

**A GARDEN APART:
AN AGRICULTURAL AND SETTLEMENT
HISTORY OF MICHIGAN'S SLEEPING BEAR
DUNES NATIONAL LAKESHORE REGION**

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Midwest Regional Office, National Park Service
Omaha, Nebraska
&
State Historic Preservation Office, Michigan Bureau of History
Lansing, Michigan

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FOREWORD

This report presents an overview of the agricultural evolution of two adjacent counties, Benzie and Leelanau, located in the northwestern corner of Michigan's Lower Peninsula. Encompassing a large portion of the Lake Michigan coastline of both counties, in addition to North and South Manitou Islands, is Sleeping Bear Dunes National Lakeshore, created by Congress in 1970 and administered by the National Park Service. Although the National Lakeshore is best known for its unique natural features, many significant cultural resources also are located within the park, including a number associated with agriculture.

The primary purpose of this overview is to provide contextual information that can be used to interpret the region's agricultural history. Provided with this baseline information, subsequent researchers will be able to focus upon specific agricultural districts and/or issues within the Lakeshore's boundaries.

As the footnotes and bibliography reveal, scores of sources have been employed in preparing this report. We relied heavily upon primary sources--i. e., "eyewitness" documents which are contemporaneous to the time period under study. Particularly helpful were the original manuscript schedules from the federal censuses of population and agriculture. Other useful primary sources included reports, letters, and memoirs prepared by local individuals and officials. Secondary sources (books and articles by both lay and professional historians) served to supplement the primary materials, in some cases by pinpointing contradictory data.

Upon encountering conflicting or inconclusive information, we considered carefully the reliability of the source material and presented the version they judged most trustworthy. In such cases, explanatory footnotes within the text of the report allow the reader to form his or her own conclusion. While we have made every effort to insure accuracy, we take full responsibility for the inevitable errors, trusting that future readers and researchers will detect and correct them.

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Chapter 1 EXECUTIVE SUMMARY

To establish the historical context for interpreting agricultural development in the Sleeping Bear Dunes National Lakeshore region (Benzie and Leelanau counties), the ensuing report examines three broad areas:

1. **environmental factors influencing agriculture in the Sleeping Bear region, including its geology, soils, vegetation, and climate;**
2. **patterns of settlement, from the Paleo-Indian people who hunted near the glacier's edge some 10,000 years ago, to the European and Canadian immigrants who arrived in the region in the late 1800s and early 1900s; and**
3. **the evolution of agricultural practices, from the subsistence regimens followed by native people prior to the arrival of Euro-American settlers, to the "scientific agriculture" that revolutionized farming in the twentieth century.**

Because of its generally mediocre soils and northern latitude, the Sleeping Bear region would have experienced only rudimentary agricultural development if not for the moderating influence of Lake Michigan on its climate. Both Benzie and Leelanau counties lie within a zone that enjoys 150 to 160 frost-free days annually--a growing season comparable to that of locales situated 200 miles to the south. The lake effect also delays the onset of fall and spring, resulting in more favorable growing conditions for temperature-sensitive plants such as fruit trees.

But when Euro-American settlers began arriving in the Sleeping Bear region in the late 1840s, most were drawn to the area not because of its agricultural potential but because of its abundant forest resources and its location adjacent to the Great Lakes shipping lanes. At that time, a hardwood-hemlock forest covered most of the area, providing an ample supply of fuel for passing steamships. Euro-American traders and woodcutters encountered Ottawa and Ojibwa Indians, who had practiced for centuries a subsistence regimen based on hunting, fishing, gathering wild foods, and raising crops such as corn, beans, and squash. The Indians' remarkable success with raising apple trees,

documented by early settlers in the 1840s and 1850s, demonstrated the region's potential for fruit growing and may have provided the impetus for subsequent horticultural efforts by Euro-American farmers, who brought with them new farming methods and technologies.

From the 1840s to the 1860s, Euro-American agriculture passed through a pioneering phase in the Sleeping Bear region. As settlers began clearing farms from the forests, they relied heavily on subsistence crops such as potatoes, corn, and maple syrup. Most agricultural products were consumed by the people who raised them, or by their livestock.

The 1860s brought sweeping cultural and economic changes to the Sleeping Bear region. Among the events which took place during this period that shaped the destiny of the region for decades to come were the Civil War, the passage of the Homestead Act, the increased exploitation of forest resources, the construction of state roads through the region, and the arrival of significant numbers of foreign-born settlers. In 1860, the most numerous immigrant groups were the Germans, Canadians, British, Norwegians, and Bohemians.

By the beginning of the 1870s, agriculture in the Sleeping Bear region was passing out of its pioneering phase. With the extension of railroad service into the Grand Traverse region, a new era dawned not only for local farmers, but for those engaged in the logging trade. At the same time, communities that had sprung up around wooding operations struggled to survive as steamships increasingly burned coal instead of wood. While cordwood trade declined along the shore, the construction of logging railroads made possible increased exploitation of forest resources within the region's interior.

Meanwhile, the foundations of the region's fruit-growing industry were being laid. By the 1870s, local orchards of peach, apple, pear, and plum trees had begun bearing fruit. Cherries were being raised on the Leelanau Peninsula as early as the 1850s, but large-scale cherry operations did not emerge until the 1890s.

During the last two decades of the nineteenth century, the forest products industry continued to dominate the regional economy, providing employment for large numbers of native and foreign-born workers. By 1890, foreign-born persons comprised 39 percent of the region's population, the largest proportion ever recorded in a census year. The number of foreign-born persons in the two-county area peaked in 1900, but by then they represented only 18 percent of the total population.

At the turn of the century, the most intensive period of forest exploitation was waning. When it became apparent that the logging industry could not be sustained at its previous levels, some residents turned to more sustainable forms of economic activity, including agriculture and tourism. Significantly, it was also during this period that a boom in cherry production took place.

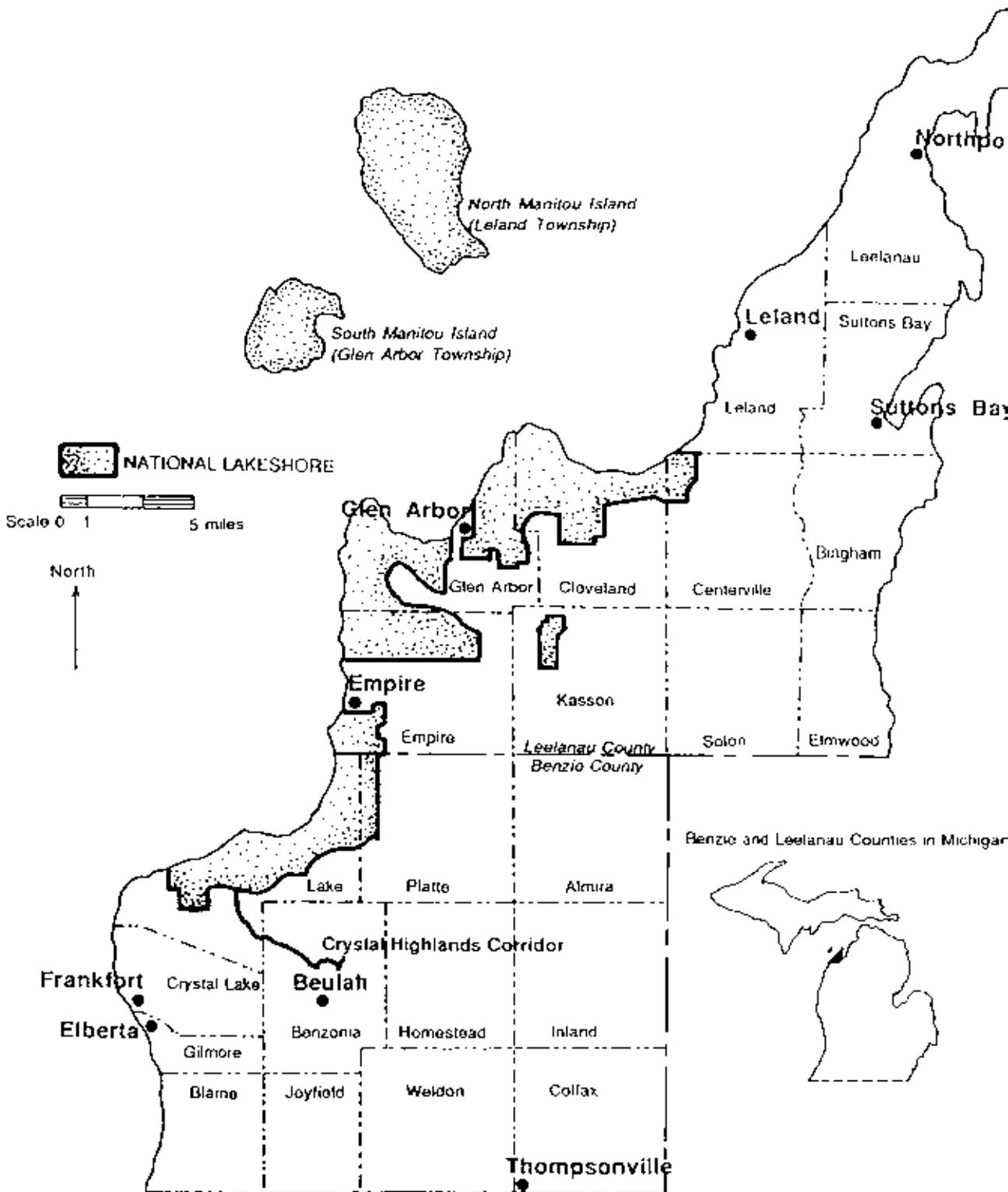
While the Leelanau Peninsula and the Grand Traverse region of which it is a part have become famous in recent decades for cherry production, agricultural statistics reveal that orchardists represented only one segment of the local farming population for much of the twentieth century. By the end of World War II, "general" farms still outnumbered fruit farms in both counties, raising livestock and crops such as hay, corn, and potatoes. In 1918, plant breeding experts from Michigan Agricultural College (now Michigan State University) proclaimed South Manitou Island to be the ideal environment for propagating a promising new rye variety, "Rosen." In the late 1930s, seed propagation of another successful hybrid, "Michelite" beans, also took place on the island.

While the Depression years of the 1930s meant severe hardship for most local farmers, the decade also saw some positive developments in agriculture. The federal Agricultural Adjustment Administration offered farmers financial incentives for practicing soil conservation techniques. In 1939, the Rural Electrification Administration granted a loan to the Cherryland Rural Electrification Association, and farms throughout the region soon were enjoying the benefits of electrical power.

In the years following World War II, agriculture in the Sleeping Bear region reflected trends being experienced in rural districts throughout the nation: the number of farms was decreasing, more farm acreage was being withdrawn from production, and the size of an average farm unit was becoming larger.

Today, extensive farming and orchard districts are still found throughout the two-county area. Fruit farming is clearly the major agricultural endeavor in the region. Because of the proximity of the National Lakeshore and the region's outstanding scenic and recreational resources, however, it is reasonable to assume that the conversion of agricultural lands to non-farm uses will persist. As agricultural land use patterns continue to change, the preserved farmsteads within the Lakeshore will take on an ever-greater significance as cultural resources.

Figure 1
TOWNSHIPS AND VILLAGES IN BENZIE AND LEELANAU
COUNTIES, MICHIGAN, 1994



Chapter 2 THE ENVIRONMENTAL CONTEXT

To understand the agricultural development of a region, one must study its ecosystem. Accordingly, this chapter will describe briefly the physical features of the study area, including its geology, soils, pre-settlement vegetation, and climate. A summary of the major soil associations overlying Benzie and Leelanau counties includes a description of the original forest cover that each soil type supported prior to American settlement, as well as a rating of the soils' agricultural potential. Finally, a description of the region's unique climate helps to explain its development into one of the nation's leading fruit-growing districts.

While environmental factors such as soils and climate dictate the types of crops that may be raised, it is important to remember that economic factors such as market accessibility and affordable transportation determine which crops may be raised profitably.

The Glacial Legacy

In geological terms, the Sleeping Bear Dunes region is a relatively young landscape, its surface features having been formed as recently as 11,000 years ago by glacial activity.¹

In the north central United States, the Pleistocene Epoch (Ice Age) began two to three million years ago. It was characterized by a series of advances and retreats of a continental ice sheet. A period of advance, when the ice sheet formed and spread, is known as a "glacial stage." Each glacial stage was followed by a warm period, or "interglacial stage," which eventually gave way to another glacial stage.²

Early geologists identified four main glacial stages. The first was the Nebraskan, followed by the Kansan and the Illinoian. Finally, about 70,000 years ago, the fourth and most recent glacial stage, the Wisconsin, began.³

¹U. S. Department of the Interior, National Park Service, *A Proposal: Sleeping Bear National Seashore* (Washington, D. C.: National Park Service, 1961), 11. This document is in the collections of the Library of Michigan, Lansing.

²John A. Dorr, Jr., and Donald F. Eschman, *Geology of Michigan* (Ann Arbor: University of Michigan Press, 1970), 158.

³*Ibid.* This four-stage time scale still serves as a basis for study, but contemporary geologists recognize that there were more glacial advances than those outlined by earlier investigators.

Over the 60,000-year span of the Wisconsin stage, several pronounced advances and retreats took place. These events, each lasting several thousand years, are known as "substages." Geologists identify each substage by the distinctive landscape features created during that period.

The topography of the study area took shape some 11,000 years ago during the Port Huron Substage, one of the last substages of the Wisconsin glaciation (Figure 2). As the ice sheet retreated north, it left behind a series of moraines, or belts of glacial debris. Moraines are formed when the edge of the ice sheet is melting as fast as the ice is moving forward, with the result that the edge remains essentially stationary for many years. During this time, glacial debris is deposited continuously along the margin of the ice, eventually creating a hilly belt of connected ridges and mounds. Moraines may vary in width from less than a mile to several miles. The larger moraines comprise a system of parallel or irregular hilly belts, usually interspersed with lowlands.⁴

The system of moraines deposited during the Port Huron substage lies roughly parallel to the Lower Peninsula's modern coastline. It stretches from an area near Manistee, on the Lake Michigan side of the Lower Peninsula, northeasterly to its tip, and then southeasterly around Saginaw Bay to the vicinity of Port Huron.⁵

This moraine system, along with the Lower Peninsula's deeply indented coastline, represents the "footprint" left by the glacier during the Port Huron substage. It is apparent that the glacier's margin was highly irregular, consisting of a series of lobes and indentations that corresponded to underlying valleys and ridges. While the main lobe of the Port Huron substage pressed southward through what is now the basin of Lake Michigan, several smaller lateral lobes branched off into adjoining low areas. In addition to Grand Traverse Bay, lobes advanced along smaller shoreline depressions, including Good Harbor Bay, Sleeping Bear Bay, and Platte Bay.⁶

Over the course of the Port Huron substage, the ice sheet underwent a series of retreats, halts, and advances. As it moved across the Grand Traverse region, the glacier halted three times. The first two halts occurred when the edge

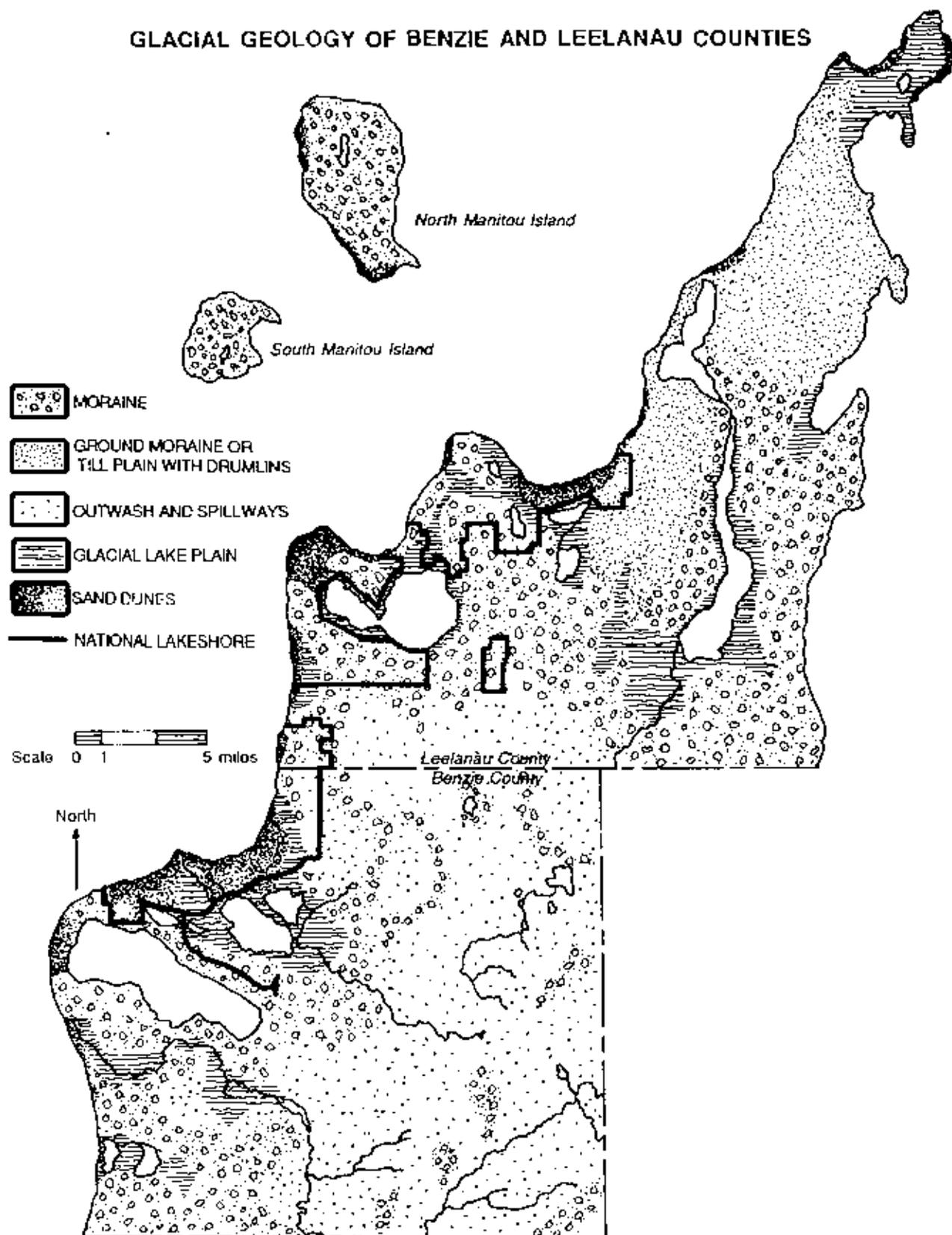
⁴National Park Service, *A Proposal*, 11; Dorr and Eschman, *Geology of Michigan*, 148.

⁵George Weeks, *Sleeping Bear: Yesterday and Today, Including Ghost Towns, Lighthouses and Shipwrecks of Sleeping Bear Dunes National Lakeshore* (Franklin, Michigan: Altwerger and Mandel Publishing Company, 1990), 157.

⁶*Ibid.*, 158-9.

Figure 2

GLACIAL GEOLOGY OF BENZIE AND LEELANAU COUNTIES



Sources: Derived from glacial geology maps for Benzie and Leelanau Counties (Michigan Department of Conservation, 1957).

of the ice lay south of the study area; the third retreat took place atop what is now the Sleeping Bear Dunes region, forming the foundation of its modern topography.⁷

This final halt of the Port Huron substage was the climactic event in the glacial history of the Sleeping Bear region. It created the Manistee Moraine, the ridge which forms the high ground along much of the inland boundary of Sleeping Bear Dunes National Lakeshore.⁸

While the inland topography of the study area was formed during the ice age, the shoreline and its distinctive dunes are more recent in origin. In the post-glacial period, the Great Lakes underwent a series of changes in water level. The dunes along the eastern shore of Lake Michigan were formed during periods of low water, when sand that had accumulated along the shore lay exposed on dry beaches. Prevailing westerly winds picked up the sand and deposited it inland. Beach dunes are common along the Lake Michigan coast, usually forming near water level. By contrast, "perched" dunes lie atop glacial highlands, sometimes hundreds of feet above the lake level. Within Sleeping Bear Dunes National Lakeshore, perched dunes occur on Sleeping Bear Plateau, Empire Bluffs, Pyramid Point, and on the west coast of South Manitou Island.⁹

As the most striking landscape feature within the study area, the dunes represent a unique visual and recreational resource; but their role in the region's agricultural history has been insignificant. Not surprisingly, the soil overlying the dunes is classified as submarginal for agricultural use due to its low fertility and vulnerability to wind erosion.¹⁰

The most common soil associations found within the boundaries of the National Lakeshore all fall within the general textural category of sands (Figure 3). Most are classified either as marginal or submarginal for agricultural use.¹¹

⁷*Ibid.*, 158.

⁸National Park Service, *A Proposal*, 11; map, "Major Physical Features of the Sleeping Bear Region."

⁹Weeks, *Sleeping Bear*, 145-6, 160.

¹⁰J. O. Veatch, *Soils and Land of Michigan* (East Lansing: Michigan State College, 1953), 101-2, "Soil Map of Michigan"; Hermann L. Weber, *Soil Survey of Leelanau County, Michigan* (Washington, D. C.: USDA Soil Conservation Service, in cooperation with Michigan Agricultural Experiment Station, 1973), 41.

