IF COMMENT GIVEN) How is this place connected to the others you mentioned? 1= Comment given 8= Don't Know 9= No Response

11bb. (IF ANSWERED 1 TO 11b) Comments given:

PLACE FEATURES (I will now ask a few questions about the physical features of the place)

Which, **if any**, of the following features is an important part of why this place is significant to commercial fishermen?

Feature Type	1= YES	2= NO	List and Describe each specific feature, like Waterfall, Wild Rice, Bears
12a. Source for Water			12aa.
12b. Source for Plants			12bb.
12c. Source for Animals			12cc.
12d. Source for Fish			12dd.
12e. Evidence of Previous Use e.g.- archeological remains, historic structures			12ee.
12f. Surface Geological Features eg. Mountain, spring, landmark, harbor			12ff
12g. Sub-Surface Features e.g.- currents, water temperature, reefs			12ff.

FOR EACH FEATURE CHECKED ABOVE PLEASE FILL OUT THE APPROPRIATE FEATURE PAGE

FEATURE TYPE A: WATER SOURCE (List specific feature from table on page 3) _____

13. Would commercial fishermen have used this feature(_____) ? 1= YES 2= NO 8= DK 9= NR

14. (IF YES) Why or for what purpose would commercial fishermen have used this __Feature(s)__ ?

1= FOOD/DRINK 2= MEDICINE 3= CEREMONY 4= OTHER 8= Don't Know 9= No Response

14a. Comments:

15. How would you evaluate the condition of the feature(s)_____? 1= EXCELLENT 2= GOOD 3= FAIR

4= POOR 9=No Response

16. Is there anything affecting the condition of the __Feature(s)__? 1= YES 2= NO 8= Don't Know 9= NR

16a. (IF YES) What in your opinion, is affecting the condition of _____?

FEATURE TYPE B: PLANT SOURCE (List features from table on page 3) _____

17. Would commercial fishermen have used the plants at this particular site? 1= YES 2= NO 8= DK 9= NR

18. (IF YES), Why or for what purpose would commercial fishermen have used these plants?

1= FOOD 2= MEDICINE 3= CEREMONY 4= MAKING THINGS 8= Don't Know 9= NR

18a. Comments (if given):

19. How would you evaluate the condition of these plants? 1= EXCELLENT 2= GOOD 3= FAIR

4= POOR 9= No Response

20. Is there anything affecting the condition of these plants? 1= YES 2= NO 8= Don't Know 9= NR

20a. (IFYES) What in your opinion, is affecting the condition of the plants?

FEATURE TYPE C: ANIMAL SOURCE (List features from table on page 3) _____

21. Would commercial fishermen have used the animals at this place? 1= YES 2= NO 8= DK 9= NR

22. Why or for what purpose would commercial fishermen have used the animals in this site?

1= FOOD 2= MEDICINE 3= CEREMONY-CELEBRATIONS 4= CLOTHING 5= TOOLS

6= EXCHANGE/TRADE 7 = TAME 8=RIDE 9 = OTHER 10 = DK 11 = NR

22a. Comments:

23. How would you evaluate the condition of these animals/habitat? 1= EXCELLENT 2= GOOD 3= FAIR 4= POOR 9= No Response

24. Is there anything affecting the condition of the animals/habitat? 1= YES 2= NO 8= DK 9= NR

24a. (IF YES) What in your opinion, is affecting the condition of the animals/habitat?

FEATURE TYPE D: FISH SOURCE (List features from table on page 3) _____

25. Would commercial fishermen have used the animals at this place? 1= YES 2= NO 8= DK 9=NR

26. Why or for what purpose would commercial fishermen have used the animals in this site?

1= FOOD 2= MEDICINE 3= CEREMONY 4= CLOTHING 5= TOOLS

6= EXCHANGE/TRADE 7 = OTHER 8 = Don't Know 9= No Response

26a. Comments:

27. How would you evaluate the condition of these fish/habitat? 1= EXCELLENT 2= GOOD 3= FAIR

4= POOR 9= No Response

28. Is there anything affecting the condition of the fish/habitat? 1= YES 2= NO 8= DK 9= NR

28a. (IF YES) What in your opinion, is affecting the condition of the fish/habitat?