¹¹Data used in this discussion have been taken from two sources: J. O. Veatch, *Soils and Land of Michigan* (East Lansing: Michigan State College, 1953), and Hermann L. Weber, *Soil Survey of Leelanau County, Michigan* (Washington, D. C.: USDA Soil Conservation Service, 1973). The Veatch study is a guide to all the major soil associations of the state, and thus provides only a broad generalized view of conditions specific to Benzie and Leelanau Counties. By contrast, the

Within Leelanau County, the Deer Park-Dune soil association is found at several points along the Lake Michigan coastline: north and south of the village of Empire; atop Sleeping Bear Point; at Pyramid Point; in the northernmost corner of Leland Township; and adjacent to Cathead Point at the northern tip of the county.¹² Dunes also are found south of the Lakeshore at Betsie Point in Benzie County.¹³ The other most commonly encountered soil associations are described below.¹⁴

The East Lake-Eastport-Lupton soil association is found along the coastal lowlands adjacent to Platte Bay, Sleeping Bear Bay, and Good Harbor Bay. Bands of these soils also surround the inland lakes of Leelanau County, including Glen Lake, Lake Leelanau, and Little Traverse Lake. The soil association also occurs on the eastern shores of North and South Manitou Island.¹⁵ These lowland areas are rated either marginal or submarginal for agricultural use due to their low fertility, poor drainage, and vulnerability to wind and wave erosion.¹⁶ Nevertheless, some of the areas encompass micro-environments that support a wide variety of plant and animal species. The zone near the mouth of the Platte River, for instance, features forest, marsh, stream, dune, and jack pine communities.¹⁷ The original forest cover of these zones

latter reference is a comprehensive catalog of soils specific to Leelanau County, presented in meticulous detail. Unfortunately, a comparable soil survey for Benzie County never has been published. Further complicating the interpretation of data from these two sources is the fact that a new system of soil classification was adopted by the National Cooperative Soil Survey in 1965, twelve years after the publication of the Veatch study. Thus, the Weber study employs slightly different nomenclature and there is only partial correlation between the boundaries on soil maps that accompany the two studies. As Weber has explained [p. 84]: "The names, descriptions, and delineations of soils in this published soil survey do not always agree with soils on maps of adjoining counties published at an earlier date. Differences are brought about by better knowledge about soils or modifications and refinements in soils series concepts." For purposes of this report, the authors have relied mainly on the Weber study for descriptions of Leelanau County soils; general information on Benzie County was derived from the Veatch study.

¹²Weber, *Soil Survey of Leelanau County*, "General Soil Map."

¹³Veatch, *Soils*, "Soil Map of Michigan." Veatch identifies the soil association of the dunes at Sleeping Bear and Betsie Points as "Bridgman," a term apparently no longer used by the time the Weber survey was published in 1973.

¹⁴A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern. (Weber, 2)

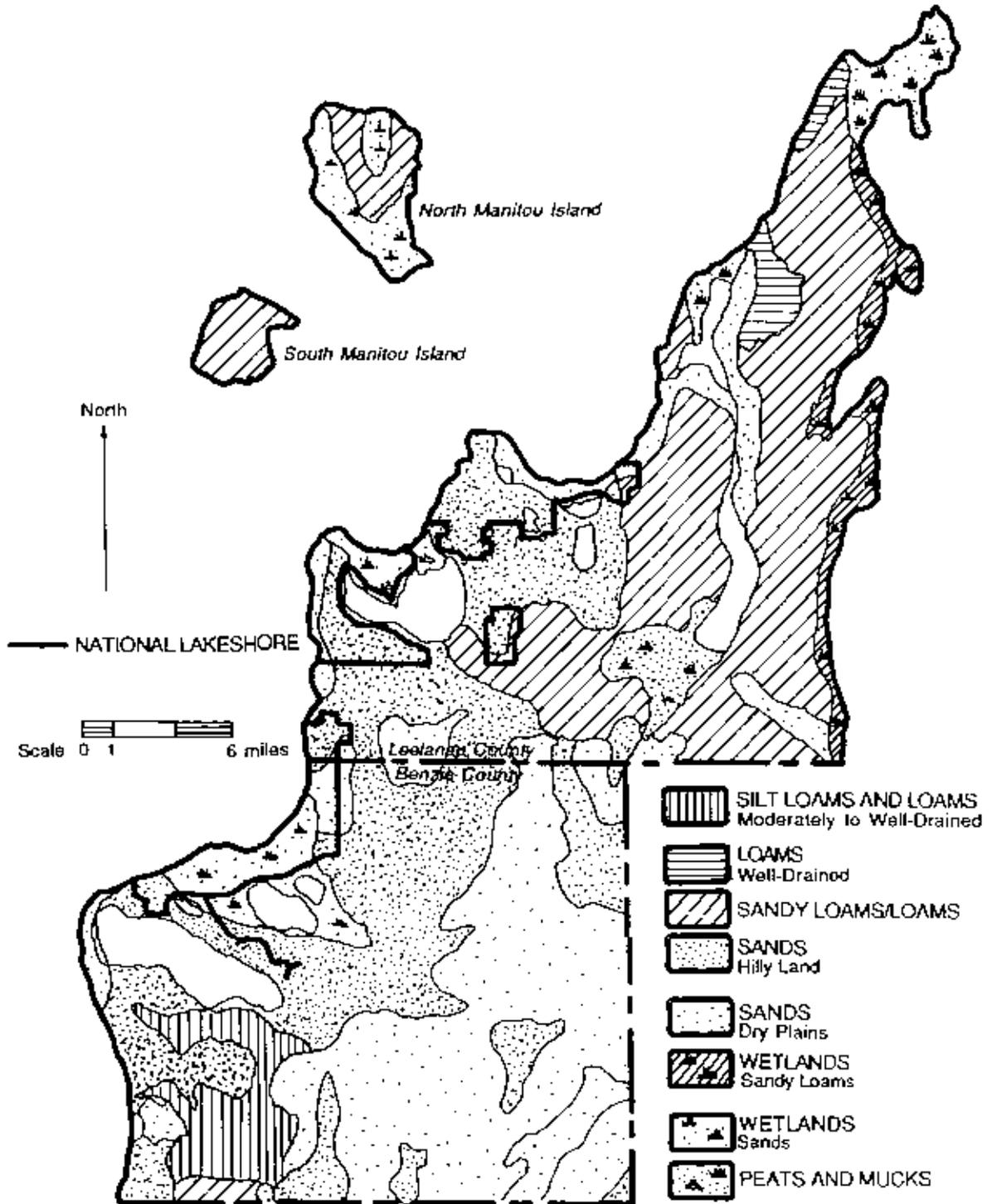
¹⁵Weber, *Soil Survey of Leelanau County*, "General Soil Map."

¹⁶Veatch, *Soils*, 100; "Soil Map of Michigan." Terms used by Veatch to describe this soil association are "Eastport" and "lakeshore lands."

¹⁷National Park Service, *A Proposal*, 13.

Figure 3

SOIL CHARACTERISTICS OF BENZIE AND LEELANAU COUNTIES



Source: Derived from J.O. Veatch, Soils and Land of Michigan (Michigan State University Press, 1953).

consisted of mixed cedar, spruce, tamarack, aspen, white birch, alder, and willow. Oak and pine grew on drier sites.¹⁸

Moving inland from the Lake Michigan coast, the two most common soil associations encountered within the boundaries of the National Lakeshore are the Kalkaska-East Lake and Kalkaska-Mancelona. Both feature sandy, well-drained soils, with the Kalkaska-East Lake association occurring on steeper slopes atop moraines. The Kalkaska-Mancelona association originated from glacial outwash plains, where drainage from the melting ice sheet deposited sand and gravel.¹⁹ Prior to logging, it supported a northern hardwood-hemlock forest, consisting of sugar maple, elm, yellow birch, beech, basswood, and a small amount of white pine. Although this soil type has been farmed with some success locally, most of it has relatively low agricultural potential, and its slopes are subject to serious erosion.²⁰

As mentioned previously, the major soil associations found within the boundaries of the Lakeshore typically are classified as either marginal or submarginal for agricultural use. Soil associations with higher agricultural ratings, however, are encountered elsewhere in Benzie and Leelanau counties.

The two predominant soil associations overlying the inland of the Leelanau Peninsula are the Emmet-Leelanau and the Emmet-Omena. While both are quite sandy, they contain a larger percentage of loam than the soil associations previously described. Both are well-drained, with slopes ranging from nearly level to very steep. The less sloping Emmet soils are well suited to a wide variety of crops, and are among the more desirable orchard soils in frost-protected areas.²¹ Topographically, this soil association is characterized by rolling and hilly highlands. In the case of the Leelanau Peninsula and its neighboring Old Mission Peninsula, the landscape consists of a plateau highland deeply broken by drainage hollows, with very little flat land at the crest.²² Soils of the Emmet series originally supported forests of sugar maple, beech, some yellow birch, black cherry, and elm.²³

¹⁸Veatch, *Soils*, "Soil Map of Michigan."

¹⁹Weber, *Soil Survey of Leelanau County*, 89, "General Soil Map."

²⁰*Ibid.*, 40-41; Veatch, *Soils*, 80, "Soil Map of Michigan."

²¹Weber, *Soil Survey of Leelanau County*, 15, "General Soil Map."

²²Veatch, *Soils*, 73.

²³Weber, *Soil Survey of Leelanau County*, 15.

Another zone with a relatively high agricultural rating occurs in southwestern Benzie County, where the Nester-Iosco-Emmet soil association covers a large portion of Blaine and Joyfield townships. Ranging from supermarginal to marginal, the loamy soil covers a rolling landscape diversified by numerous basin depressions.²⁴ The land once supported a hardwood forest that consisted principally of sugar maple, elm, yellow birch, beech, and basswood, with a scattering of hemlock and white pine. Relatively successful dairy and livestock farms have been developed on this type of land throughout the northern Lower Peninsula.²⁵

It is important to note that the foregoing description of soil associations found in Benzie and Leelanau counties provides only a general summary of their locations, topography, agricultural ratings, and original vegetation. Local variations are possible. An area classified overall as submarginal, for instance, may have patches of fertile and productive soil.²⁶

Compared with much of the rest of the state, Benzie and Leelanau counties contain a relatively low percentage of good agricultural land. In 1912, Frank Leverett, a geologist studying the surface geology of Michigan's Lower Peninsula, noted the following about Benzie County: "The coating of loam on the gravel plains is very thin so they are but little more productive than the sandy areas." Nevertheless, he concluded, "the sandy till forms excellent orchard and fair farm land."²⁷ His assessment of Leelanau County's agricultural potential, however, was considerably more positive:

This county has a good soil and is an exceptionally favored situation for growing orchards, fruits, and vegetables, being a peninsula between Lake Michigan and Grand Traverse Bay. But in this direction there has been less development than in neighboring counties. The Manitou Islands . . . are also favorably situated for growing orchards and fruits.²⁸

A subsequent study of Michigan's land types found that only 3 percent of Benzie County's soils merited a first class, or supermarginal, rating for

²⁴Veatch, *Soils*, 65. NB: Pre-1965 nomenclature is used.

²⁵*Ibid.*, 66.

²⁶J. O. Veatch, *Agricultural Land Classification and Land Types of Michigan* (East Lansing: Agricultural Experiment Station, Michigan State College, 1933), 48.

²⁷Frank Leverett, *Surface Geology and Agricultural Conditions of the Southern Peninsula of Michigan* (Lansing: Wyrkoop Hallenbeck Crawford Co., 1912), 93.

²⁸*Ibid.*, 114.

agricultural use. The overwhelming majority of the county's land was rated as second class/marginal (47 percent), or third class/submarginal (50 percent). Leelanau County's soils received a slightly higher rating, with 6 percent being first class, 58 percent second class, and 36 percent third class. (According to the study, 26 percent of the entire state of Michigan consists of first class soils, 40 percent are second class, and 37 percent are third class.)²⁹

Because of its generally mediocre soils, the Sleeping Bear region would have experienced only rudimentary agricultural development if not for the moderating influence of some rather extraordinary climatic features.

Climate as Moderator

The unique weather patterns that prevail over the northwestern corner of Michigan's Lower Peninsula are the result of a fortuitous convergence of climatic and geographic factors. Leelanau County is bisected by the 45th parallel of latitude, placing it about the same distance north of the equator as the cities of Minneapolis/St. Paul, Minnesota, and Wausau, Wisconsin.³⁰ Normally, a region's latitude is the dominant factor in determining its climate. But in Benzie and Leelanau counties, as well as along the rest of Michigan's west coast, the climate is moderated by Lake Michigan and the prevailing westerly winds.³¹

This so-called "lake effect" is due mainly to the fact that water responds much more slowly than air to changes in temperature. At the end of winter, as the atmosphere begins to warm, Lake Michigan remains relatively cold well into spring. As a result, coastal zones experience relatively lower spring temperatures than do regions farther inland; these lower temperatures usually delay the blossoming of local fruit trees until after the last killing frost.³² Over the warm months, the lake's temperature continues to rise slowly. By late August and early September, when frosty nights are common in the interior, regions adjacent to the lakeshore remain relatively warm and frost-free.³³

²⁹*Ibid.* 49.

³⁰The 45th parallel passes through the village of Leland, in northern Leelanau County.

³¹Norton D. Strommen, "The Climate of Michigan," in *Climates of the States*, Vol. 1, by Officials of the National Oceanic and Atmospheric Administration, U. S. Department of Commerce (Washington, D. C.: NOAA, 1974), 192.

³²Norton D. Strommen, "Climate," in *Soil Survey of Leelanau County*, by Hermann L. Weber (Washington, D. C.: USDA Soil Conservation Service, in cooperation with Michigan Agricultural Experiment Station, 1973), 85.

³³Dewey A. Seeley, *Michigan Agriculture: 3/Climate* (Lansing: Bureau of Agricultural Development, State Department of Agriculture, 1922), 7.

Because the first killing frost of fall arrives relatively late, standing crops have more time to mature or to reach a stage of development less susceptible to frost damage. Winter temperatures rarely fall below -20° F in the immediate vicinity of the lake, while readings below -40° F have been recorded in most interior sections of the state.³⁴

The prevailing westerly winds carry the lake's moderating influence several miles inland, far beyond the coastline. Benzie and Leelanau counties lie entirely within a zone that has a growing season of 150 to 160 days (Figure 4). Continuing east and north along the Lake Michigan coast, this zone extends inland to cover the western half of Grand Traverse County, the northwestern corner of Antrim County, the western third of Charlevoix County, and the west coast of Emmet County.³⁵

Under the influence of the lake effect and the prevailing westerly winds, the study area enjoys a growing season more typical of regions much farther south. At Frankfort, on the shore of Lake Michigan in Benzie County, the frost-free period averages 157 days. At Traverse City, located at the same latitude and about 20 miles east of the study area, the average growing season is 152 days.³⁶ Thus, the growing season in the study area is comparable to that of Lansing, located some 200 miles southeast of the National Lakeshore, where there is a 155-day growing season.³⁷ The powerful influence of the lake effect is further demonstrated by the fact that Grayling, Michigan, a community at the same latitude as Frankfort, but lying some 80 miles inland, has a growing season of only 114 days. Furthermore, in some areas of the central Lower Peninsula, the season drops to 90 days.³⁸

Lake Michigan and the westerly winds passing over it also influence precipitation, bringing increased cloudiness and snow flurries throughout the state in the fall and early winter. The frequency of precipitation varies widely from one side of Lake Michigan to the other. In January, the Wisconsin coast

³⁴Strommen, "The Climate of Michigan," 193, 194.

³⁵Seeley, *Climate*, 32.

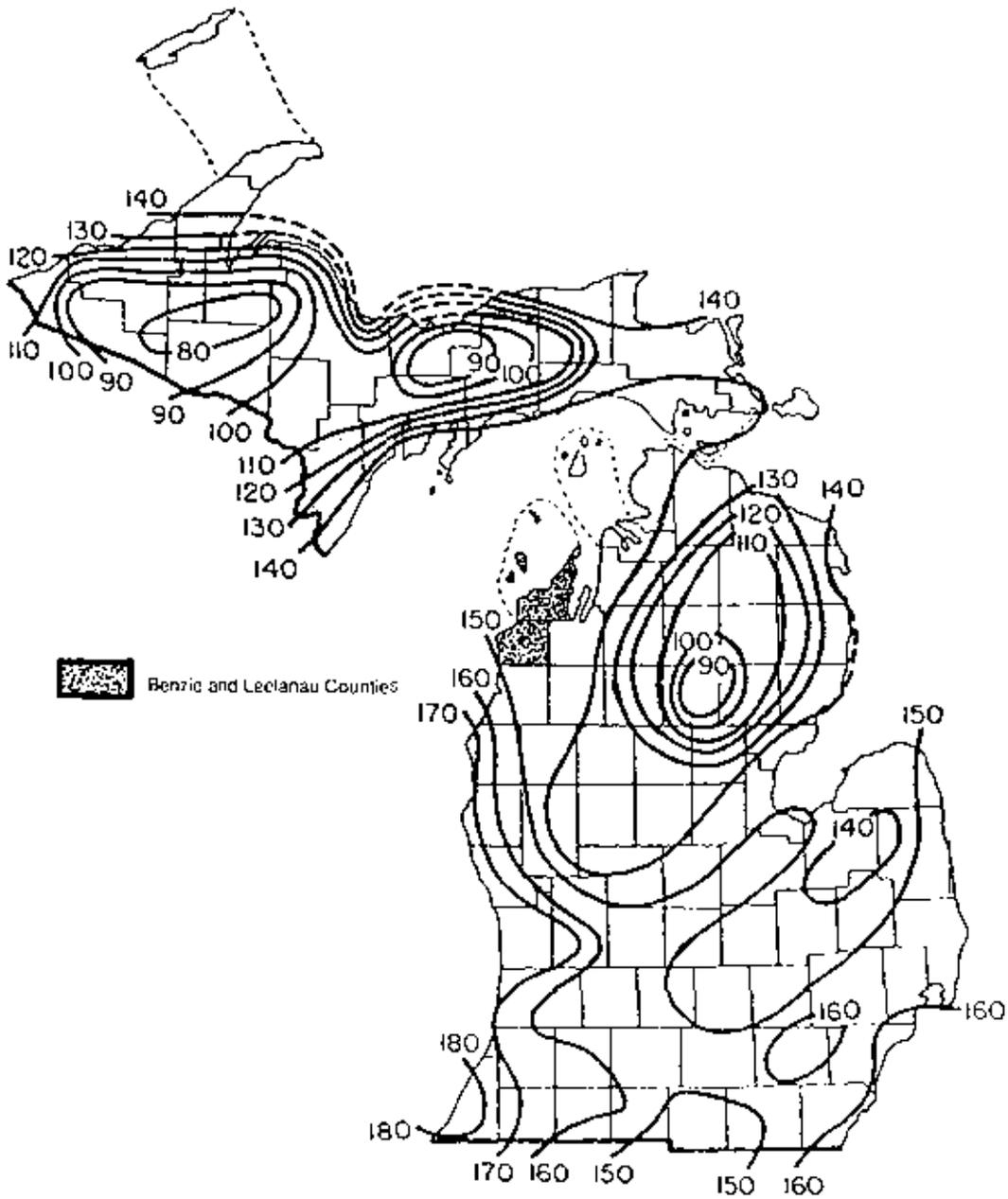
³⁶*Ibid.* According to Norton D. Strommen, National Weather Service climatologist for Michigan, data collected at Traverse City are generally representative of Leelanau County. As of 1973, weather data recorded at Glen Arbor and Maple City could not be used for statistical purposes because observations had been made for relatively short periods at these stations. See Strommen, "Climate," 85.

³⁷Seeley, *Climate*, 26.

³⁸*Ibid.*

Figure 4

AVERAGE NUMBER OF DAYS, PER YEAR, WITHOUT
KILLING FROST IN MICHIGAN



Source: H.M. Wills, "Climate of Michigan." In *Climate and Man: Yearbook of Agriculture*, 1941 (Washington, D.C.: U.S. Department of Agriculture).

experiences measurable precipitation about once every five days. On the Michigan side of the lake, however, precipitation occurs approximately every other day. The trend reverses itself in June, when precipitation occurs less frequently on the Michigan coast than on the Wisconsin side of the lake.³⁹

Across the state of Michigan, precipitation averages 31 inches annually, with 55 to 60 percent of the total recorded during the growing season.⁴⁰ In the northwestern Lower Peninsula, slightly more rain falls along the coastline during the growing season than farther inland.⁴¹

At the regional level, the study area's unique climate may be traced to the interplay of latitude, lake effect, and prevailing winds. When examined at the local scale, however, a much more complex climatic picture emerges. At various locations within a rural district, or even within the boundaries of a single farm, it is possible to find subtle climatic differences caused by topography, soils, or exposure to wind. Awareness of this phenomenon, known as "local climate," is essential for successful farming, and particularly in the operation of commercial orchards.⁴²

In a rolling morainic landscape such as that found in the Sleeping Bear Dunes National Lakeshore, cold air drains down the slopes of ridges and hilltops into lower-lying areas such as valleys and lake basins. Thus, when the temperature is near freezing, frost is more likely to form over these low areas than at higher elevations. Ideally, orchard sites should be located no less than fifty feet above "cold air storage basins," as they are called by soil scientists, for maximum protection from frost and low temperatures during critical phases of development. Low temperatures or daytime fog, for instance, may prevent bees from taking flight to pollinate blossoms on fruit trees.⁴³ While other crops may tolerate a wider range of environmental conditions, all are subject to local climatic phenomena to some extent.

Summary

The foundation for understanding the agricultural development of Benzie and Leelanau counties is based on knowledge of the region's

³⁹Strommen, "The Climate of Michigan," 193.

⁴⁰*Ibid.*

⁴¹Seeley, *Climate*, 20.

⁴²Weber, *Soil Survey of Leelanau County*, 44.

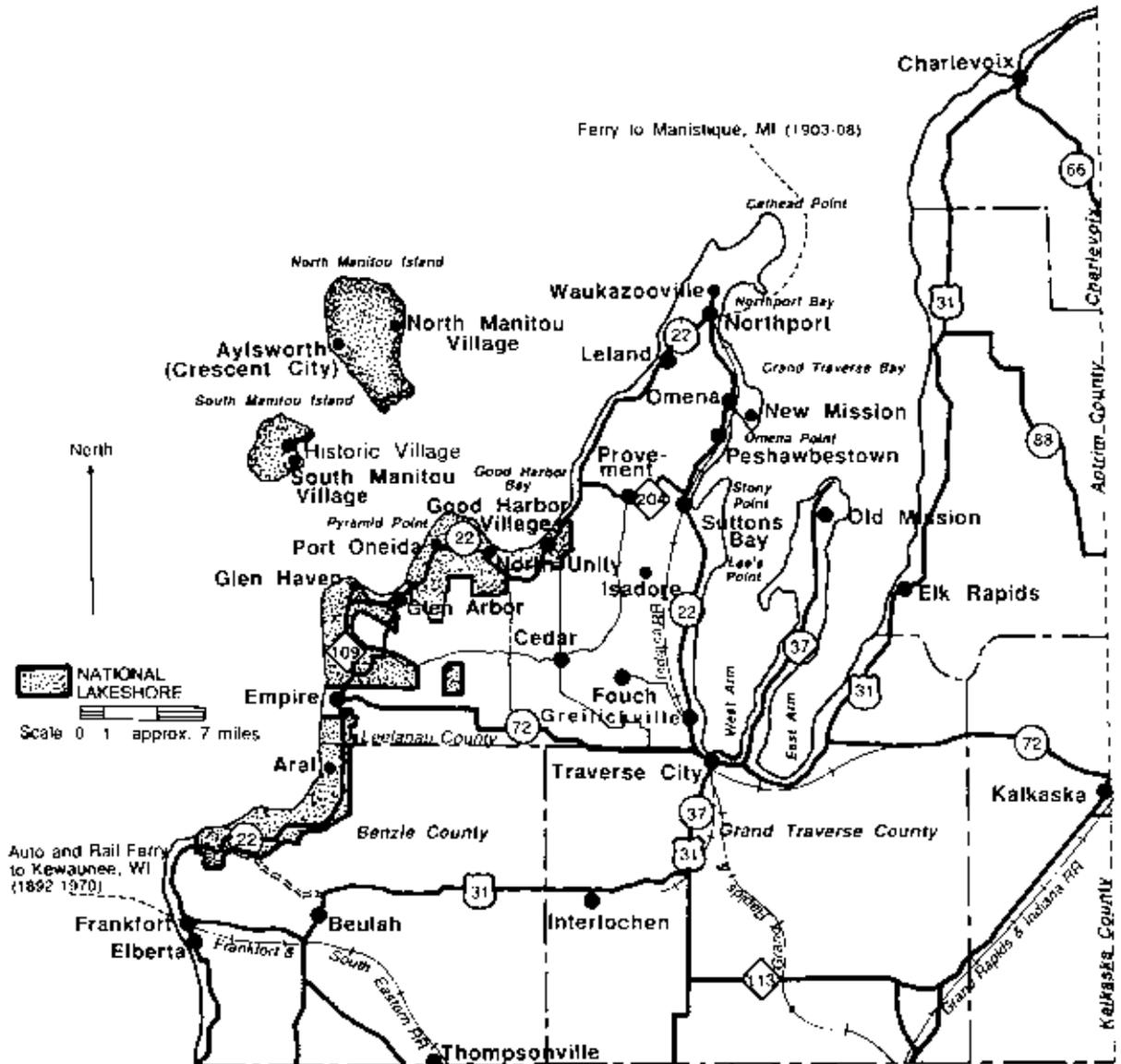
⁴³*Ibid.*

environmental context: its geology, soils, original vegetation, and climate. In geological terms, the landscape of the Sleeping Bear Dunes region is relatively young, having been fashioned as recently as 11,000 years ago. As it retreated, the glacier left behind moraines, outwash plains, and a coastline indented with numerous bays and adjacent inland lakes. Soil associations found within the boundaries of Sleeping Bear Dunes National Lakeshore are predominantly sandy in texture and are rated marginal or submarginal for agricultural uses. Richer soils are found at various locations outside the Lakeshore, however. The Emmet soil associations of the Leelanau Peninsula fall into this category. At the time of Euro-American settlement, a hardwood-hemlock forest covered most of the area.

Because of its generally mediocre soils, the study area would have experienced only rudimentary agricultural development if not for the moderating influence of the lake effect. Both Benzie and Leelanau counties lie within a zone adjacent to Lake Michigan that enjoys 150 to 160 frost-free days annually—a growing season comparable to that of locales situated 200 miles to the south. The lake effect also delays the onset of fall and spring, resulting in more favorable growing conditions for temperature-sensitive plants such as fruit trees.

The lake effect exercises a moderating influence on temperature and wind patterns throughout the region. At the same time, local climatic phenomena can create a variety of microenvironments within a rural district or within the boundaries of a single farm. A recognition of environmental factors at both a regional and local level has been and continues to be essential to the success of agriculture in virtually any context, but especially in the Sleeping Bear Dunes region.

Figure 5
THE GRAND TRAVERSE REGION: FORMER AND CURRENT PLACE NAMES, TRANSPORTATION ROUTES, AND NATURAL FEATURES



Chapter 3 PATTERNS OF SETTLEMENT

The previous chapter demonstrated how environmental factors such as soils and climate delimit agricultural development. Although agriculture has played an important role in the history of Benzie and Leelanau counties, the area's first permanent settlements did not originate as farming communities. Instead, both aboriginal people and Euro-American settlers initially were attracted to the region by abundant natural resources, such as its fisheries and forests. The following chapter provides a chronology of human habitation in the study area, from the Paleo-Indians who hunted at the edge of the retreating glacier, to 1910, the census year in which the population of Benzie and Leelanau counties reached its pre-World War II peak, and the time when the region's settlement patterns and basic infrastructure had been established. A brief overview of population development from 1910 to 1990 concludes the chapter.

Early Hunters and Gatherers

Archeological evidence indicates that Paleo-Indian people hunted game in the Sleeping Bear region as the last glacier retreated more than ten thousand years ago. Spear points characteristic of this period have been found atop moraines in the Lakeshore area, marking the location of temporary campsites where game was processed.¹

The first direct evidence of occupation in the Lakeshore area, however, dates from the Late Archaic period, which lasted from 3,000 B. C. to 600 B. C. Changes in climate and vegetation taking place throughout the Great Lakes region at this time created conditions more conducive to human habitation. During the period, Platte Lake, Glen Lake, and Crystal Lake were inlets along the shore of Lake Michigan. Indigenous people found these shallow bays protected and favorable environments.² A Late Archaic burial was exposed at the Dunn Farm Site near Glen Lake in 1973. Inside the grave, archeologists found several charred grains of wild rice, a rare find that had been documented at only two other archeological sites in the Great Lakes region.³

¹William A. Lovis, *Sleeping Bear Dunes National Lakeshore: Archaeological Survey* (Denver: National Park Service, 1984).

²*Ibid.*

³Richard I. Ford and David S. Brose, "Prehistoric Wild Rice from the Dunn Farm Site, Leelanau County, Michigan," *The Wisconsin Archeologist* 56 (1): 9-11.

Sheltered areas on North and South Manitou islands also supported human habitation.⁴ In 1966, an archeological survey team from Michigan State University found several Late Archaic artifacts near Vessel Point on the eastern shore of North Manitou Island.⁵

Apparently these early inhabitants of the Lakeshore subsisted by hunting, fishing, and gathering indigenous plant foods. The cultivation of domesticated plants such as corn probably was not practiced until the Late Woodland Period, which started about 1,400 years ago and ended with the arrival of Europeans around 1620 A. D.

Archeological evidence from southern Michigan indicates that aboriginal people were growing corn, beans, and squash by 900 to 1000 A. D.⁶ By 1100 to 1200 A.D., agriculture had reached its northernmost aboriginal limit. Corn was being grown near the Straits of Mackinac by 1320 A. D., its cultivation made possible with a local growing season of 140 days.⁷

Agriculture, however, was not practiced at the Late Woodland sites found within the boundaries of the Lakeshore. Instead, archeologists have characterized them as short-term, temporary camps, probably used for seasonal hunting. Large agricultural villages were located to the north, south, and east of the Lakeshore.⁸

Among the several Woodland sites that have been found in the Sleeping Bear region is a fishing camp at Fisher Lake east of Glen Arbor. Pottery found at Fisher Lake has been classified as Middle Woodland, dating from 200 to 600 A. D. Decorations from pottery found at Fisher Lake and on the Manitou Islands suggest cultural links between Sleeping Bear Indians and people living to the north at the Straits of Mackinac, to the south in Mason and Oceana counties, and to the west on Wisconsin's Door Peninsula.⁹

⁴Lovis, *Archaeological Survey*, 6?

⁵Charles E. Cleland, "A Preliminary Report on the Prehistoric Resources of North Manitou Island" (East Lansing: Michigan State University Museum, 1966), 7.

⁶Lovis, *Archaeological Survey*, 9.

⁷Richard Asa Yarnell, "Aboriginal Relationships between Culture and Plant Life in the Upper Great Lakes Region," in *Anthropological Papers*, Museum of Anthropology, University of Michigan, No. 23 (Ann Arbor: University of Michigan, 1964), 14, 40, 123. Corn kernels excavated at the Juntunen site on Bois Blanc Island were grown between 1070 and 1320 A. D., plus or minus 75 years.

⁸Lovis, *Archaeological Survey*, 9.

⁹*Ibid.*, 8.

Occupied somewhat later were about a dozen Late Woodland sites found in Sleeping Bear Dunes National Lakeshore. Dating between 600 and 1620 A. D., these settlements were located on the mainland shore, on interior lakes and streams, and on both Manitou Islands. Late Woodland Indians established a campground on the Platte River around 130 A. D., and continued using the site for a thousand years.¹⁰

Most of the archeological sites found thus far within the Lakeshore's boundaries date from the Late Woodland period, leading archeologists to conclude that the prehistoric occupation and activity in the region climaxed during this period. Apparently, most of the sites were relatively small; a 1984 archeological survey reported that the existence of a major prehistoric settlement in the Lakeshore would have been unlikely.¹¹

Impact of the Fur Trade

In the early seventeenth century, the initiation of the fur trade between Indians and Europeans set the wheels in motion for profound changes in settlement patterns throughout the Great Lakes region. Of the many intertribal conflicts resulting from the fur trade, the Iroquois Wars probably had the most impact on settlement patterns in the Sleeping Bear region. Based in northern New York state, the Five Nations of the Iroquois Confederacy initially traded furs with the Dutch. By the 1640s, the population of beaver in Iroquois territory had become seriously depleted. To obtain more pelts, the Iroquois began raiding the Huron and other nations to the west, where the French dominated the fur trade. Following several disastrous raids, the Huron fled their villages in southern Ontario and relocated elsewhere. Some took refuge with friendly neighbors, such as the Ottawa, who at that time were based in Ontario: along Georgian Bay, on the Bruce Peninsula, and on Manitoulin Island.¹² The Iroquois pursued them, eventually sending war parties hundreds of miles into enemy territory, ranging from Michigan's Upper Peninsula to Illinois.¹³

¹⁰Jeffrey J. Richner, *Archeological Excavations at the Platte River Campground Site (20 BZ 16), Sleeping Bear Dunes National Lakeshore, 1987* (Lincoln, Nebraska: Midwest Archeological Center, National Park Service, 1991), 64, 66.

¹¹Lovis, *Archeological Survey*, 9.

¹²James M. McClurken, "The Ottawa," in *People of the Three Fires* (Grand Rapids, Michigan: Michigan Indian Press, 1986), 2, 13.

¹³Helen Hornbeck Tanner, *Atlas of Great Lakes Indian History* (Norman, Oklahoma: University of Oklahoma Press, 1987), 29-31.

Finding their Ontario homeland unsafe, the Ottawa relocated to northern Michigan and Wisconsin in the 1650s. Finally, after thirty years of conflict, the Ottawa made peace with the Iroquois in the 1670s and began to establish large villages near the Straits of Mackinac.¹⁴ The Iroquois threat, however, persisted for several decades. In 1698, a French expedition from Mackinac to the lower Mississippi River avoided traveling down the eastern shore of Lake Michigan because of a recent Iroquois attack on a party of French soldiers. Explaining the route taken, missionary Jean Francois Buisson de St. Cosme wrote:

We should have gone by the south side [i.e., along the eastern shore of Lake Michigan], which is much finer than the north, but as it is the route usually followed by the Iroquois, who, not long before, had made an attack on the soldiers and savages proceeding to the country of the Miamis, this compelled us to take the north side [the western shore of Lake Michigan], which is not as agreeable nor so well stocked with game, though it is easier, I believe, in the autumn because one is sheltered from the northwest winds.¹⁵

Continued hostilities between the Iroquois and nations of the Upper Great Lakes depopulated Michigan's Lower Peninsula, creating a "no man's land" between the Iroquois and Indians occupying the Upper Peninsula and Wisconsin.¹⁶ Not until the 1700s did the Ottawa begin moving into the Lower Peninsula, seeking lakeshore lands where a lengthy growing season could support corn cultivation. They supplemented their diet by fishing, tapping maple trees, and gathering wild foods.¹⁷

Apparently, the Ottawa were not familiar with techniques for maintaining soil fertility. In 1742, they relocated their main village to L'Arbre Croche (near present-day Cross Village, Emmet County) because the soil around

¹⁴McClurken, "The Ottawa," 13.

¹⁵Louise Phelps Kellogg, ed. *Early Narratives of the Northwest: 1634-1699* (New York: Charles Scribner's Sons, 1917), 343.

¹⁶Jim Muhn, *Historic Resource Study: Sleeping Bear Dunes National Lakeshore* (Omaha: National Park Service, Midwest Region, 1984), 9.

¹⁷McClurken, "The Ottawa," 34.

Mackinac had become exhausted.¹⁸ As the regional headquarters of the Ottawa nation, the enclave at L'Arbre Croche played an integral role in the settlement history of the Grand Traverse region, including the Sleeping Bear area.¹⁹ It was also the site of a Catholic mission, established by French Jesuits in 1741.²⁰ Throughout the mid-1700s, there was a proliferation of new villages as Ottawa families separated from larger settlements to form homes along waterways in the lower peninsula. By the early 1800s, several large permanent Ottawa villages had been established in the L'Arbre Croche region, which stretched from Mackinac southward along the coast to Little Traverse Bay.²¹

About the same time, Ojibwa people began moving into the region, establishing their own villages or settling in Ottawa villages. Within the study area, there were at least two settlements by 1810. A combined Ottawa and Ojibwa village was located near the present site of Leland, where the Leland (formerly Carp) River flows into Lake Michigan. On the east coast of the Leelanau Peninsula, near present-day Northport, was an Ojibwa village known as Stony Point.²²

Documentation of Indian occupancy of the Sleeping Bear region during the early 1800s is scant.²³ Several contemporary descriptions of the area survive, primarily written by passengers of ships that were traversing the Manitou Passage or stopping at one of the local wooding stations to take on fuel. Nevertheless, few of these accounts make reference to the presence of Indians. One notable exception is a memoir of Albert G. Ellis (1800-1885), a traveler whose ship waited out a gale at "Big Manitou" in 1823. Stretching for half a mile along the beach of the island was a line of mounds atop which wooden frames had been erected. Ellis interpreted the construction as "evidently for a game of

¹⁸W. Vernon Kintz, "The Indians of the Western Great Lakes, 1615-1760," *Occasional Contributions from the Museum of Anthropology of the University of Michigan*, No. 10 (Ann Arbor: University of Michigan Press, 1940), 236.

¹⁹Tanner, *Atlas*, 62, 130; Ruth Craker, *The First Protestant Mission in the Grand Traverse Region* (Mount Pleasant, Michigan: Rivercrest House, 1979), 8 ff.

²⁰Craker, *First Protestant Mission*, 9.

²¹McClurken, "The Ottawa," 17, 23.

²²Tanner, *Atlas*, 97, 98. Text notes that Stony Point is "tentatively identified."

²³Muhn, *Historic Resource Study*, 15. Muhn lists three contemporary accounts, dating from 1836 to 1850.

athletes at jumping . . . their tracks were abundant proof of the game, at which it appeared they had been exercising, only a day or two before our visit."²⁴

Whatever the provenience of the mounds, an Indian presence in the Sleeping Bear region apparently was increasing. By 1830, there were at least seven villages within the study area. The southernmost was an Ottawa village at the eastern end of Crystal Lake, near present-day Benzonia. A few miles to the north was an Ottawa settlement called Platte River, located upstream from Platte Lake. On the shore of Sleeping Bear Bay near the mouth of the Crystal River was a combined Ottawa and Ojibwa village. The previously-mentioned settlement at the mouth of the Leland River had become known as Chemagobing.²⁵ Another combined Ottawa and Ojibwa village was located near Cathead Point, at the tip of the Leelanau Peninsula. There were two Ojibwa settlements on the east coast of the peninsula: Shabwasung's village (near present-day Omena) and a village near Suttons Bay.²⁶

The Ottawa, like most other indigenous peoples of the Great Lakes, practiced a semi-sedentary lifestyle, dividing the year between campsites in widely-scattered locations. During the warm months, several families would gather at a home base, where they grew corn and other crops. After the fall harvest, most left the village in small groups, relocating to hunting camps for the winter. In early spring, they set up sugaring camps near stands of maple. As the warm weather returned, they rejoined the larger group at the home base.²⁷ Many Indians of the L'Arbre Croche region followed this pattern, wintering along the Grand and Muskegon rivers in southern Michigan. Some travelled as far south as Illinois, returning north in the spring.²⁸

As permanent American settlements mushroomed across southern Michigan in the early 1800s, the Ottawa found it increasingly difficult to pursue their traditional subsistence regimens. The officials of Michigan Territory, anticipating statehood, sought title to Ottawa lands to open them to

²⁴Albert G. Ellis, "Fifty-Four Years' Recollections of Men and Events in Wisconsin," *Wisconsin Historical Collections* 7, 233.

²⁵Also known as "Mishi-me-go-bing." See Craker, *First Protestant Mission*, 21.

²⁶Tanner, *Atlas*, 134.

²⁷Tanner, *Atlas*, 5.

²⁸Craker, *First Protestant Mission*, 12-13; Lawrence Wakefield, ed., *A History of Leelanau Township* (Leland, Michigan: Friends of the Leelanau Township Library, 1982), 12.

Euro-American settlement.²⁹ Negotiations began in 1835, culminating in the Treaty of 1836. Under the terms of the treaty, the United States acquired the northwestern third of the Lower Peninsula, as well as the entire Upper Peninsula. The government retired the Ottawas' outstanding debts and promised them yearly cash payments. In addition, financial support for schools, agricultural programs, and missions was to be provided.³⁰ The Ottawa would be allowed to remain for five years longer on small reservations located north of the Grand River, along the Manistee River, and near Little Traverse Bay.³¹

The Ottawa also retained the right to occupy lands within the ceded territory until they were needed by Euro-American settlers. Assuming that their northern lands would not be sought after for farming, they believed that the ceded territory was theirs to use for many years to come.³² This was not to be the case, however, for in the early 1800s, southern portions of Michigan Territory were undergoing rapid settlement, a phenomenon resulting from what a Michigan historian has called "one of the great population movements of American history."³³ The opening of the Erie Canal in 1825 linked the Hudson River Valley with the Great Lakes, redirecting the flow of westward settlement. Michigan became attractive because it could now ship its agricultural products cheaply by water to eastern markets. Seized by "Michigan fever," settlers from New England and upstate New York swarmed into the Territory.³⁴

Between 1835 and 1838, the population of Michigan Territory doubled. So quickly did Michigan continue to grow, that in 1836 receipts from land sales exceeded one-fifth of the land sales for the entire country.³⁵ The following year, 1837, brought two significant events: Michigan became a state, and regular steamboat service was established on Lake Michigan.³⁶

²⁹McClurken, "The Ottawa," 28.

³⁰McClurken, "The Ottawa," 29.

³¹Per Tanner, *Atlas*, 168, the Beaver Islands also were reserved as part of the Treaty of 1836.

³²McClurken, "The Ottawa," 29.

³³Justin L. Kestenbaum, "Modernizing Michigan: Political and Social Trends, 1836-1866," in *Michigan: Visions of Our Past*, ed. Richard J. Hathaway (East Lansing: Michigan State University Press, 1989), 115.

³⁴Lawrence M. Sommers, ed., *Atlas of Michigan* (East Lansing: Michigan State University Press, 1977), 101.

³⁵Kestenbaum, "Modernizing Michigan," 115.

³⁶Robert T. Hatt, *Island Life: A Study of the Land Vertebrates of the Islands of Eastern Lake Michigan* (Bloomfield Hills, Michigan: Cranbrook Institute of Science, 1948), 28.

The latter development provided the catalyst for permanent American settlement of the Sleeping Bear region, which soon became the site of a thriving cordwood trade. Over the course of one voyage, a Great Lakes steamer could consume between 100 and 300 cords of wood. With each steamer averaging 30 to 35 trips per season, the demand for easily accessible fuel wood was prodigious.³⁷ The Sleeping Bear region, with its plentiful hardwood and deep water harbors, provided the perfect setting for the establishment of a fuel wood trade. While it has not been possible to establish when steamers began stopping near Sleeping Bear for fuel, the area's first commercial wooding station may have been located on South Manitou Island. Sailing vessels and steamers had long taken shelter at South Manitou, which had the only harbor between Chicago and Mackinac that could accommodate large ships in all weather.³⁸ William N. Burton and his family may have arrived on the island as early as 1835. In 1837, Lt. James T. Homans was sent to South Manitou by the U. S. government to locate a site for a lighthouse; he observed a steamboat landing and a house, probably occupied by the Burton family.³⁹

Burton and his family were "squatters" on the land, which wasn't acquired officially by the United States until the Treaty of 1836. Settlers were forced to wait several more years for the chance to gain title to land in northwestern Michigan, pending completion of the U. S. General Land Office survey. In the Sleeping Bear area, this task was to take more than a decade: government surveyors were at work in present Benzie County in 1838, and east of Grand Traverse Bay in present Antrim County in 1839. South Manitou Island, however, was not surveyed until 1847.⁴⁰ Then, around 1849, some recently

³⁷Jim Muhn, *Historic Resource Study: Sleeping Bear Dunes National Lakeshore* (Denver: National Park Service, Denver Service Center, 1979), 96. By comparison, steamboats plying the Mississippi River system in the mid-1800s consumed between 75 and 100 cords of wood daily. River steamboats rarely carried fuel supplies for more than 24 hours, and the common practice was to take on wood twice daily. The preparation of steamboat fuel became an important backwoods industry along the rivers, promoting settlement and economic development. See Louis C. Hunter, *Steamboats on the Western Rivers: An Economic and Technological History* (Cambridge: Harvard University Press, 1949), 264-266; David E. Schob, "Woodhawks and Cordwood: Steamboat Fuel on the Ohio and Mississippi Rivers, 1820-1860." *Journal of Forest History* 21 (July 1977): 124-132.

³⁸Myron H. Vent, *South Manitou Island: From Pioneer Settlement to National Park* (Springfield, Virginia: Goodway Press, Inc., 1973), 15.

³⁹*Ibid.* 32.