FEATURE TYPE E: EVIDENCE OF PREVIOUS OCCUPATION OR USE (Specifically) _____

29. Would commercial fishermen have used this site and/or artifacts? 1= YES 2= NO 8= DK 9=NR

30. Why or for what purpose would commercial fishermen have used this site, artifacts, or historic structure?

1= LIVING 2= HUNTING 3= GATHERING 4= CAMPING 5= CEREMONY/POWER

6= EXCAHNGE/TRADE 7 = OTHER 8= Don't Know 9= No Response

30a. Comments:

31. How would you evaluate the condition of this site? 1= EXCELLENT 2= GOOD 3= FAIR

4= POOR 9= NR

32. Is there anything affecting the condition of this site? 1= YES 2= NO 8= Don't Know 9= No Response

32a. (IF YES) What in your opinion, is affecting the condition of this site?

FEATURE TYPE F: GEOLOGIC FEATURES (specifically _____)

33. Would commercial fishermen have visited or used this __(Feature)__ ? 1= YES 2= NO 8= DK 9= NR

34. Why or for what purpose would commercial fishermen have used this __(Feature)__ ?

1= COMMUNICATE WITH OTHER COMMERCIAL FISHERS 2= TEACHING NEW GENERATIONS 6= TERRITORIAL MARKER 7= OTHER 8= Don't Know 9= No Response

34a. Comments:

35. How would you evaluate the condition of the __(Feature)__? 1= EXCELLENT 2= GOOD 3= FAIR 4= POOR 9= No Response

36. Is there anything affecting the condition of the __(Feature)__? 1= YES 2= NO 8= DK 9= NR

36a. (IF YES) What in your opinion, is affecting the condition of __(Feature)__?

FEATURE TYPE G: SUB-SURFACE FEATURES (specifically _____)

37. Would commercial fishermen have visited or used this __(Feature)__ ? 1= YES 2= NO 8= DK 9= NR

38. Why or for what purpose would commercial fishermen have used this __(Feature)__ ?

1= COMMUNICATE WITH OTHER COMMERCIAL FISHERS 2= TEACHING NEW GENERATIONS 6= TERRITORIAL MARKER 7= OTHER 8= Don't Know 9= No Response

38a. Comments:

39. How would you evaluate the condition of the __(Feature)__? 1= EXCELLENT 2= GOOD 3= FAIR 4= POOR 9= No Response

40. Is there anything affecting the condition of the __(Feature)__? 1= YES 2= NO 8= DK 9= NR

40a. (IF YES) What in your opinion, is affecting the condition of __(Feature)__?

MANAGEMENT AND ACCESS RECOMMENDATIONS

I know we have talked about specific features of this place, but now I would like to get your overall assessment of the place and to ask you what you would like to ask what **(if anything)** could be done by the NPS to protect any features that you believe need further protection.

41. How would you evaluate the OVERALL condition of this place? 1= EXCELLENT 2= GOOD 3= FAIR 4= POOR 9= No Response

42. Is there anything affecting the OVERALL condition of this place? 1= YES 2= NO 8= DK 9= NR

42a. (IF YES) What in your opinion is affecting the OVERALL condition of this place?

Above you identified specific features at this site. What would be your recommendation for protecting each specific feature?

43. Water Source:

44. Plant Source:

45. Animal / Fish Source:

46. Traditional Use Feature:

47. Surface Geological Feature:

48. Sub-Surface Feature:

49. What would be your recommendation for protecting this place?

50. Do you think future generations of your family would want to come to this place? 1= YES 2= NO

8=DK 9= NR

50a. (IF YES) Why would future generations of your family want to come to this place?

General Comments or Additional Questions