⁴⁰Leonard L. Case, *The Crystal Gazer* (Benzonia, Michigan: Benzie Area Historical Society, 1985), 8-9; M. L. Leach, *A History of the Grand Traverse Region* (Traverse City: Grand Traverse Herald,

completed survey maps of northern Michigan were found to be fraudulent, with non-existent lakes and streams represented.⁴¹ As a result, much of the Lower Peninsula, including sections of the Sleeping Bear area, had to be re-surveyed around 1850.⁴²

Pioneer Settlements of the 1840s

In the meantime, Presbyterians were establishing the first Protestant mission in the Grand Traverse region. In May 1839, missionaries Peter Dougherty and John Fleming landed at the tip of the narrow peninsula between the east and west arms of Grand Traverse Bay, which "to the white man was then almost a *terra incognita*," according to a local historian.⁴³ Establishment of a mission and school, as authorized in the Treaty of 1836, had been approved by Indian agent Henry Schoolcraft, who was based at Mackinac. Schoolcraft sent a government farmer, John Johnston, to the mission in the fall of 1839. Johnston's assignment was to teach agriculture to the Indians.⁴⁴ The settlement that grew up around Dougherty's establishment eventually became known as Old Mission.

The exact population of the Grand Traverse region in the 1840s is not known, but information from a variety of sources suggests that only a handful of American settlers was present. Around the time of the federal census of 1840, most of northwestern Michigan fell within the boundaries of one huge county, Michilimackinac. Between 1840 and 1897, northern Michigan underwent numerous county reorganizations and changes in township boundaries, making extrapolation of the census figures extremely difficult. In 1840, Omeena (later called Grand Traverse) and Leelanau counties were set off from Michilimackinac, the first step towards their organization as separate counties. The fact that they were set off did not necessarily indicate population growth, however. New counties may or may not have had any permanent inhabitants at the time they were set off. Both Omeena (Grand Traverse) and Leelanau remained bureaucratically attached to their parent county, Michilimackinac, for several

1883), 8; Joseph Rogers, *South Manitou Island: A Field Trip Sourcebook and Guide* (Traverse City: Northwestern Michigan College, 1966), 29-30.

⁴¹George H. Cannon, "The Life and Times of William A. Burt, of Mt. Vernon, Michigan," *Michigan Pioneer Collections* 5 (1882): 122.

⁴²*Ibid.*; see also Surveyor's Plats, Benzie and Leelanau Counties, State Archives of Michigan, Lansing.

⁴³Leach, *Grand Traverse Region*, 8.

⁴⁴Craker, *First Protestant Mission*, 53, 55.

years.⁴⁵ In Michigan, as the population of a set off county increased and settlers perceived the need for local government, they could petition the state legislature for formal organization of their county. Following a favorable referendum vote, the legislature officially organized the county.⁴⁶

Before a county was organized, its census data usually were included with those of the county to which it was attached. Figures for Michilimackinac County, published with the 1850 federal census, embrace data from 21 unorganized counties, including those that later were organized as Benzie and Leelanau. Consequently, it is impossible to extrapolate accurate figures from published data for those settlements that were being established in the Sleeping Bear region by the late 1840s.⁴⁷

A few contemporary accounts document the presence of early Euro-American settlers. Author Margaret Fuller, a passenger on a steamer which stopped "at the Manitou Islands" in 1843 for fuel, noted that "no one lives here except the woodcutters for the steamboats."⁴⁸ By 1846, woodcutter Nicholas Pickard had established a residence on North Manitou Island. In the following year, John Lerue arrived on the Manitous from Chicago, "in search of health," and established a trading post. In addition, "on the north Manitou were two fishermen, without families," recorded M. L. Leach in an 1883 history of the Grand Traverse region. Another inhabitant, identified only as "a man named Clark," kept a lighthouse on North Manitou. According to Leach, there were no other white settlers at that time in what was to become Leelanau County.⁴⁹

About the same time, a Mormon settlement led by James Jesse Strang was being established on Beaver Island, located some 40 miles northeast of the Manitous. By the winter of 1847, the colony numbered eighteen persons, and the population increased rapidly in subsequent years.⁵⁰ In the same year, settlers arrived at the head of the west arm of Grand Traverse Bay. There, they erected a

⁴⁵Grand Traverse County was organized in 1851; Leelanau in 1863. See Richard W. Welch, *County Evolution in Michigan, 1790-1897* (Lansing: Michigan Department of Education, State Library Services, Occasional Paper No. 2, 1972), 7, 10.

⁴⁶*ibid.*, 2.

⁴⁷U. S. Census Office, *Seventh Census of the United States: 1850* (Washington, D. C.: Robert Armstrong, Public Printer, 1853)

⁴⁸David L. Fritz, *History Data Report on North Manitou Island, Leelanau County, Michigan* (Denver: Denver Service Center, National Park Service, 1986), 3.

⁴⁹Leach, *Grand Traverse Region*, 23.

⁵⁰Writers' Program, Work Projects Administration, *Michigan: A Guide to the Wolverine State* (New York: Oxford University Press, 1941), 603.

sawmill at the mouth of the Boardman River, establishing the community that became Traverse City.⁵¹

To the southwest, in present-day Benzie County, the mouth of the Aux Becs Scies (now called Betsie) River was the site of another early settlement. A Pennsylvanian named Joseph Oliver arrived in the area sometime between 1847 and 1850, establishing a base for his hunting and trapping activities at what later became the city of Frankfort.⁵² In 1848, John Lerue moved his trading post from South Manitou to a site near present-day Glen Arbor, thus becoming the first recorded Euro-American to establish a permanent residence on the mainland of what was to become Sleeping Bear Dunes National Lakeshore.⁵³

In the following year, a party of Congregational missionaries led by the Rev. George N. Smith landed at Northport Harbor, on the eastern coast of the Leelanau Peninsula. Smith had chosen the site to relocate a colony of Ottawa and Ojibwa Indians with whom he had been living at the Old Wing Mission in southwestern Michigan. Smith had established Old Wing, a settlement on the Black River (near present-day Holland, Michigan), in 1839 under the auspices of the Western Society of Michigan to Benefit the Indians, an organization that sought to help Native Americans adjust to changes brought about by the Treaty of 1836. The Old Wing colony included several Ottawa who traditionally had spent their summers in the Grand Traverse area. Among their leaders was Chief Waukazoo of Middle Village, a settlement near L'Arbre Croche.⁵⁴

For almost a decade, the isolated Old Wing colony remained relatively untouched by the waves of settlement sweeping over the rest of southern Michigan. The arrival of Dutch settlers in the area in early 1847, however, sparked a series of cultural conflicts that culminated in the colony's relocation to the Leelanau Peninsula. Tense relations between the Dutch and Indians reached a crisis in the autumn of 1847. The Indians had planted corn and beans at Old Wing that spring, but then had departed to hunt and fish elsewhere for the summer. Unaware of the Indians' seasonal migrations, the Dutch settlers

⁵¹Leach, *Grand Traverse Region*, 14.

⁵²N. A. Parker, "History of Crystal Lake Township, Benzie County," *Michigan Historical Collections* (1898), 548.

⁵³Gilbert/Commonweath, Inc., *Cultural Resource Assessment of Proposed Rehabilitation of the Platte River Campground and Limited Testing at Site 20BZ16, Benzie County, Michigan* (Jackson, Michigan: Gilbert/Commonweath, Inc., 1986), 26.

⁵⁴Etta Smith Wilson, "Life and Work of the Late Rev. George N. Smith, A Pioneer Missionary," *Michigan Pioneer and Historical Collections* 30 (1905), 198-199.

assumed they had abandoned the settlement and allotted the fields to arriving immigrants. When the Indians returned in September, they discovered Dutch settlers had taken over their fields. As the Dutch population increased, Smith and the Indians became convinced that relocation of the colony was necessary.⁵⁵ In the spring of 1848, Smith and Chief Waukazoo left on a scouting trip of potential sites in northwestern Michigan, traveling up the coast as far as Mackinac.⁵⁶

Smith and his family arrived at the chosen site on present Northport Harbor in June 1849. Later that summer, Chiefs Waukazoo and Nagonaba established a settlement there which became known as Waukazooville. Its population consisted of forty to fifty families.⁵⁷ During the same year, Father Francis Pierz built what is believed to be the first Catholic church in the Grand Traverse region at Stony Point, at the tip of the peninsula that shelters Suttons Bay.⁵⁸ Pierz, a missionary based at L'Arbre Croche who later established several missions in Minnesota, did not found the settlement at Stony Point, however. When he built the church there in 1849, the Ojibwa already had been living at Stony Point for almost forty years.⁵⁹

The 1850s: Growth of the Forest Products Industry

During the 1850s, the region's growing forest products industry resulted in the creation of several additional settlements in the Sleeping Bear region. As mentioned previously, shipping traffic on the Great Lakes provided a living for entrepreneurs who came to the area to engage in the cordwood trade. The success of this enterprise is demonstrated by the fact that W. N. Burton's wooding operation on South Manitou had denuded the island of most of its trees by 1847.⁶⁰ While exploitation of the region's forests had been initiated to supply the cordwood trade, by the 1850s local sawmills also were producing lumber. Throughout the Sleeping Bear region, new communities sprang up adjacent to

⁵⁵C. Warren Vander Hill, *Settling the Great Lakes Frontier: Immigration to Michigan, 1837-1924* (Lansing: Michigan Historical Commission, 1970), 51.

⁵⁶Wilson, "Rev. George N. Smith," 204.

⁵⁷Wakefield, ed., *History of Leelanau Township*, 24; Leach, *Grand Traverse Region*, 24.

⁵⁸Father S. A. Bur, "Immaculate Conception Church-Peshabatown-Suttons Bay," typewritten manuscript dated 18 Feb. 1972, with notation: "taken from the unpublished notes of Fr. S. A. Bur, written April 1970." On file at Michigan Bureau of History, Lansing.

⁵⁹Tanner, *Atlas*, 97.

⁶⁰Muhn, *Historic Resource Study*, 105.

wooding docks and sawmills; a few villages produced both cordwood and lumber.

The manufacture of another wood product--barrels--was instrumental in the creation of Glen Arbor, the first Euro-American settlement in what became the National Lakeshore. John Dorsey, a Chicago barrel maker, entered into partnership with Indian trader John Lerue in 1851. Dorsey established a cooperage to produce barrels for packing fish that Lerue obtained from local Indians.⁶¹ In 1855, Glen Arbor's first sawmill was built by entrepreneur George Ray. Two years later, Ray built a wooding dock at Glen Arbor, the first on Sleeping Bear Bay. John Fisher, another early resident of Glen Arbor, constructed a sawmill at the mouth of the Crystal River in 1859.⁶²

To the northeast on Good Harbor Bay, a sawmill was built in 1856 at North Unity, where Michigan's first rural Czech (Bohemian) community was being established.⁶³ About the same time, a village known as "Ailsworth" [sic] was developing on the western shore of North Manitou Island, where George F. Aylsworth, Sr., based his wooding operation.⁶⁴

At Leland, near the tip of the Leelanau Peninsula where the Carp (now Leland) River drained into Lake Michigan, a sawmill had been established in 1853 by Antoine Manseau. By the end of the decade, a wooding dock was in operation at Leland, as well.⁶⁵

⁶¹Weeks, *Sleeping Bear*, 47.

⁶²Muhn, *Historic Resource Study*, 100, 98.

⁶³*Ibid.*, 100. James A. Anderson, ed., *The Peoples of Michigan Series, Vol. 2: Ethnic Groups in Michigan* (Detroit: Michigan Council for the Arts and Michigan Council for the Humanities, 1983), 92. Contradictory evidence exists regarding what kind of mill was erected at North Unity in the early days of the community. Park Service historian Jim Muhn stated in his 1984 *Historic Resource Study* that a sawmill opened at North Unity in 1856. The source he cited for this information was Julia Terry Dickinson's *The Story of Leelanau* (1951). On page 42, Dickinson wrote that North Unity's early settlers built a grist mill at the outlet of [Little] Traverse Lake where it empties into Lake Michigan; no mention is made of a sawmill. However, Joseph Kruber, one of North Unity's original settlers, stated in his memoirs that a sawmill was built there in 1856, and that settlers had used a hand mill to grind their grain into flour. [See "History of Joseph Krubner, Leland, Michigan," typewritten manuscript on file at the Michigan Bureau of History, Lansing, and at Sleeping Bear Dunes National Lakeshore headquarters library, Empire]. Supporting evidence for Kruber's account may be found in U. S. Census Office, *Manufactures of the United States in 1860* (Washington, D. C.: Government Printing Office, 1865), p. 265. Census enumerators counted three lumber sawing establishments in Leelanau County in 1860, but no flour or meal mills are listed.

⁶⁴Muhn, *Historic Resource Study*, 97.

⁶⁵Hatt, *Island Life*, 29; Leach, *Grand Traverse Region*, 24.

During this period, economic opportunities created by logging drew settlers to communities throughout the Grand Traverse region. In 1851, the state legislature approved the organization of Grand Traverse County.⁶⁶ Three years later, the county had a population of 911 persons.⁶⁷ Manitou County, comprising the Manitou Islands, Beaver Islands, and Fox Islands, was organized in 1855.⁶⁸ While the forest products industry was the major catalyst for Euro-American migration into the region, settlers also came for other reasons. In 1852, the Rev. Peter Dougherty relocated his mission from the Old Mission Peninsula to the east coast of the Leelanau Peninsula, where he purchased land from an Ojibwa chief named Shabwasung. Recent revisions in Michigan's constitution had granted American citizenship to "all civilized persons of Indian descent, not members of any tribe." Therefore, Dougherty's parishioners were anxious to avoid relocation west of the Mississippi River by the government; they realized that as American citizens, they would be able to buy land and remain in Michigan. Dougherty encouraged them to save portions of their annual treaty allotment towards the purchase of land. Unfortunately, the lands they occupied on the Old Mission Peninsula were not yet on the market; but land on the west side of Grand Traverse Bay was for sale. Many Indians selected tracts across the bay and moved to the Leelanau Peninsula. Dougherty, anticipating the dispersal of Old Mission's population, decided to relocate. The site he chose was about six miles south of the Rev. George Smith's mission at Waukazooville. Located on high land near Ormena Point, it became known as New Mission. Here, Dougherty and his family operated a farm and manual training school for Indian students.⁶⁹

In 1855, Father Ignatius Mrak, another Catholic missionary from L'Arbre Croche, arrived at Stony Point. Mrak, discovering that the Indian population at the Stony Point mission was smaller than that of the area across Suttons Bay, decided to build a new church. Mrak called the community across the bay Eagletown, but it later became known as Peshawbestown. He dedicated the new

⁶⁶Welch, *County Evolution in Michigan*, 10.

⁶⁷Fritz, *North Manitou Island*, 2.

⁶⁸Welch, *County Evolution in Michigan*, 10; Leach, *Grand Traverse Region*, 53. The Beaver Islands were divided into two townships, Peaine and Galilee. The Fox Islands constituted the township of Patmos. North and South Manitou Island became Manitou Township.

⁶⁹*Ibid.*, 11; Wakefield, ed., *History of Leelanau Township*, 180.

church there in October 1858. An itinerant missionary, Mrak based his ministry at Peshawbestown, but traveled throughout northwestern Michigan.⁷⁰

Soon, additional Euro-American settlers arrived on the Leelanau Peninsula. Joseph Dame, who had come to Old Mission in 1841 as a government farmer to the Indians, bought land near Waukazooville and began constructing a wharf around 1853.⁷¹ Dame and his son, Eusebius, subdivided their land into lots. Buyers arrived the following spring, many attracted to the area by a testimonial letter of Dame's that had appeared in the *New York Daily Tribune*.⁷²

Dame called the new village Northport. His neighbor, the Rev. George Smith, who had relocated to the Leelanau Peninsula only five years earlier to avoid the tide of settlement, was apprehensive about Dame's promotional activities. In April 1843, Smith recorded in his diary:

Mr. Dame wrote a letter last winter and published it in the *New York Tribune*--He is now receiving many letters of inquiry--he is much pleased--How this movement will affect the Indians remains to be proved. Perhaps serious evils will grow out of it. The future can only tell.⁷³

As it turned out, the *Tribune* publicity did attract settlers, but not only to Northport. The founders of the religious colony established at Benzonia in 1858 also had been influenced by Dame's letter.⁷⁴ Led by the Rev. Charles E. Bailey, a Congregational minister from Medina, Ohio, the colony's first settlers arrived at Glen Arbor in October 1858. They hired a vessel to take them down the coast to the mouth of the Betsie River, where they loaded their belongings into small boats for the two-and-one-half-day trip upstream to their new home. Transportation was to remain primitive for several years; no roads linked Benzonia to the outside world until 1862.⁷⁵

⁷⁰Elvin L. Sprague and Mrs. George N. Smith, *Sprague's History of Grand Traverse and Leelanau Counties, Michigan* (Indianapolis: B. F. Bowen, Publisher, 1903), 337; Bur, "Immaculate Conception Church-Peshabatown-Suttons Bay."

⁷¹Wakefield, ed., *History of Leelanau Township*, 26; Leach, *Grand Traverse Region*, 24.

⁷²"North-Western Michigan," letter from Joseph Dame, Northport, Grand Traverse Bay, Michigan, dated 23 January 1854, published in the *New York Daily Tribune*, 3 March 1854, p. 3, col. 5-6.

⁷³Wakefield, ed., *History of Leelanau Township*, 34.

⁷⁴Leach, *Grand Traverse Region*, 46; William A. Betts, "A History of the Early Settlement of the Township of Benzonia and the Founding of Grand Traverse College," *Michigan Historical Collections* (1901), 116.

⁷⁵Leach, *Grand Traverse Region*, 47.

Similar conditions prevailed throughout the Sleeping Bear region in the 1850s. Settlers communicated with the outside world by water; Indian trails accommodated overland transportation. "The beach forms a useful thoroughfare in summer, and the ice in winter," noted Alexander Winchell in an 1866 report on the Grand Traverse region.⁷⁶

One of the first roads on the Leelanau Peninsula connected Waukazooville to New Mission. The Rev. George Smith recorded in his diary that Indians had begun work on the road late in 1853.⁷⁷ The following year, Smith and the Rev. Peter Dougherty laid out a road from Waukazooville to Carp River (present-day Leland).⁷⁸ Another early road connected the village of Northport with the Indian settlement at Cat Head Point.⁷⁹

The 1860s: Highways and Homesteaders

Settlers still had to wait several years for overland connection with regional trading centers such as Traverse City. In 1859, the legislature approved funding for state roads. A leg of the projected Allegan, Muskegon and Traverse Bay State Road was to connect Benzonia with Traverse City.⁸⁰ Not until the fall of 1863, however, was a road between Benzonia and Traverse City cut through the woods and made passable for wagons. Labor was provided by "the citizens of each settlement . . . doing the work on that half [of] the route next [to] their own locality."⁸¹ By 1866, the state road extended from Grand Haven to Traverse City (via Benzonia), and a mail stage ran regularly between Muskegon and Traverse City.⁸²

Another locally important highway, the Manistee and Leland State Road, was surveyed in 1868. When completed in 1870, it connected the coastal communities of Frankfort, Platte, Empire, and Glen Haven, "affording the people

⁷⁶Alexander Winchell, *The Grand Traverse Region*, 1866, 76.

⁷⁷Wakefield, ed., *History of Leelanau Township*, 31.

⁷⁸*Ibid.*, 159.

⁷⁹Leach, *Grand Traverse Region*, 24.

⁸⁰Winchell, *Grand Traverse Region*, 76. Today, Interstate 31 follows roughly the same route.

⁸¹Leach, *Grand Traverse Region*, 48.

⁸²Winchell, *Grand Traverse Region*, 77.

a means of egress and ingress to and from the various trading points along the shore," noted a local historian.⁸³

At the beginning of the Civil War decade, however, the Sleeping Bear region was still at the frontier's edge, difficult to reach by land and dependent upon seasonal Great Lakes shipping for contact with the outside world. At the close of the 1850s, development of a new deep-water harbor was underway at the outlet of the Aux Becs Scies (Betsie) River. A group of Detroit-based investors known as the Frankfort Land Company had acquired most of the property adjacent to the harbor and initiated improvements to the river channel. Convinced of Aux Becs Scies Lake's potential as a port, the firm recorded a plat for an adjacent village in August 1859. The following spring, citizens of Crystal Lake Township met in the village of Frankfort for their first town meeting. They "were cheered with the prospects of a rapid and permanent settlement and improvement." But a year later, in the spring of 1861, the population still had not grown beyond three families. The Frankfort Land Company's development plans languished during the Civil War.⁸⁴

At the decade's beginning, population densities across the Sleeping Bear region averaged slightly greater than four persons per square mile, with the highest concentration occurring on North Manitou Island.⁸⁵ There, as throughout the region, the wooding trade continued to thrive. Although sailing vessels still outnumbered wood-burning ships three to one on the Great Lakes, a total of 335 steamers and propellers plied their shipping lanes in 1860.⁸⁶

At least three new wooding docks were established in the Sleeping Bear area during the 1860s. In 1862, Thomas Kelderhouse built a dock into Sleeping Bear Bay; subsequently, the community of Port Oneida, named after a passing steamer, grew up there. H. D. Pheatt built a dock and established a wooding business at nearby Good Harbor the following year. In 1865, Charles C. McCartey erected a wooding dock west of Glen Arbor, the third on Sleeping Bear Bay. The village that sprang up initially was called Sleeping Bearville; later its

⁸³M. E. Thurston, "History of the Township of Platte," *Michigan Historical Collections* 31 (1901), 150; Leonard Case, *Benzie County: A Bicentennial Reader*, 1976, 30. A portion of modern state highway M-22 follows the former route of the Manistee and Leland State Road.

⁸⁴Parker, "History of Crystal Lake Township," 551-553.

⁸⁵Authors' calculations, based on population data from Secretary of State of the State of Michigan, *Statistics of the State of Michigan, Compiled from the Census of 1860, Taken by Authority of the United States* (Lansing: John A. Kerr & Co., Printers to the State, 1861), 149-150, 173-174.

⁸⁶Hatt, *Island Life*, 29.

name was changed to Glen Haven. McCartney also operated a sawmill at nearby Little Glen Lake.⁸⁷

In 1860, a total of 2,500 people resided in the region, with 1,465 living in townships either totally or partially within the area that would become Sleeping Bear Dunes National Lakeshore (Table 1). North Manitou Island had 270 inhabitants, while only 73 persons lived on South Manitou. On the mainland, the most populous township was Leelanau, with 1,035 inhabitants. Adjacent Centerville Township had a population of 650 people, whereas Glen Arbor Township, although occupied by Euro-American settlers since 1848, had a population of only 255 people. Crystal Lake Township, enumerated as part of Leelanau County in 1860, but encompassing the territory that later became Benzie County, had 215 inhabitants. It was the most sparsely populated of the region's townships, having less than one person per square mile.⁸⁸

Altogether, 705 people (28 percent of the region's total population) who resided in the region in 1860 were born outside the United States (Table 2). About 25 percent of the mainland's inhabitants were immigrants; the combined figure for North and South Manitou Islands was 48 percent. The 260 Germans formed the largest single group of foreign-born people in the region; ten German states were represented in the region's population, but 65 percent of the emigres came from three areas: Prussia (69), Hanover (59), and Bavaria (42). The 155 Canadians followed the Germans as the second largest group, while smaller numbers came from Great Britain (100), Norway (60), Bohemia (42), and Ireland (34).⁸⁹

The largest total numbers of immigrants were concentrated in Centerville (150) and Glen Arbor Townships (140), and on North Manitou Island (135). Germans predominated in all three of these areas, Canadians formed the largest group in Leelanau and Crystal Lake townships and the Village of Northport, and Norwegians were most evident among the small number of people who populated South Manitou Island.⁹⁰

Just under 60 percent (1,010) of the region's 1,725 American-born residents had been born in Michigan, while the 385 New Yorkers comprised 22

⁸⁷Muhn, *Historic Resource Study*, 98, 100.

⁸⁸Manuscript schedules, Eighth Census of the United States (1860); Secretary of State, *Statistics of the State of Michigan*, 149-150, 173-174; Case, *Benzie County*, 17.

⁸⁹Manuscript schedules, Eighth Census of the United States (1860).

⁹⁰*ibid.*

Table 1

TOTAL POPULATIONS OF BENZIE AND LEELANAU COUNTIES, THE MANITOU ISLANDS, AND TOWNSHIPS INCLUDED, EITHER ENTIRELY OR PARTIALLY, WITHIN THE CURRENT BOUNDARIES OF SLEEPING BEAR DUNES NATIONAL LAKESHORE, 1860-1990

County/Area					
Census Year	Benzie County	Leelanau County	Manitou Islands	Total	Sleeping Bear Dunes National Lakeshore Townships
1860	217*	1,941	342	2,500	1,463
1870	2,184	4,576	167	6,927	3,067
1880	3,433	6,253	171	9,857	3,047
1890	5,273	7,944	106	13,323	2,902
1900	9,685	10,556	-	20,241	4,142
1910	10,638	10,608	-	21,246	4,036
1920	6,947	9,061	-	16,008	3,126
1930	6,587	7,800	-	14,387	2,550
1940	8,206	8,436	-	16,642	2,454
1950	8,306	8,647	-	16,953	2,228
1960	7,834	9,321	-	17,155	2,526
1970	8,593	10,872	-	19,465	2,960
1980	11,205	14,007	-	25,212	3,381
1990	12,200	16,527	-	28,727	3,882

* Although Benzie was not officially organized as a county until 1869, the 1860 figure is for Crystal Lake Township (then in Leelanau County).

Sources: U.S. Censuses of Population, 1860-1990.

Table 2
COUNTRY OF BIRTH FOR THE FOREIGN-BORN POPULATIONS OF BENZIE AND
LEELANAU COUNTIES AND THE MANITOU ISLANDS, 1860-1910

AREA	Austria	Bohemia	Britain	Canada	Denmark	Germany	Ireland	Norway	Poland	Sweden	Other	Total
1860												
Benzie County	-	-	14	31	-	5	7	2	-	-	1	60
Leelanau County	2	42	78	120	-	195	19	1	-	-	22	479
Manitou Islands	-	-	10	4	4	60	8	57	-	5	17	165
TOTAL	2	42	102	155	4	260	34	60	0	5	40	704
1870												
Benzie County	-	-	86	161	-	41	28	15	-	2	9	342
Leelanau County	35	120	151	684	5	334	114	36	-	5	44	1528
Manitou Islands	-	-	4	13	3	26	4	19	11	15	-	95
TOTAL	35	120	241	858	8	401	146	70	11	22	53	1965
1880												
Benzie County	1	-	115	297	18	93	41	32	13	32	22	664
Leelanau County	50	147	142	568	21	298	99	153	47	73	37	1635
Manitou Islands	-	-	5	5	18	26	6	1	2	8	-	71
TOTAL	51	147	262	870	57	417	146	186	62	113	59	2370
1890												
Benzie County	2	1	170	375	29	144	44	255	6	58	57	1141
Leelanau County	33	183	210	391	11	645	80	319	69	98	65	2104
TOTAL	35	184	380	766	40	789	124	574	75	156	122	3245
1900												
Benzie	4	-	168	594	28	171	43	228	3	111	97	1447
Leelanau	46	147	401	484	22	515	61	401	242	188	78	2285
TOTAL	50	147	269	1078	50	686	104	629	245	299	175	3732
1910												
Benzie County	-	8	110	501	27	132	24	250	12	93	76	1242
Leelanau County	-	156	61	346	17	355	36	377	266	149	64	1829
TOTAL	0	164	171	847	44	487	60	627	278	242	140	3069

Since the manuscript schedules for the 1890 census are not available, it was not possible to determine how many of Manitou County's residents lived on North or South Manitou Islands. In 1896, North Manitou merged with Leland Township, and South Manitou with Glen Arbor Township.

Sources: Manuscript schedules for the 1860, 1870, 1880, 1900, and 1910 federal censuses of population.

percent of the total. The remaining 325 Americans came from fourteen different states. Fully one-third of the mainland's native-born residents were American Indians. (None lived on the islands.) Only one African-American was enumerated in 1860.⁹¹

Some months after the passage of the Homestead Act in May 1862, a fresh wave of settlers began to arrive in the Sleeping Bear region. The new legislation enabled the head of a family to secure a homestead of not more than 160 acres within the surveyed public domain. Title to the homestead was acquired by continuous residence and improvement of the holding over the span of five years. Alternatively, after six months' residence and suitable improvement, the claimant could commute his or her homestead entry into full title by paying \$1.25 per acre.⁹² Across the state of Michigan, some three million acres were alienated under the Homestead Act.⁹³

In 1862, *New York Tribune* editor Horace Greeley welcomed the new legislation as "a reform calculated to diminish sensibly the number of paupers and idlers and increase the proportion of working, independent, self-subsisting farmers in the land evermore."⁹⁴ The Homestead Act did indeed make a significant impact on settlement throughout the Grand Traverse region, as recorded by historian M. L. Leach:

The homestead law . . . contributed not a little to hasten the settlement of the country. The entries of homesteads for the first month at the U. S. land office at Traverse City, numbered 128, and for the first eight months, 528. For several years afterwards they varied from 50 to 80 per month, with the exception perhaps of two or three months in the dead of winter of each year.⁹⁵

Similar patterns characterized the homestead situation for land areas now situated within or immediately adjacent to Sleeping Bear Dunes National Lakeshore. The first homesteader was Alexis Goffart, Sr., of Grand Traverse, Michigan, who filed for 120 acres of land in Sections 29 and 30 of Glen Arbor

⁹¹*Ibid.*

⁹²Roy M. Robbins, *Our Landed Heritage: The Public Domain, 1776-1970*, 2nd ed., rev. (Lincoln, Nebraska: University of Nebraska Press, 1976), 207.

⁹³M. M. Quaife and Sidney Glazer, *Michigan: From Primitive Wilderness to Industrial Commonwealth* (New York: Prentice-Hall, Inc., 1948), 249.

⁹⁴Robbins, *Our Landed Heritage*, 207.

⁹⁵Leach, *Grand Traverse Region*, 51.

Township (Township 29 North-Range 14 West) on 1 January 1863. Only ten days after filing his claim in the U. S. Land Office at Traverse City, Goffart settled on the property and began to construct his farm buildings and to clear land. On 29 May 1868, Goffart (who resided on the property with his wife and three children) filed his homestead "proof." At this time Goffart reported that 25 acres of land had been fenced and cultivated, and that he had "planted a number of fruit and other trees." Goffart also noted that the holding included a one-and-one-half story house which was 16' X 24' in size; the dwelling, termed a "comfortable house to live in," included two doors, four windows, a shingle roof, and a board floor. In addition, Goffart had dug a well and constructed a 20' X 22' barn and a 14' X 20' stable.⁹⁶

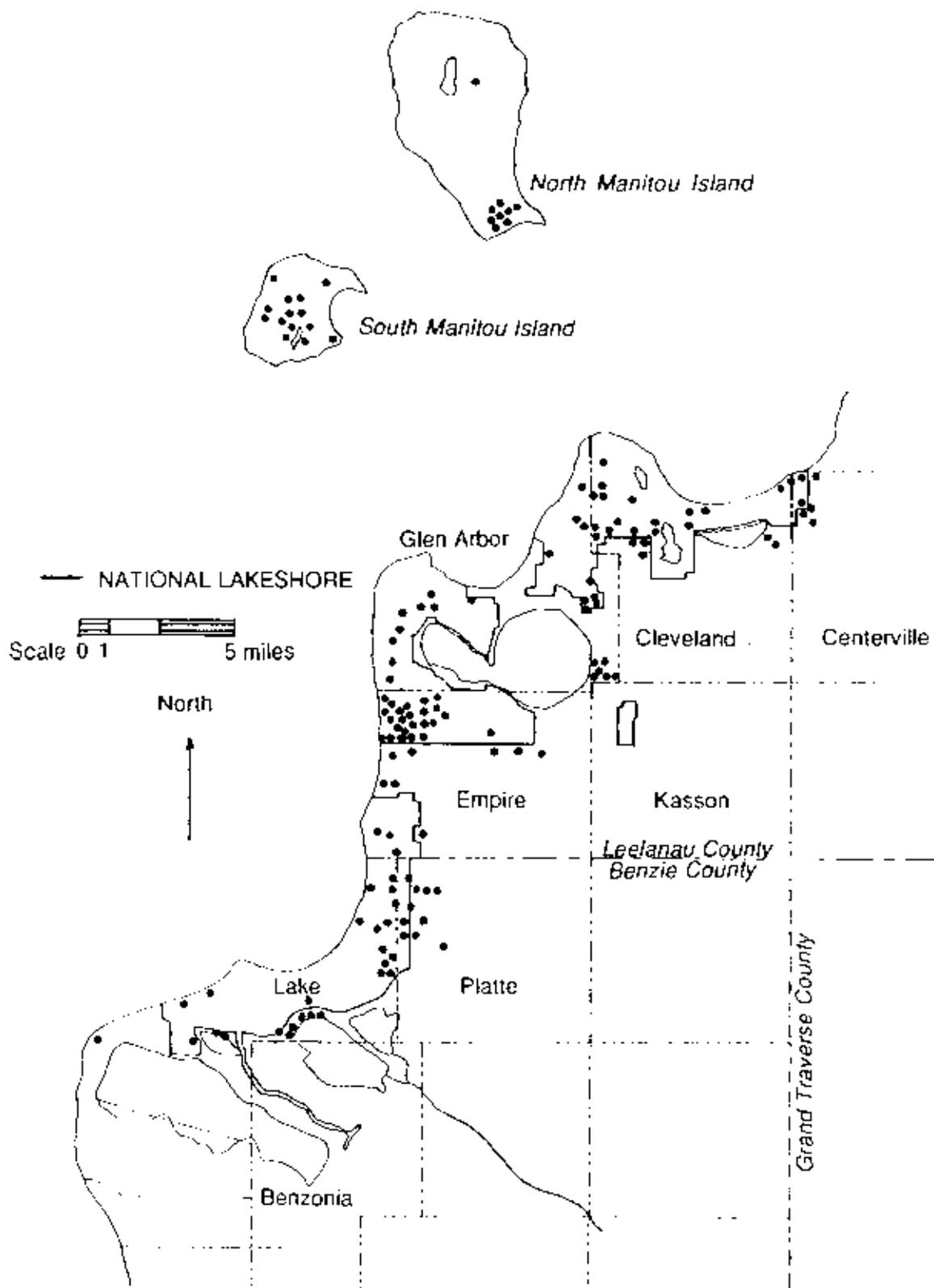
On 7 January 1863, just one week after Alexis Goffart, Sr., made the above entry, his son, Alexis Goffart, Jr., filed a homestead claim for 160 acres of land in nearby Section 31. Over the next six years, the younger Goffart made virtually the same property improvements that his father had accomplished in Sections 29 and 30. (In addition, Goffart, Jr., constructed a chicken coop on his homestead).⁹⁷

Empire Township in Leelanau County served as the destination for the largest number of early homesteaders who settled the Sleeping Bear Dunes National Lakeshore area. In January 1863, two homesteaders filed for claims in Section 6 (Charles McIntire and William Cofl); one in Section 8 (R. O. Donald and his widow, Margaret); one in Section 9 (Solomon MacIntire); one in Section 13 (Job Perry); and two in Section 15 (Joseph Collings and John Toohey). In Cleveland Township, a number of individuals also filed for homesteads in January: two in Section 6 (Martin Hept and Henry Eckhardt); one in Section 7 (Henry Oliver); one in Section 8 (Benjamin Collins); and two in Section 31 (Carsten Miller and Jacob Mautz). On South Manitou Island, both George Hutzler and Thomas Kitchen made January 1863 entries for homesteads in Section 33. North Manitou Island's first homesteader was Richard Kitchen, who registered his claim on Section 34 in April 1863. The Benzie County portion of Sleeping Bear Dunes National Lakeshore began to be homesteaded in 1864, whereas Leelanau County's Centerville Township did not see its first

⁹⁶Homestead Application No. 20, Traverse City Land Office (National Archives and Records Service).

⁹⁷Homestead Application No. 89, Traverse City Land Office (National Archives and Records Service).

Figure 6
 LOCATION OF HOMESTEADS ESTABLISHED (1863-1923)
 WITHIN OR ADJACENT TO THE CURRENT BOUNDARIES OF
 SLEEPING BEAR DUNES NATIONAL LAKESHORE



Source: Individual Homestead Records (National Archives).

Table 3

HOMESTEADS ESTABLISHED (1863-1923) WITHIN OR IMMEDIATELY ADJACENT TO THE CURRENT BOUNDARIES OF SLEEPING BEAR DUNES NATIONAL LAKESHORE

County	Number of Homestead Claims Filed	Average Size of Homestead Claim (Acres)	Range of Years During Which Homestead Claims Were Filed
Manitou County			
South Manitou Island	14	135	1863-1923
North Manitou Island	10	123	1863-1912
Total	24	130	
Leelanau County			
Centerville Township	7	129	1872-1877
Cleveland Township	25	79	1863-1920
Empire Township	37	116	1863-1884
Glen Arbor Township	13	90	1863-1868
Total	82	103	
Benzie County			
Lake Township	23	87	1864-1918
Platte Township	12	138	1864-1871
Total	35	104	
Sleeping Bear Dunes National Lakeshore Area Total	141	108	1863-1923

Note: The township totals include only those homesteads that were filed for land either within or immediately adjacent to the current boundaries of SBDNL; therefore, it must be emphasized that numerous claims were made elsewhere in the townships. Figures for South and North Manitou Islands are complete.

Sources: U.S. Land Office Local Tract Books and Homestead Application Forms.

homesteader until 1872. Of the 141 homestead entries filed for land now included within or adjacent to Sleeping Bear Dunes National Lakeshore, 40 percent occurred during the last three years of the Civil War (1863-1865).⁹⁸

Following the end of the Civil War, a new surge of settlers arrived in northern Michigan. Most of the land in the entire Grand Traverse region lying near navigable water was alienated by 1866. Farther inland, claims were less numerous. In Leelanau County, claims were distributed from shore to shore, with many unoccupied lands being interspersed.⁹⁹

In those land areas now embraced by or adjacent to the National Lakeshore, 60 percent of all homestead claims were filed during the 1860s. Another 12 percent were filed during the 1870s, 6 percent during the 1880s, and 8 percent during the 1890s. The remaining 14 percent took place during the early 1900s. Many homesteaders claimed the 160 acres they were entitled to acquire, but others received title to parcels as small as 40 acres. Therefore, the size of an average homestead claim in the area was 108 acres.¹⁰⁰

The post-war years brought a long-awaited surge of development to Crystal Lake Township and the village of Frankfort, as recorded by local historian N. A. Parker:

[In 1867-8,] . . . the tide of settlers tended towards Northern Michigan and mechanics and artisans, traders and settlers, ex-soldiers and land speculators came pouring in from every quarter, and in such hurried confusion, and in such numbers that the mechanics and builders could not construct buildings or provide accommodations fast enough to meet the pressing demands of the hour.¹⁰¹

As the 1860s came to a close, Traverse City emerged as the largest settlement in the entire Grand Traverse region, with a population of about 1,000 people. The town was dominated by the logging firm of Hannah, Lay & Co., which operated docks, stores and a large sawmill. Traverse City also boasted the region's U. S. Land Office and a newspaper.¹⁰² Northwest of the city, several

⁹⁸Information derived from U. S. Land Office Tract books deposited in the State Archives of Michigan, Lansing, and the Bentley Historical Library, University of Michigan, Ann Arbor; and homestead application forms on file in the National Archives and Records Service.

⁹⁹Winchell, *Grand Traverse Region*, 80.

¹⁰⁰U. S. Land Office Tract books; homestead application forms.

¹⁰¹Parker, "History of Crystal Lake Township," 553.

¹⁰²Winchell, *Grand Traverse Region*, 73-74.



THE UNITED STATES OF AMERICA.

To all to whom these presents shall come, Greeting:

Homestead Certificate No. 3407

Application 9708

of the Land therein at *Marquette Michigan*

Whereas there has been deposited in the GENERAL LAND OFFICE of the United States a Certificate of the Register of the State of Michigan, whereby it appears that pursuant to the Act of Congress approved 20th May, 1862, "To secure Homesteads to Actual Settlers on the Public Domain," and the acts supplemental thereto, the claim of *Byron S. Richardson*

has been established and duly consummated, in conformity to law, for the *South West Quarter of Section Twenty four and the North West Quarter of the same Section Twenty four in Township Twenty one North of Range Tenth West of Michigan in Michigan, containing eighty acres.*

according to the former Part of the Survey of the said Land, returned to the GENERAL LAND OFFICE by the Surveyor General:

It is known ye, That there is, therefore, granted by the UNITED STATES unto the said *Byron S. Richardson*

the tract of Land more described: **To have and to hold** the said tract of Land, with the appurtenances thereto unto the said *Byron S. Richardson* and his heirs and assigns forever.



In testimony whereof I, *Thomas Roosevelt*, PRESIDENT OF THE UNITED STATES OF AMERICA, have caused these letters to be made Patent, and the seal of the GENERAL LAND OFFICE to be hereunto affixed. Given under my hand, at the City of Washington, this *15th* day of *October*, in the year of our Lord one thousand nine hundred and *one*.

By the President: *T. Roosevelt* Secretary
J. H. McLean Secretary of the General Land Office

Recorded Michigan 10857

Figure 7. Copy of final homestead certificate received by Byron S. Richardson for an eighty-acre parcel of land in Sections 24 & 25 of Lake Township, Benzie County, 1901.

small communities dotted the coastline of the Leelanau Peninsula. A dock and sawmill were in operation at Norristown (present-day Greilickville).¹⁰³ Ten miles north at Lee's Point was a landing dock detached from the shore. Suttons Bay, founded in 1866 as "Suttonsburg," had a detached dock and a post office.¹⁰⁴ A grist mill was in operation at the mouth of Belangers Creek, just south of Peshawbestown.¹⁰⁵ Northport's wooding business was thriving, with some 400 propellers stopping there for fuel annually.¹⁰⁶

Several additional communities were developing on the west coast of the Leelanau Peninsula, including Leland, at the the mouth of the Carp River, which boasted two docks and a grist mill. To the south and west along the lakeshore, development also was proceeding at Glen Arbor, Empire, and Frankfort.

Less accessible were the communities of the Peninsula's interior, including Benzonia and the Carter settlement, located on the road between Traverse City and Glen Arbor in southern Leelanau County. At the narrows of Carp Lake (now called Lake Leelanau), the community of Provement had sprung up in the late 1850s. Originally an enclave of French Canadian farmers, Provement later became the site of a combination grist- and sawmill and also served as a fueling station for steamers plying Carp Lake between Leland and Fouch. The name of the village was changed to Lake Leelanau around 1924.¹⁰⁷

Although Euro-American settlement was advancing steadily throughout the region, some community leaders were anxious to speed up the pace of development. In 1865, several prominent citizens commissioned state geologist Alexander Winchell to write a report on the Grand Traverse region, "with a view to making the attractions and advantages of the country better known abroad."¹⁰⁸ Claiming that "this region, like all of Northern Michigan, has heretofore been generally misrepresented," Winchell attempted to set the record

¹⁰³*Ibid.*, 74. The village was named after brothers Seth and Albert Norris, who also established a grist mill, a tannery, and a brick yard. The community became known as Greilickville after 1903. See Julia Terry Dickinson, *The Story of Leelanau* (Omena, Michigan: Solle's Bookshop, 1951), 40.

¹⁰⁴*Ibid.*, 17-18; Winchell, *Grand Traverse Region*, 74.

¹⁰⁵Mark C. Branstner, "The M-22/Belangers Creek Bridge Study Area, Suttons Bay Township, Leelanau County, Michigan: A Cultural Resources Inventory Study," submitted to the Michigan Departments of Transportation and State (Lansing), 10 Feb. 1990, 8.

¹⁰⁶Winchell, *Grand Traverse Region*, 74.

¹⁰⁷Dickinson, *Story of Leelanau*, 32.

¹⁰⁸Leach, *Grand Traverse Region*, 51.

straight with his report, in which he promised that "emigrants and capitalists will equally find . . . statements of facts which will both surprise and interest them."¹⁰⁹

While describing the Grand Traverse area as "the most remarkable and desirable section of the country in the Northwest," Winchell acknowledged "serious drawbacks to the development of this region," including its relatively remote location and widespread misconceptions about its soils and climate. In addition, Winchell sharply criticized the Federal government's creation of an Indian reservation near Northport.¹¹⁰

The Ottawa had negotiated their final treaty with the United States in 1855. The treaty legally ended the threat of removal and made provisions for the allotment of land. Reservations were created in Mason and Oceana counties and on Grand Traverse and Little Traverse bays, with the reserved lands to be divided among individual Ottawa. The Indians were given five years to select their parcels and file claims; the land then was to be held in trust by the federal government for ten years, after which the individual owners would gain title.¹¹¹

According to Winchell, the development of Leelanau County had been "very materially retarded" by the Treaty of 1855. He complained:

. . . a repressive--perhaps we should say an oppressive--public act has deferred for ten years the prosperity of this important point [Northport]. The term of reservation expires this year, and it is now understood that the land will be speedily brought into market.¹¹²

Surprisingly, Winchell also criticized the Homestead Act, which he claimed had "retired from occupation many thousands of acres of valuable land." Many persons who had entered claims failed to move onto their homesteads, he charged, with the result that they "remain unimproved and retired from the market." Furthermore, he claimed, few cared to initiate the "slow and tedious" procedure for securing title to abandoned homesteads. This, however, does not

¹⁰⁹Winchell, *Grand Traverse Region*, Preface.

¹¹⁰*Ibid.*, Preface, 80.

¹¹¹McClurken, "The Ottawa," 32.

¹¹²Winchell, *Grand Traverse Region*, 78-79.

appear to have been the case for homesteads established within or adjacent to the present boundaries of Sleeping Bear Dunes National Lakeshore.¹¹³

Citizens of the Grand Traverse region also complained about another government policy, the withdrawal of public domain lands from the market in support of railroad construction. At the time of Winchell's report, lands granted by the government to the Grand Rapids & Indiana Railroad covered more than half of Grand Traverse County and the entire region on the east side of Grand Traverse Bay. Observed Winchell:

It may be that the only method of constructing railroads through a new country is by means of land grants; but it is obvious that in this case, the grants have not secured the end proposed, while they have proved of incalculable injury to the region in which they are located.¹¹⁴

As it turned out, the Grand Traverse region did not acquire a rail connection with southern Michigan until 1872. To promote the construction of railroads through undeveloped regions, Congress had approved extensive land grants to several new states, including Michigan, in 1856. The legislation specified several routes to be built in Michigan, including a line to connect Grand Rapids with "points on or near Grand Traverse Bay."¹¹⁵ In 1857, the state bestowed land grants to nine companies, including the Grand Rapids & Indiana Railroad (GR&I). The GR&I's route was to originate in Fort Wayne, Indiana, passing through Kalamazoo and Grand Rapids, thence to the Grand Traverse region on a line roughly parallel to the west coast of the Lower Peninsula.

As was the case with several other land grant railroads, the GR&I's progress was frustratingly slow. Following the Civil War, however, the growth of logging in the northern Lower Peninsula gave fresh impetus to railroad construction.¹¹⁶ In September 1870, the GR&I was completed from Fort Wayne to Kalamazoo; a month later, it reached Grand Rapids. By December 1871, the line had reached Clam Lake (Cadillac). Construction continued northward; eighteen miles beyond Cadillac was the southern border of Grand Traverse County and the community of Walton. In December 1872, the Traverse City

¹¹³*Ibid.*, 79; homestead application forms.

¹¹⁴*Ibid.*

¹¹⁵Edmund A. Calkins, "Railroads of Michigan since 1850," *Michigan History Magazine* 13 (Winter 1929), 8.

¹¹⁶*Ibid.*, 11.

Railroad completed a line connecting Traverse City with the GR&I at Walton Junction. Sixteen years after the passage of the Land Grant Act, the Grand Traverse region had its rail connection at last.¹¹⁷

Despite the various obstacles to development noted by Alexander Winchell in his 1866 report, the populations of Benzie and Leelanau counties continued to grow during the Civil War decade. Benzie County, organized in 1869, had a population of 2,185 persons at the time of the 1870 census—a ten-fold increase over its 1860 population (Table 1).¹¹⁸ In the same period, Leelanau County more than doubled its population, which by 1870 numbered 4,575 persons.¹¹⁹ On South Manitou Island, the population remained stable at 76 residents, increasing by only three persons during the decade. North Manitou, however, experienced a precipitous drop, decreasing from 270 people in 1860 to 91 in 1870; the downturn possibly reflected the decline of the island's wooding operations.¹²⁰

Data from the 1870 manuscript census indicate that 1,965 of the region's 6,925 inhabitants (28 percent) were of foreign birth (Table 2). A significantly larger number (1,530) and proportion (33 percent) of Leelanau County's residents were of immigrant origin than in Benzie County (340 people and 15 percent). North and South Manitou's immigrant population of 95 inhabitants (57 percent) made the two islands the most European-oriented of the counties that comprised the region in 1870, but the small numbers make comparisons with the mainland quite meaningless.¹²¹

By 1870, the 860 Canadians supplanted the Germans as the region's largest immigrant group, forming 44 percent of the total foreign-born population. The German population totaled 400 individuals (20 percent of the foreign-born); almost one in three was a Prussian (125), followed by emigres from Hanover (77), Bavaria (58), and Baden (53). The 240 British immigrants (12 percent) served as the third largest foreign-born group; four of five were of English origin, with one

¹¹⁷Michigan Department of Transportation, *150 Years of Michigan's Railroad History* (Lansing: Department of Transportation, 1987?), n.p.

¹¹⁸In 1860, Crystal Lake Township (enumerated with Leelanau County) comprised all the territory that later became Benzie County. The population of Crystal Lake Township in 1860 was 216 persons.

¹¹⁹U. S. Census Office, *Ninth Census-Vol. I: The Statistics of the Population of the United States* (Washington, D. C.: Government Printing Office, 1872), 172.

¹²⁰*Ibid.*, 173.

¹²¹Manuscript schedules, Ninth Census of Population (1870).

in five being a Scot. Altogether, the Canadians, Germans, and British comprised just over three-fourths of the region's entire immigrant population in 1870. Of the remaining groups, only three were represented by more than 50 people: the Irish (145), Bohemians or Czechs (120), and Norwegians (70).¹²²

Centerville Township in Leelanau County once again comprised the largest single concentration of immigrants in the region (685), with the 205 Canadians forming the township's predominant foreign-born group. Canadians were represented in largest numbers in all but six of the region's political units. Of the six where Canadians did not comprise either a majority or plurality, Germans were most evident in three (Elmwood and Glen Arbor Townships and North Manitou Island), the British in two (Inland and Kasson Townships), and the Norwegians in one (South Manitou Island).¹²³

Of the townships that now form the National Lakeshore, the Canadians (480) and Germans (285) ranked first and second, respectively, with the next three groups having very similar numbers: the Irish (100), British (96), and Bohemians (93). The 59 Scandinavians were represented by 40 Norwegians, 16 Swedes, and 3 Danes (Table 3).¹²⁴

The largest number (1,750) and proportion (35 percent) of the 4,970 American-born people who populated the entire region in 1870 came from Michigan. (Tables A-8, A-9, and A-10, Appendix). As was true in 1860, significant numbers of individuals also were from New York (1,180) and Ohio (555), followed by Pennsylvania (195) and Vermont (115). Leelanau County's 3,050 native-born people included 500 American Indians, most of whom lived in Bingham and Leelanau Townships. In 1870, the region's African-American population comprised 32 persons.¹²⁵

During the 1870-1880 decade, Benzie and Leelanau counties and the Manitou islands gained 2,813 new residents (Table 1). By 1880, Leelanau's population totaled 6,165 persons, and Benzie's 3,430. On the islands, North Manitou's numbers continued to decline, falling from 91 to 73 persons, but South Manitou revealed a slight increase from 76 to 98 residents.¹²⁶

¹²²*ibid.*

¹²³*ibid.*

¹²⁴*ibid.*

¹²⁵*ibid.*

¹²⁶Manuscript schedules, Tenth Census of the United States (1880); U. S. Census Office, Statistics of the Population of the United States at the Tenth Census, June 1, 1880 (Washington, D. C.: Government Printing Office, 1883).

The region's foreign-born population also increased in size, expanding from 1,965 to 2,370 persons between 1870 and 1880 (Table 2). Nevertheless, the immigrant proportion of the total population decreased from 28 to 24 percent since the gain displayed by the American-born residents was even greater. In Leelanau and Benzie counties, 26 and 19 percent of the residents were immigrants, respectively. The figure for North and South Manitou was 42 percent, but again, the small number of islanders (altogether fewer than 175 persons) does not permit one to make direct comparisons with the mainland.¹²⁷

The 870 Canadians counted in 1880 virtually replicated the number that had been enumerated ten years earlier (Figure 9). Even though they remained as the largest group in the region, their numbers did not keep pace with the overall gain in the foreign-born population; hence, the Canadian proportion of the total immigrant community declined from 44 to 37 percent between 1870 and 1880. Although they retained their second-place position in the region, the German population increased only slightly from 400 to 415 representatives. These emigres traced their European origins to fourteen different German states, with the largest number coming from Prussia (215), followed by smaller representations of people from Hanover (61), Baden (41), Mecklenberg (22), and Bavaria (19). It should also be noted that 175 members of the group simply listed themselves as "Germans."¹²⁸

The 260 British and 145 Bohemians or Czechs revealed small increases in total numbers from 1870 to 1880, while the size of the Irish community stabilized at 145 individuals. The Scandinavians established themselves much more noticeably in the region, with all three of the major groups displaying impressive relative if not significant absolute gains; during the decade the number of Norwegians grew from 70 to 185, the Swedes from 12 to 115, and the Danes from 8 to 57. The entire ethnic mosaic of the region exhibited even greater diversity than in the past, given the expansion of the Polish community from 11 to 62 individuals during the period.¹²⁹

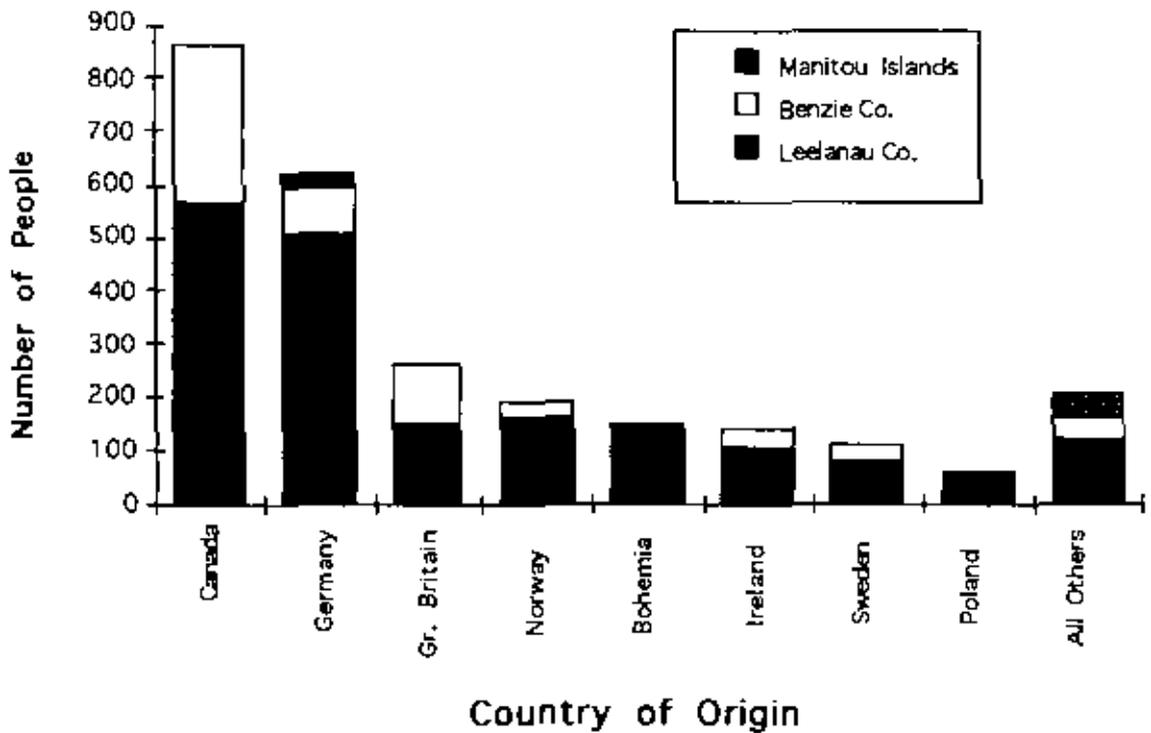
Bingham Township in Leelanau County had the largest total number (395) of foreign-born people in 1880, whereas adjacent Centerville Township,

¹²⁷*Ibid.*

¹²⁸*Ibid.*

¹²⁹*Ibid.*

Figure 9
FOREIGN-BORN POPULATION OF BENZIE AND LEELANAU COUNTIES
AND THE MANITOU ISLANDS, 1880



Source: Manuscript schedules, Tenth Census of the United States (1880).

Note: Foreign-born groups on the Manitou Islands totalling fewer than 10 persons are included in the "All Others" column.

POPULATIONS OF FOREIGN-BORN GROUPS RESIDING IN TOWNSHIPS CURRENTLY INCLUDED, EITHER TOTALLY OR PARTIALLY, WITHIN THE BOUNDARIES OF SLEEPING BEAR DUNES NATIONAL LAKESHORE, 1860-1900

COUNTY AND TOWNSHIP	Countries										TOTAL
	BOHEMIA	BRITAIN	CANADA	GERMANY	IRELAND	POLOAN	SCANDINAVIA	ALL OTHERS			
1860											
Leelanau County											
Centerville Township	-	15	33	95	4	-	-	-	5	-	152
Glen Arbor Township	-	4	6	112	2	-	-	-	17	-	141
Manitou County											
N. Manitou Island	-	-	4	58	5	-	-	48	21	-	136
S. Manitou Island	-	7	-	-	3	-	-	18	1	-	29
TOTAL	0	26	43	265	14	0	0	66	44	-	458
1870											
Benzie County											
Crystal Lake Township	-	28	60	24	13	-	-	14	13	-	152
Platte Township	-	13	23	4	1	-	-	-	-	-	41
Leelanau County											
Centerville Township	33	7	203	134	16	-	-	8	11	-	412
Empire Township	-	19	104	21	42	-	-	-	3	-	189
Glen Arbor Township	60	14	22	67	11	-	-	-	10	-	184
Sleeping Bear Township	-	11	55	10	13	-	-	-	9	-	98
Manitou County											
N. Manitou Island	-	-	13	8	1	11	-	37	11	-	70
S. Manitou Island	-	4	-	18	3	-	-	-	-	-	25
TOTAL	93	96	480	286	100	11	59	46	46	-	1,171
1880											
Benzie County											
Lake Township	-	3	1	-	-	-	-	-	-	-	4
Platte Township	-	4	31	12	1	-	-	-	2	-	50
Leelanau County											
Centerville Township	4	3	112	101	4	41	-	27	44	-	295
Cleveland Township	64	3	18	51	7	2	-	1	7	-	151
Empire Township	-	19	51	19	25	-	-	1	-	-	115
Glen Arbor Township	-	8	36	8	9	-	-	-	5	-	66
Manitou County											
N. Manitou Island	-	-	1	10	1	2	-	23	3	-	37
S. Manitou Island	-	5	4	16	6	-	-	4	-	-	35
TOTAL	68	45	254	217	52	45	56	16	16	-	753
1890											
Benzie County											
Lake Township	-	1	7	2	1	-	-	4	-	-	15
Platte Township	-	9	44	15	1	1	-	6	3	-	79
Leelanau County											
Centerville Township	5	1	58	52	2	165	-	46	7	-	336
Cleveland Township	55	1	13	45	3	12	-	2	4	-	135
Empire Township	3	14	85	17	25	-	-	74	18	-	236
Glen Arbor Township	1	9	31	25	4	-	-	51	2	-	123
TOTAL	64	35	238	156	36	178	183	34	34	-	924

Note: In 1896, North Manitou Island merged with Leland Township and South Manitou Island with Glen Arbor Township. Sources: Manuscript schedules for the 1860, 1870, 1880, and 1900 federal censuses of population.

with 45 percent (295 people) of its population being of foreign birth, displayed the highest relative proportion. (Just over one-half of North Manitou Island's 73 residents were of foreign birth, but the total number obviously was very small.) Canadians formed the largest group in eighteen of the region's governmental units, Germans and British in four each, and the Danes and Austrians in one each.¹³⁰

Of the townships that later would form Sleeping Bear Dunes National Lakeshore, Canadians (255) and Germans (215) also constituted the two largest immigrant groups (Table 4). The Bohemians (68) served as the third largest enclave, followed by the Scandinavians (56), Irish (52), British (48), and Poles (45). With the exception of the islands, Canadians were situated throughout the area, while Germans were found almost entirely in Leelanau County's grouping of townships (especially Centerville) and on the islands; as was true of the region, the largest number of the Lakeshore area's Germans came from Prussia and Hanover. Bohemians were concentrated almost exclusively in Cleveland Township; Scandinavians were situated primarily in Centerville Township and on North Manitou Island; about one-half of the Irish lived in Empire Township; the British were found in small numbers throughout the area, although a plurality resided in Empire; and the Poles were concentrated in Centerville Township almost exclusively.¹³¹

As noted above, the size of the American-born population increased remarkably between 1870 and 1880, expanding from 4,960 to 7,140 persons (a gain of 44 percent) during the interim. Included in this number were 615 American Indians (about 115 more than in 1870), who continued to be especially evident in three of Leelanau County's townships: Bingham (360), Leelanau (185), and Leland (70). The size of the African-American population (including mulattos) grew slightly from 38 to 62 individuals.¹³²

Years of Growth and Expansion, 1880-1910

During the last two decades of the nineteenth century and the first decade of the twentieth, the harvest of forest products was to remain the region's primary industry. As the cordwood trade gradually faded in importance, the lumber industry dominated the economics of the region. In 1873, George F.

¹³⁰*Ibid.*

¹³¹*Ibid.*

¹³²*Ibid.*

Aylsworth moved his wooding business from North Manitou Island to a site on the mainland near Empire. Aylsworth's firm at Empire was the last major wooding business established in the Sleeping Bear area.¹³³ Around the same time at the northern end of Leelanau County, William Gill and his son Wilburforce began acquiring large tracts of virgin timber land. In 1875, they built a dock and sawmill about eight miles up the coast from Leland. A community developed on the site which became known as Gills Pier. Several families of Bohemian immigrants settled the surrounding countryside.¹³⁴

Large-scale logging operations were under way throughout Benzie and Leelanau Counties during the 1880s. Around 1881, Dr. Arthur O'Leary built a sawmill near the mouth of Otter Creek; a community (later known as Aral) developed nearby. By 1885, Empire had become the base of another logging operation. The following year, the lumber business operated by the Northern Transportation Company near Glen Haven came under the management of David H. Day, who was to play a major role in the subsequent development of the region. In 1887, the Wilce Lumber Company of Chicago acquired the Empire Lumber Company, which ultimately became the largest logging operation in the Sleeping Bear region. The 1890s brought further economic growth, with two sawmills constructed near Glen Arbor.¹³⁵

Between 1880 and 1890, the population of the region displayed rather dramatic gains, increasing by just over 25 percent to a total of 13,325 people (Table 1). Of this figure, 1,840 people became residents of Benzie County, bringing its total population to 5,275 individuals. Leelanau County's population grew by almost 1,700 persons, reaching a total of 7,945 in 1890. On the Manitou Islands, the combined population figure continued to exhibit a loss over the decade. South Manitou recorded a decline of 24 persons (from 98 to 74), while North Manitou's loss amounted to 41 people (from 73 to 32). Whereas the population of the overall region demonstrated a marked increase from 1880 to 1890, the National Lakeshore townships actually displayed a slight decrease, falling from 3,045 to 2,900 people.¹³⁶

¹³³Muhn, *Historic Resource Study*, 99.

¹³⁴Wakefield, ed., *History of Leelanau Township*, 134.

¹³⁵*Ibid.*, 100-104.

¹³⁶U. S. Census Office, *Report on Population of the United States at the Eleventh Census: 1890, Part I* (Washington, D. C.: Government Printing Office, 1895).

Since the 1890 manuscript census schedules for the entire nation were destroyed by a disastrous fire many years ago, it is neither possible to determine how many foreign-born people lived in each of the region's townships and villages, nor to secure any information on the immigrant backgrounds of the foreign-born population. County-level figures are available, however, thereby making it possible to determine the total numbers for Benzie and Leelanau counties. As revealed by these figures, the size of the immigrant population grew from 2,370 to 3,245 people during the ten-year period (Table 2). This gain was even significant enough to maintain the foreign-born proportion of the total population at 24 percent in both 1880 and 1890.¹³⁷

The last decade of the nineteenth century saw another one-third increase in the population counts for Benzie and Leelanau counties; together, the two demonstrated a net gain of just under 7,000 people. Benzie recorded a gain of 4,450 persons, reaching a total of about 9,700 in 1900.¹³⁸ In 1892, the port city of Frankfort achieved rail connection with the Ann Arbor Railroad, a development that led to the establishment of a successful Lake Michigan car ferry service between Frankfort and Kewaunee, Wisconsin.¹³⁹ By 1900, Frankfort's population had grown to the point that the figure was approaching 1,500 people. In Leelanau County, the population exceeded 10,600 persons at the turn of the century, an increase of about 2,600 people since 1890. The Lakeshore townships also displayed a significant population increase, growing from 2,900 to 4,140 people during the period. Indeed, 1900 still marks the census year highwater mark in the history of the Lakeshore's population evolution.¹⁴⁰

In the nation as a whole, a noticeable change in the source areas of European migration occurred after 1890. The vast majority of immigrants who arrived in America prior to the last decade of the nineteenth century had arrived from northern and western Europe (often termed the "old immigration"), whereas the migration streams of the 1890s and early 1900s included large numbers of southern and eastern Europeans (referred to as the "new immigration"). Virtually all immigration ended in 1914, however, when war broke out in Europe.

¹³⁷*Ibid.*

¹³⁸U. S. Census Office, *Census Reports*, Vol. I: Twelfth Census of the United States, Taken in the Year 1900—Population, Part I (Washington, D. C.: U. S. Census Office, 1901).

¹³⁹Willis F. Dunbar, *All Aboard! A History of Railroads in Michigan* (Grand Rapids: William B. Eerdmans Publishing Co., 1969), 68.

¹⁴⁰*Twelfth Census of the United States* (1900).

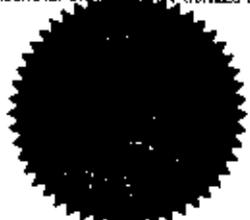
The impacts of the geographic shift from northern and western Europe to eastern and southern Europe are only slightly noticeable in the immigrant picture of Benzie and Leelanau counties. Virtually all of the region's best land, for example, had been claimed by old immigrant groups and American settlers prior to the time that the new immigrants crossed the Atlantic. (Most of the people who arrived in America after 1890 were relegated to the nation's cities.) Therefore, agriculture provided few economic opportunities for the new immigrants who otherwise might have been attracted to the Sleeping Bear Dunes region.

In 1900, just over 3,700 foreign-born people resided in Benzie and Leelanau counties--the highest immigrant total experienced in the history of the region (Table 2). Nevertheless, because of the overall gains that occurred at this time, the proportion of foreign-born individuals in the total population declined from 24 to 18 percent between 1890 to 1900. The numbers of Canadians demonstrated an especially significant gain, expanding from 765 to 1,080 inhabitants during the ten-year interim. Many undoubtedly worked in the timber industry that was so important in the region at the turn of the century. The 685 Germans formed the second largest group, although their numbers had declined by about one hundred people from 1890 to 1900. The Canadians and Germans were followed by immigrants from Norway (630), Sweden (300), and Britain (270). The Poles, whose numbers grew from 75 to 245, were the only new immigrant group to display a noticeable increase during the period. Other significant immigrant enclaves included the Bohemians (145), Irish (105), and Danes (50); the census count also listed 50 Austrians, but it appears that most were ethnic Bohemians or Germans who had been born somewhere within the domain of the Austro-Hungarian Empire.¹⁴¹

At this time, a total of 925 foreign-born individuals resided in the townships and villages of what later would become the Lakeshore area (Tables A-15 and A-16, Appendix). As was true of the entire region, the largest number were Canadians (240), followed by 185 Scandinavians (the majority being Norwegians). The 180 Poles represented almost 70 percent of the entire Polish population then residing in Benzie and Leelanau Counties, while the 64 Bohemians constituted 44 percent of their entire group. A significant German

¹⁴¹Manuscript schedules, Twelfth Census of the United States (1900).

Be it Remembered, That in General Term of the Circuit Court for the County of Salaman State of Michigan held at the Court House in the Village of Island in said County of Salaman State of Michigan in the UNITED STATES OF AMERICA on the twelfth day of May in the year of our Lord one thousand eight hundred and Eighty five Mary Olson Swan a native of Sweden exhibited a petition praying to be admitted to become a CITIZEN OF THE UNITED STATES; and it appearing to the said Court that she had declared on her oath before the Clerk of the Court of Manitowish State of Michigan on the fourteenth day of August A. D. 1883 that it was her intention to become a CITIZEN OF THE UNITED STATES, and to renounce forever all allegiance and fidelity to any Foreign Prince, Potentate, State or Sovereignty whatsoever, and particularly the King of Sweden of whom she was at that time a subject and she said Mary Olson Swan having on her oath declared and also made proof thereof by competent testimony of C. W. Allard & C. W. Allard a citizen of the United States, that she had resided in Manitowish County State of Michigan within the United States of America upwards of Five Years immediately preceding her application, and had continued to reside therein; and it appearing to the satisfaction of the Court, that during that time she had behaved as a man of good moral character, attached to the principles of the Constitution of the United States, and well disposed to the good order and happiness of the same; and she had declared on her oath before the said Court, that she would support the Constitution of the United States, and that she did absolutely and entirely renounce and abjure all allegiance and fidelity to every Foreign Prince, Potentate, State and Sovereignty whatsoever, and particularly to the King of Sweden of whom she was before a subject. And thereupon the said Court admitted the said Mary Olson Swan to become a CITIZEN OF THE UNITED STATES, and ordered all the proceedings aforesaid to be recorded by the Clerk of said Court, which was done accordingly.



*Attest: and sworn to before me
at Island
this 12th day of May 1885*

In Witness Whereof, I have hereunto affixed the seal of said Court, at Island this 12th day of May in the year of our Lord one thousand eight hundred and Eighty five and of the sovereignty and independence of the United States of America this twelfth day of May 1885

C. W. Allard
Clerk

Figure 10. Copy of 1885 naturalization certificate for Mary Olson Swan, who received title to a 160-acre homestead in Section 31 of North Manitou Island in 1886, two years after the death of her husband, Gustaf Olson Swan.

(155) presence continued to be found in the Lakeshore area, but the sizes of the Irish (36) and British (35) immigrant communities declined noticeably.¹⁴²

With the turn of the century, forests on the mainland were being depleted, although the population numbers did not fall until the years after 1910. Wilbur Gill sold his property at Gills Pier and relocated his logging operation to Beaver Island.¹⁴³ Forests in the vicinity of Good Harbor also had disappeared, and loggers turned their attention to forests on the Manitou Islands. A logging company began operations on South Manitou (presumably on second-growth forest) in 1905. The Smith and Hull Lumber Company of Traverse City launched large-scale logging on North Manitou in 1907, leading to the development of a village, Crescent City, on the west side of the island. On the mainland, the exploitation of remnants of commercially valuable timber continued. The sawmill at Aral, twice destroyed by fire in the 1880s, was rebuilt in 1908 by the House of David, a religious community.¹⁴⁴

Between 1900 and 1910, the total population of the region increased by only one thousand people; nevertheless, the 1910 figure of 21,245 people represents the census year high for the entire 1860-1970 interim (Table 1). In fact, it would not be until 1980 that the population count would exceed the 1910 figure. Also of note is that Benzie County, after trailing Leelanau County for several decades, replicated the former's census numbers (10,600) in 1910.¹⁴⁵

After increasing significantly in population size from 1890 to 1900, the townships and villages that currently have some area within the Lakeshore's boundaries also stabilized, revealing a total of just over 4,000 people by 1910. The governmental units in Leelanau County had the largest populations by far, especially Empire (1,210) and Centerville (1,050) townships. In Benzie County, the combined populations of Lake and Platte townships only totaled some 630 persons, whereas the Manitou islands continued to display population fluctuations: South Manitou's figure fell just below 70 people, although North Manitou was the home of 215 residents in 1910. Undoubtedly the lumber

¹⁴²*Ibid.*

¹⁴³Wakefield, ed., *History of Leelanau Township*, 134.

¹⁴⁴Muhn, *Historic Resource Study*, 102-106.

¹⁴⁵U. S. Department of Commerce, Bureau of the Census, *Thirteenth Census of the United States Taken in the Year 1910: Vol. II. Population—Reports by States* (Washington, D. C.: Government Printing Office, 1913).

operations on North Manitou contributed to its relatively large count, as well as to the number of people found within the mainland area of Leelanau County.¹⁴⁶

A total of 3,070 immigrants resided in the region in 1910 (Table 2). This figure represented an absolute decline of 665 people since 1900, and a relative decrease from 18 to 14 percent in the proportion of the total population count. Once again, the Poles represented the only significant new immigrant presence in the region.¹⁴⁷

The Canadians, with 845 representatives, were the largest foreign-born group in the region (Figure 11). The 1910 census also makes it possible to distinguish among the various groups that formed the Canadian community. Overall, the 640 English-speaking Canadians predominated: 510 displayed English ancestry, 90 had Irish backgrounds, and 40 were of Scottish descent. The French Canadian population totaled 140 people, while 70 of the Canadians possessed German backgrounds. Overall, the 625 Norwegians formed the second largest group, followed by the Germans (485), Poles (280), Swedes (240), British (170), and Bohemians or Czechs (165).¹⁴⁸

Between 1900 and 1910, the immigrant population of the townships within the present-day Lakeshore area declined from 925 to 750 people. The 175 Canadians represented the largest group in 1910; of these individuals, most were English-speaking Canadians (110), followed by French Canadians (37) and some (18) who claimed a Germanic heritage. A total of 165 Poles, 100 Germans, 95 Norwegians, 55 Swedes, and 55 Bohemians/Czechs also resided in the Lakeshore area. Almost 60 percent of the region's entire Polish population lived in this area (primarily in Centerville Township), as did one-third of all Bohemians (most were in Cleveland Township). Though the Lakeshore area's Norwegians and Swedes did not constitute a large proportion of their total immigrant communities, Empire Township served as the most important Scandinavian enclave in 1910; the same was true of the Canadians. The Germans were spread out over a wider portion of the area, with Centerville and Cleveland Townships embracing the largest numbers.¹⁴⁹

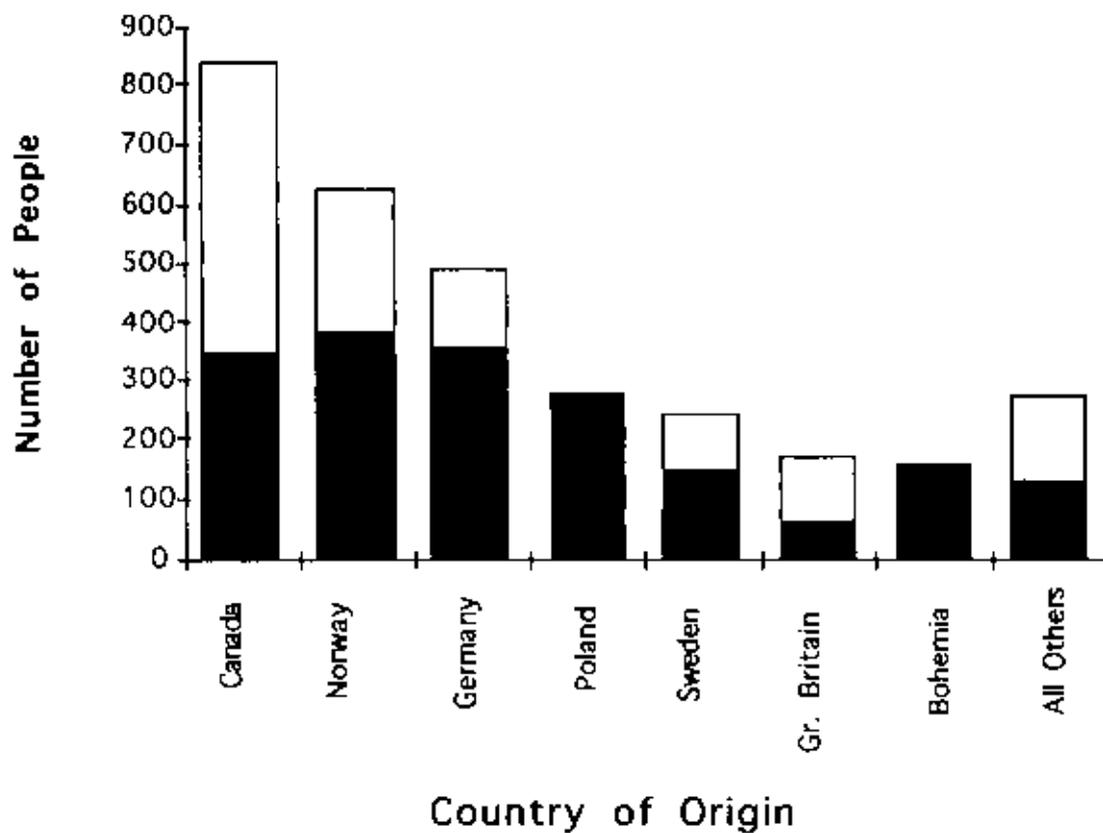
¹⁴⁶*Ibid.*: manuscript schedules, Thirteenth Census of the United States (1910).

¹⁴⁷Manuscript schedules, Thirteenth Census of the United States (1910).

¹⁴⁸*Ibid.*

¹⁴⁹*Ibid.*

Figure 11
FOREIGN-BORN POPULATION OF BENZIE AND LEELANAU
COUNTIES, 1910



Source: Manuscript schedules, Thirteenth Census of the United States (1910).

Agriculture as the Mainstay, 1910-1970

With the demise of the logging industry in the 1910s and 1920s, thousands of residents left the region to seek opportunities elsewhere. By 1911, the forests near Aral were depleted, and the House of David abandoned its mill there. Five years later, the Empire Lumber Company's mill burned, never to be rebuilt. Around 1917, Smith and Hull ceased operations on North Manitou. D. H. Day's sawmill near Glen Haven shut down in 1923. By 1925, most of the sawmills in the Sleeping Bear region were out of business.¹⁵⁰

When it became apparent that the logging industry could not continue to serve as the region's economic mainstay, the people of the Sleeping Bear region were forced to find other ways to make a living. Thousands of residents simply departed. Others explored alternative uses for the land. During the heyday of logging, agriculture and tourism had played secondary roles in the region's economic system; but as the timber disappeared, they quickly gained in importance. Though the number of farms in the region peaked in 1910, the agricultural units that remained thereafter became larger and more productive. Therefore, it was agriculture that would serve as the mainstay of the regional economy for much of the twentieth century.

The downturn in timber-related activities, and the decline in the number of people living on farms, led to commensurate decreases in the region's total population count after 1910. Between 1910 and 1920, the number fell by 21 percent (5,240 people), dropping to a total of 16,000. However, Leelanau County, with 9,060 people, once again regained its numerical superiority in the region, significantly exceeding Benzie County's population count of 6,945 inhabitants. The downward trend in population continued during the 1920s, with the regional total reaching 14,385 people by 1930--the lowest census year figure recorded since 1890, and the smallest number experienced during the twentieth century. Similar trends were exhibited by the governmental units that either entirely or partially form the present day Lakeshore: the figures eroded from 4,035 in 1910, to 3,125 in 1920, and to 2,550 by 1930 (Table 1).¹⁵¹

¹⁵⁰Muhn, *Historic Resource Study*, 104-107.

¹⁵¹*Thirteenth Census of the United States (1910)*; U. S. Department of Commerce, Bureau of the Census, *Fourteenth Census of the United States, Taken in the Year 1920. Vol I, Population-- Number and Distribution of Inhabitants* (Washington, D. C.: Government Printing Office, 1921); U. S. Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States*:

During the Depression years, a modest back-to-the-land movement contributed to a gain of over 15 percent (2,255 people) in the region, with the population count approaching almost 16,650 people by 1940. Despite the post-war baby boom, which contributed to significant population gains throughout many areas of the United States, the region's numbers virtually stabilized between 1940 to 1960: a net gain of only some 500 people was experienced over the entire twenty-year period. Leelanau County continued to display a larger population count than Benzie, exceeding the latter county's figure by 1,500 people in 1960. Over the span of the next ten years, the region registered a gain of 2,300 people, reaching a total that approached 19,500 people by 1970.¹⁵²

A somewhat different pattern characterized the situation displayed by the area currently included within the Lakeshore's boundaries. Whereas the two-county region displayed a population gain from 1930 to 1940, the Lakeshore area demonstrated a slight decrease of some 100 persons, followed by another decline, this time totaling 225 people, between 1940 to 1950. Indeed, the 1950 population count of 2,230 people was the lowest figure experienced by the Lakeshore area since 1860. By 1960, however, the Lakeshore area's townships and villages displayed a modest population gain, with the total reaching 2,525 people; this was followed by another increase to 2,960 people by 1970.¹⁵³

The Lakeshore Era: Tourism and Recreation, 1970-1990

After the National Lakeshore was established in 1970, the region's attractive features became more familiar to larger numbers of people (including many retirees.) As a result, significant in-migration was experienced by both counties. Tourism, fostered by the establishment of the Lakeshore and the

1930–Population, Vol. III, Part 1: Reports by States (Washington, D. C.: Government Printing Office, 1932).

¹⁵²U. S. Department of Commerce, Bureau of the Census, Sixteenth Census of the United States: 1940–Population, Vol. I: Number of Inhabitants (Washington, D. C.: Government Printing Office, 1942); U. S. Department of Commerce, Bureau of the Census, A Report of the Seventeenth Decennial Census of the United States: Census of Population: 1950–Vol. I, Number of Inhabitants (Washington, D. C.: U. S. Government Printing Office, 1952); U. S. Department of Commerce, Bureau of the Census, The Eighteenth Decennial Census of the United States: Census of Population: 1960–Vol. I: Characteristics of the Population, Part A: Number of Inhabitants (Washington, D. C.: U. S. Government Printing Office, date); and U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population: Vol. I, Characteristics of the Population–Part A: Number of Inhabitants–Section 1: United States, Alabama–Mississippi (Washington, D. C.: U. S. Government Printing Office, 1972).

¹⁵³*ibid.*

development of related facilities throughout the region, also provided new sources of livelihood for many permanent residents. As a result, the absolute (5,750 people) and relative (23 percent) gains in the total population were especially noticeable during the 1970s. By 1980, for example, the two-county region embraced just over 25,200 residents--the highest census year figure experienced since 1910 (Table 1). Though the gain was not quite as significant (12 percent) during the 1980s, a total of 3,500 more people were added to the region's population rolls, with the figure reaching 28,725 people by 1990.¹⁵⁴

Even though some farming areas (such as Port Oneida) were largely depopulated following the establishment of the Lakeshore in 1970, many areas immediately adjacent to its boundaries continued to gain people. When considering the townships and villages that now have some of their land included within the Lakeshore, a population increase of 15 percent occurred from 1960 to 1970 (a gain from 2,525 to 2,960 people), followed by a 12 percent increase during the 1970s. The upturn continued during the 1980 to 1990 interim (a gain of 500 persons), with the total count reaching 3,880 people by the latter year. It is now evident that the economies of both counties in the region, as well as the area immediately adjacent to the National Lakeshore, are strongly oriented to tourism and recreation.¹⁵⁵

¹⁵⁴U. S. Department of Commerce, Bureau of the Census, *1980 Census of Population: Vol. I, Characteristics of the Population--Chapter A. Number of Inhabitants--Part 24: Michigan* (Washington, D. C.: U. S. Government Printing Office, 1982); *1990 Census of Population, General Population Characteristics: Michigan* (Washington, D. C.: U. S. Government Printing Office, 1992).

¹⁵⁵1970 Census of Population; 1980 Census of Population; 1990 Census of Population.

Chapter 4 AGRICULTURAL PRACTICES

The history of agricultural development in the Sleeping Bear region may be divided into four overlapping phases, each distinguished by characteristic crops, technology, and land use patterns. The terminology used to describe these phases has been adapted from Lewis Mumford's classic study, *Technics and Civilization* (1934), which traced the impact of technological development upon Western culture.¹

As discussed in Chapter 3, agriculture first was practiced in the Sleeping Bear region by aboriginal peoples as a subsistence strategy. The cultivation of crops such as corn, beans, and squash provided an auxiliary food source in an area where fish, game, and wild foods also were harvested. Though effective, the tools and methods of cultivation employed were relatively primitive; thus, this period of agriculture is termed "pre-technic," as compared to subsequent phases of development. In the study area, this pre-technic phase dates from the beginnings of agriculture in the Upper Great Lakes around 1000 A. D. to the early 1840s, when Euro-American settlers introduced new methods of farming to the resident Indians.

Following the pre-technic phase was the eotechnic period, a brief interlude lasting roughly from the 1840s to the 1860s, during which time Euro-American agricultural technology such as metal plowshares and the employment of draft animals was introduced. As with pre-technic agriculture, the primary goal of eotechnic farming was subsistence. Most agricultural products were consumed by the people who harvested them. Surplus products were transported to market by water or via a primitive network of roads that linked the area's villages by the 1860s.

During the next phase of agricultural development, the paleotechnic period, technological and social changes necessitated profound adjustments in agricultural practices. Labor shortages caused by the Civil War, followed by the arrival of the railroad in the 1870s, presented challenges and opportunities to the region's farmers. For farmers of the Sleeping Bear region, the paleotechnic phase began during the Civil War decade and persisted until 1939, when electrical power became generally available throughout rural portions of Benzie and

¹Lewis Mumford, *Technics and Civilization*, 1963 ed. (New York and London: Harcourt Brace Jovanovich, 1934).

Leelanau Counties. Throughout Europe and the United States, the paleotechnic era was characterized by unchecked exploitation of natural resources, resulting in massive environmental degradation. The period also witnessed rapid advances in technology and the ascendancy of the railroads. Paleotechnic agriculture was extensive, rather than intensive, in nature. Its primary objective was not subsistence, but realizing maximum profits with minimum effort. The growing of wheat as a cash crop, which played a prominent role in the early settlement history of southern Michigan and Wisconsin, is a prime example of paleotechnic agriculture.

At the turn of the century, the most intensive period of exploitation of the Sleeping Bear region's forests was winding down. Foreseeing the exhaustion of the area's forest resources, residents turned to more sustainable forms of economic activity, including agriculture and tourism. The emphasis on unrestricted resource exploitation that had marked the paleotechnic phase gradually gave way to a more rational approach to land use, marking the beginnings of the next phase, the neotechnic. The neotechnic is characterized by the emergence of "scientific" agriculture, through which discoveries in basic research have been applied successfully to the practical problems of farming. As the neotechnic phase has progressed, farmers have adjusted to new forms of transportation and different sources of energy. While the decline of Great Lakes shipping isolated island farmers from their markets, the growth of railroads and more recently of the trucking industry has opened new markets for mainland producers. Rural electrification, implemented by the Cherryland Rural Electrification Association in 1939, further accelerated the mechanization of agriculture and brought farm families of the Sleeping Bear region into closer contact with the outside world by means of radio broadcasts.

Pre-technic Agriculture

French explorers traveling the Upper Great Lakes in the 1600s recorded the agricultural practices of the Ottawa and Huron Indians inhabiting the region. At that time, corn was the principal crop, with peas, beans, squash, and a plant identified by the French as "melons" also being cultivated. Crops grew in plots adjacent to summer villages inhabited by several bands of Indians. Techniques of fertilization apparently were not practiced; villages were relocated when the surrounding soil became unproductive. According to anthropologist W. Vernon Kintz:

On reaching a new location, each family took or was assigned a certain area for its fields. The women cultivated the soil and sowed and harvested the crops, although they might be assisted by old men no longer capable of accompanying the hunting parties. The tilling was done with a tool of hard wood, "shaped like a hoe at one end and flat at the other," and their harvest, according to [French explorer Antoine de la Mothe] Cadillac, was Indian corn, peas, beans, pumpkins, and watermelons.²

Later Euro-American visitors reported that the Indians of the L'Arbre Croche district grew apple trees, the seed probably having been introduced by French missionaries or traders. According to historian M. L. Leach, the Indians also grew from seed "especially choice varieties of wild plum. . .introduced from their distant southern hunting grounds."³

Upon his arrival at Northport Harbor in 1849, the Rev. George N. Smith observed seedling apples growing about a mile inland in a field owned by an Indian named Black Mouth. Smith's biographer claimed that "this field was the only clearing in the county at that time."⁴ Evidence suggests otherwise, however. When the Rev. Peter Dougherty decided to relocate his mission only a few years later, the land he acquired from Shab-wa-sung's band reportedly was supporting apple trees with trunks as large as a man's body, suggesting that agriculture had been practiced in the Omena district for some time.⁵

Although Indians of the L'Arbre Croche region marketed some corn to French traders, they grew crops primarily for their own sustenance.⁶ After the Treaty of 1836 and the arrival of government-sponsored farming instructors in

²W. Vernon Kintetz, "The Indians of the Western Great Lakes, 1615-1760," *Occasional Contributions from the Museum of Anthropology of the University of Michigan*, No. 10 (Ann Arbor: University of Michigan Press, 1940), 236.

³M. L. Leach, *A History of the Grand Traverse Region* (Traverse City: Traverse City Herald, 1883), 7; Helen Hornbeck Tanner, *Atlas of Great Lakes Indian History*, 5.

⁴Mrs. Etta Smith Wilson, "Life and Work of the Late Rev. George N. Smith, A Pioneer Missionary," *Michigan Pioneer and Historical Collections* 30 (date), 206.

⁵Leach, *History of Grand Traverse*, 11. In the Port Oneida area of the Lakeshore, an heirloom apple tree has been found with a trunk circumference of nine feet. Its unusual size suggests that it was planted by Indians long before permanent Euro-American settlement, perhaps as much as 300 years ago. See Neal Bullington, "Memorandum to concerned staff members," [n.d.] on file at Sleeping Bear Dunes National Lakeshore headquarters, Empire.

⁶Ruth Craker, *The First Protestant Mission in the Grand Traverse Region*, 14. The Huron and Ottawa routinely sold corn to French traders. See Charles E. Cleland, *Rites of Conquest: The History and Culture of Michigan's Native Americans* (Ann Arbor: University of Michigan Press, 1992), 103, 107.

the 1840s, however, Indians of the Grand Traverse region were encouraged to pursue agriculture as a commercial enterprise, in the same fashion as their Euro-American neighbors.

From Eotechnic to Paleotechnic

Euro-American agriculture, introduced in the Grand Traverse region around 1840, was practiced throughout the region by 1860. This eotechnic phase of agricultural development was characterized by family-operated farms established on small clearings carved from the forest. Some of the region's earliest Euro-American settlers were able to avoid the laborious clearing process, however, by acquiring lands formerly occupied by Indians. In 1854, Northport's founder, Joseph Dame, described in a letter to the New York Daily Tribune the unique opportunities awaiting new settlers:

Another advantage to the emigrant is that there are old Indian improvements, formerly cultivated, which are now abandoned, on which, by plowing, (and one yoke of oxen is a good team), a man may raise enough the first year for his own family. A number of these old improvements have been taken up within two years, and all that have gone on them are doing well. There is a large tract of good land on the east side of the bay opposite this place, with more than one hundred acres of cleared land, and a great many apple trees on it, which would be a good beginning, for a number of families can raise all the produce that would be wanted for family use, and cut hay enough to keep a team and cows the first year and have plenty of apples. The trees are large and in good bearing condition, and also on the Peninsula which makes down the bay about in the middle, which is about 20 miles long and two miles wide, there are plenty of old Indian gardens--say 400 or 500 acres--which can easily be brought under successful cultivation.⁷

Extensive cultivation on the Old Mission Peninsula, as cited in Dame's letter, had been the work of a band of Ottawa under the leadership of Chief Ahgosa, an associate of the Rev. Peter Dougherty. Ahgosa's band comprised about forty families around 1848, when Indian agent Henry Schoolcraft conducted his census. Schoolcraft also collected agricultural data, noting that

⁷"North-Western Michigan," letter from Joseph Dame, Northport, Grand Traverse Bay, Michigan, dated 23 Jan. 1854; published in New York Daily Tribune, 3 March 1854, p. 3, col. 5-6.

Ahgosa's band had 350 acres of land under cultivation. They had raised more than 900 bushels of corn, some 1,200 bushels of potatoes, and tended an orchard of 30 fruit trees. They also raised beans, melons, and squash, and produced more than 15,000 pounds of maple sugar in one season. The band owned 12 horses, but had no other livestock.⁸

Shortly after the Schoolcraft census, Indians of the Old Mission community began to abandon their farms there, relocating to the Leelanau Peninsula where they could purchase land. Figures from the state census of 1854 for Peninsula Township (Grand Traverse County), where Old Mission was located, would seem to indicate a corresponding drop in agricultural productivity. According to the census, no corn or potatoes were harvested there in 1853, and only 100 pounds of sugar were manufactured. The census enumerated twelve acres of wheat harvested in 1853, but no information was recorded on the number of bushels produced. Farmers did raise 200 bushels of other types of grain, however.⁹

Data for Leelanau Township, which at that time was attached to Grand Traverse County, unfortunately were not published with the state census of 1854. Figures for Emmet County include data from Peaine and Galilee townships, of which the Manitou Islands once were part; but it is not possible to extrapolate data from the 1854 returns for the individual islands.¹⁰

Agricultural data, however, are available for Benzie and Leelanau counties and for the Manitou islands from the federal census of 1860. Benzie County, then known as Crystal Lake Township and attached to Leelanau County, had only three occupied farms and just over 200 residents at the time of the census. Potatoes, Indian corn, and maple sugar were the township's major agricultural products. During the year preceding June 1860, the farmers of Crystal Lake Township raised 900 bushels of potatoes, 170 bushels of corn, and produced 2,500 pounds of maple sugar. No wheat or rye was harvested.¹¹

⁸Wakefield, ed., *A History of Leelanau Township*, 14.

⁹Secretary of State of the State of Michigan, *Census and Statistics of the State of Michigan, May 1854* (Lansing: Geo. W. Peck, Printer to the State, 1854).

¹⁰*Ibid.*, 403-413. At the time of the 1870 federal census, North Manitou was part of Galilee Township; South Manitou was part of "Payenne" (i.e., Peaine) Township. See U. S. Census Office, *Ninth Census of the United States: Population* (Washington, D. C.: Government Printing Office, 1870).

¹¹Secretary of State of the State of Michigan, *Statistics of the State of Michigan, Compiled from the Census of 1860, Taken by Authority of the United States* (Lansing: John A. Kerr & Co., Printers to the State, 1861), 150, 152.

Data from the 1860 census published by the state of Michigan documented only one occupied farm, consisting of 200 acres of improved land, on North Manitou Island. No occupied farms were enumerated on South Manitou.¹² The agricultural census for 1860 indicates that in the previous year the North Manitou farm had produced 1,500 bushels of Indian corn, 800 bushels of buckwheat, 200 bushels of rye, and 50 bushels of potatoes. A flock of 40 sheep had yielded 50 pounds of wool, and 300 pounds of butter had been processed from the milk of seven cows. No orchard products or maple sugar were recorded.¹³

Within Benzie and Leelanau counties, the jurisdiction with the largest number of occupied farms in 1860 was Centerville Township, which at that time comprised roughly the southeastern third of what was to become Leelanau County, including the modern townships of Leland, Suttons Bay, Centerville, Bingham, Solon, and Elmwood. Within the boundaries of Centerville Township in 1860 were several small villages, including Greilickville, Peshawbestown, Provement (Lake Leelanau), and Carp River (Leland). The 1860 census recorded

¹²*Ibid.*, 174. These data contradict information from other sources. In his 1986 study, History Data Report on North Manitou Island, David Fritz reports on page 5 that 1860 census data list nine persons with the occupation of farmer, and seven as farm laborer. In addition, there were 39 day laborers on North Manitou who probably cut wood for Nicholas Pickard's operation. "One farmer, Stephen Bower from Bavaria, may have had a larger farming enterprise than most, as seven adult male farm laborers lived under his roof. Similarly, James Westland, a fisherman from Canada, had three other fishermen and a farmer living with him." In his 1984 report, Historic Resource Study: SBDNL, historian Jim Muhn notes on pages 127-8: "There are indications of farming activity on [South Manitou] island beginning in 1847. In that year, the deputy surveyor in charge of island's land survey noted the existence of a 15 to 20 acre field near [W. N.] Burton's dock By 1860, half of South Manitou Island's residents listed farming as an occupation. Raising livestock, poultry, vegetables, and other crops, these farmers eventually made the island self-sufficient for many of its needs."

The apparent source of Fritz' and Muhn's data is the 1860 census of population manuscript schedules, which list individuals' occupations. Unfortunately, the microfilm copy available to the authors is practically illegible, making confirmation problematical.

The authors were unable to locate manuscript schedules from the 1860 census of agriculture for the Manitou Islands. In the absence of this authoritative source, we were compelled to use published compendiums of census data, namely: Secretary of State, Statistics of the State of Michigan, Compiled from the Census of 1860 and U. S. Census Office, Agriculture in the United States in 1860: Compiled from the Original Returns of the Eighth Census. To add to the confusion, data on Leelanau County and the Manitou Islands in these two sources do not always agree. One possible explanation is that the Michigan compendium of 1860 federal census data was published in 1861, while the U. S. Census Office didn't publish its volume until 1864. During the intervening three years, errors detected in the original returns may have been corrected, thus leading to discrepancies between the two published versions of the 1860 agricultural census.

¹³Secretary of State, Statistics of the State of Michigan. Compiled from the Census of 1860.

938 persons and 33 occupied farms within the township. Harvested during the preceding year were more than 5,000 bushels of potatoes, 3,400 bushels of Indian corn, and about 800 bushels of oats. Centerville farms also produced 765 bushels of wheat, an important cash crop, along with more than 300 bushels of rye. Maple sugaring obviously played a major role in Centerville's economy, with residents producing more than 16,000 pounds.¹⁴

Leelanau Township, at the northern end of the Leelanau Peninsula, had in 1860 only twelve occupied farms, about one-third as many as Centerville Township. The township's population in 1860 was just over 1,000 persons, including the residents of Waukazooville, Northport, and New Mission (Omena). As elsewhere in the region, potatoes, corn, and maple sugar were the township's major products. Residents raised almost 3,000 bushels of potatoes and 1,250 bushels of corn. In addition, they produced 3,300 pounds of maple sugar. The harvested grains included oats (585 bushels), wheat (440), and rye (120).¹⁵

Interestingly, no orchard products were enumerated for Leelanau Township, although contemporary accounts document the existence of mature apple trees near Omena as early as 1852. Missionary George N. Smith recorded buying five "good sized" apple trees from Shab-wa-sung, the Ojibwa chief then living at Omena Point, in April 1850.¹⁶

Within Leelanau County, Glen Arbor Township was the least agriculturally developed in 1860, with only six occupied farms documented in that year's census. Included at that time within the boundaries of Glen Arbor Township were the modern townships of Empire, Glen Arbor, Cleveland, and Kasson. Villages established at the time included Glen Arbor and North Unity. The township's population numbered 250 persons. Residents harvested about 1,000 bushels of potatoes, 500 bushels of corn, 240 bushels of oats, 170 bushels of rye, and 35 bushels of wheat. Almost 700 pounds of maple sugar were produced, as well.¹⁷

As might be expected of pioneer farms still in the process of being cleared from the forest, the average number of improved acres per occupied farm was relatively small. In Crystal Lake Township (modern Benzie County), the average was only 14 acres per occupied farm in 1860. Glen Arbor Township's average

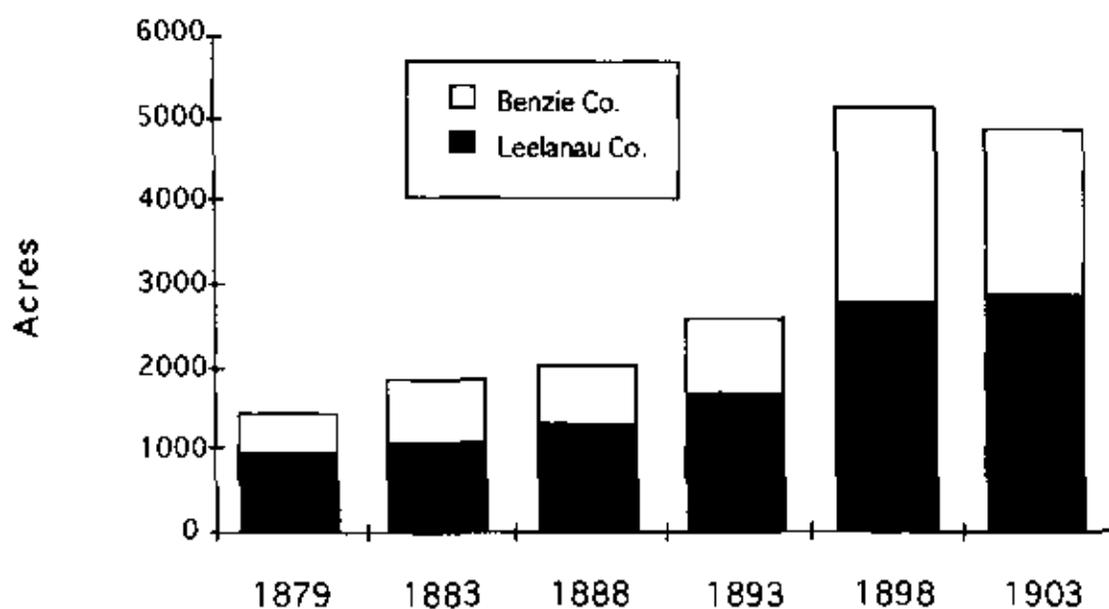
¹⁴*Ibid.*

¹⁵*Ibid.*

¹⁶Wakefield, ed., *A History of Leelanau Township*, 12.

¹⁷Secretary of State, *Statistics of the State of Michigan, Compiled from the Census of 1860*.

Figure 12
ACRES IN APPLE AND PEACH ORCHARDS,
BENZIE AND LEELANAU COUNTIES, 1879-1903



Source: Derived from Annual Reports of the Secretary of State of the State of Michigan, Relating to Farms and Farm Products, 1879-1903.

was slightly over 18 acres per farm, while the average number of improved acres per farm in Centerville Township was almost 24. The amount of improved land on Leelanau Township farms was greater--an average of more than 36 acres per farm--although Leelanau had only one-third as many farms as Centerville Township.¹⁸

As documented in the memoirs of early Euro-American settlers, carving farms out of the forests of the Sleeping Bear region was an arduous process. The memoirs of Joseph Krubner (b. 1846), an early settler of North Unity, provide a glimpse of the rigors endured by pioneer farmers during the eotechnic period of agricultural development. (Krubner was nine years old when he arrived at North Unity with his family in November 1855.)¹⁹

During the first winter, supplies that the settlers had brought with them from Chicago ran dangerously low. "Those who brought grocery [sic] along with them from Chicago, were luck[y]," Krubner recalled fifty years later. "Worse was for those, who didn't have it, even though they had money, there wasn't anything they could buy, except a little of corn from the Indians. Flour and meat was impossible to buy, so those fortunate was helping others."²⁰ In desperation, a party of settlers took a sled across the ice to one of the Manitou Islands, where they acquired some potatoes. By the second winter, the settlers had imported additional supplies from Chicago, including a few teams of draft animals. That spring, the work of preparing the soil for cultivation began:

In spots cleared from the trees, they prepared the ground for next spring for vegetable garden and potato patch, which were planted with the hoe in between the stumps. . . . This summer everybody had a fair crop of potatoes, cabbage, beans and corn, besides a little wheat.²¹

Another early settler of the Sleeping Bear region, Charles B. Slyfield (b. 1854), endured similar hardships. In 1859, Slyfield's father quit his job as

¹⁸Authors' calculations, based on data from Secretary of State, *Statistics of the State of Michigan*. Compiled from the Census of 1860.

¹⁹Joseph Krubner, "History of Joseph Krubner, Leland, Michigan," typewritten manuscript on file at Sleeping Bear Dunes National Lakeshore Library, Empire, and at Bureau of History, Lansing. Krubner wrote his memoir for the *American*, a Bohemian newspaper published in Chicago, c. 1907-1908. The document used for this study was translated into English by Anna Kalina of Cicero, Illinois.

²⁰*Ibid.*

²¹*Ibid.*

lightkeeper at South Manitou to start clearing a farm on the mainland, about two miles north of the site of Empire. The rest of the family--Mrs. Slyfield and four children--remained on South Manitou until July, when they relocated to their new home. "That fall, we had an abundance of crops but there wasn't sale for anything so [we] had to feed them to the cattle and hogs," Slyfield recalled in his 1912 memoirs. "I never saw such large potatoes and [ruta]bagas as we raised that year."²²

Despite the good harvest, Charles' father was compelled to return to South Manitou that fall "to get some potatoes that he had raised there for our winter's use," an undertaking which required three weeks' separation from his family. Charles' mother "was nearly crazy for she thought he might be lost and the prospects of our being left there alone all winter was anything but cheerful," he wrote.²³

By the spring of 1861, the family had cleared about 20 acres, on which they "raised a goodly supply of everything, the same as the year previous, but could not sell anything so [we] used it all for feed," Slyfield recorded. That summer, Charles' father was appointed keeper of the light at Point Betsie, and the family relocated again. "We were only too glad to get away from the old farm," he recalled, "and I guess Mother was just as glad as we were."²⁴

The experiences of a Glen Arbor pioneer, Preston Dewing, also provide insight to life on a farm of this era. In 1862, the Dewing family arrived by steamer from Vermont. Like other early settlers of the region, the Dewings grew potatoes, as recorded by Preston in his diary:

Father had pulled ground hemlock and planted a small patch of potatoes, but a frost in August had killed the tops and they didn't amount to much. Not having a hoe, Mother and Sarah dug them with a crooked stick. Since there was no place to store them from freezing, Mother cut a hole through the floor large enough to crawl through and with a stove shovel and an old tin pan, dug a cellar large enough to hold them. . . . The next spring we tapped some trees and caught the sap in tin milk pails. Mother had about three or

²²Charles B. Slyfield, "A Brief Sketch of the Life of Charles B. Slyfield," 1912, typewritten manuscript on file at Sleeping Bear Dunes National Lakeshore Library, Empire.

²³*Ibid.*

²⁴*Ibid.*

four dozen pails. She boiled the syrup down and made about 60 pounds of soft tub sugar.²⁵

Conditions experienced by families such as the Krubners, Slyfields, and Dewings during the early years of Euro-American settlement characterize the eotechnic phase of agricultural development. A large portion of the farm family's labor necessarily was devoted to clearing land, leaving less time for actual cultivation of the soil. Consequently, settlers depended upon a few staple crops, such as potatoes and corn, that could provide subsistence with relatively little expenditure of labor. Potatoes were especially well-suited to these requirements. One Benzie County pioneer, Calvin Linkletter of Almira Township, planted a crop of potatoes by chopping the turf with his ax, placing the seed in the opening, and re-covering the hole with turf. "That was the only work ever done on that potato patch," recalled a neighboring settler.²⁶

Subsequent crops could be produced with relatively little effort. Because of the region's mild winters and plentiful snowfall, unharvested potatoes were often stored in the soil over the winter. Farmers also reported potato fields that continued to produce season after season with no cultivation at all. John Fisher, one of the founders of Glen Arbor, reported potatoes growing in a field where they had been planted six years previously. Local farmers also enjoyed abundant yields. Joseph Dame of Northport claimed to have raised 300 bushels of potatoes on one acre.²⁷

Corn, another staple of the eotechnic farm, also could be raised with relatively little effort. The seeds were planted by hand and covered by using a hoe; this implement also was used for cultivation.²⁸ Alexander Winchell, the geologist who toured the Grand Traverse region in 1865, observed corn near Carp Lake (Lake Leelanau) "growing thriftily on the steepest hill-sides, in fields which, in some cases, had not been plowed."²⁹ In the absence of gristmills, corn frequently was ground in handmills, such as those used to grind coffee.³⁰

²⁵Julia Terry Dickinson, *The Story of Leelanau* (Omena, Michigan: Solle's Bookshop, 1951), 16-17.

²⁶Mrs. Martha Gray, "Reminiscences of Grand Traverse Region," *Michigan Historical Collections* 38 (1912), 304.

²⁷Alexander Winchell, *The Grand Traverse Region: A Report on the Geological and Industrial Resources* (Ann Arbor: Dr. Chase's Steam Printing House, 1866), 28, 66.

²⁸Romanzo Adams, "Agriculture in Michigan," *Michigan Political Science Association* 3 (March 1899), 13.

²⁹Winchell, *Grand Traverse Region*, 65.

³⁰Slyfield, "A Brief Sketch."

During the eotechnic period, farmers used simple tools and followed rudimentary methods of cultivation, often sowing their first crops among the stumps of recently-felled trees.³¹ Determined to upgrade these primitive practices, farmers of Benzie and Leelanau counties organized agricultural societies in the 1860s. Benzonia-area farmers formed an "agricultural association" in 1864, staging the first agricultural fair in the Grand Traverse region in October of that year.³² The group reorganized as the Benzie County Agricultural Society in 1867. Leelanau County's first agricultural and horticultural society was organized the following year, with the Rev. George N. Smith elected president. The society held its first fair in October 1868 in Leland.³³

Throughout this eotechnic stage of agriculture in the Sleeping Bear region, almost all farm crops were consumed by the resident family or their livestock; even when the farm yielded a surplus, little could be sold because markets were virtually inaccessible. Farmers who managed to transport their produce over the primitive roads to harbors such as Glen Arbor, Northport, or Traverse City, however, might find a market for their surplus. According to Winchell's report, thousands of barrels of potatoes were being shipped annually to Chicago from the Grand Traverse region by 1866.³⁴ By 1869, small quantities of fruit also were being shipped from Northport. Virtually all of the proofs filed by early homesteaders in the region noted that they had planted apple and peach trees, while a number also listed currant bushes and strawberries.³⁵

Data from the 1870 federal census of agriculture reinforce the significance of the potato crop to farmers of the Sleeping Bear region. The

³¹Adams, "Agriculture in Michigan," 13.

³²State Board of Agriculture, *Fourth Annual Report of the Secretary of the State Board of Agriculture of the State of Michigan for the Year 1865* (Lansing: John A. Kerr & Co., 1865), 276; Julie Ann Avery, "An Exploration of Several Early Michigan County Fairs as Community Arts Organizations of the 1850s, 1860s, and 1870s (Unpublished Ph. D. dissertation, Michigan State University, 1992), 259.

³³State Board of Agriculture, *Seventh Annual Report of the Secretary of the State Board of Agriculture of the State of Michigan for the Year 1868* (Lansing: John A. Kerr & Co., 1868), 416-417.

³⁴Winchell, *Grand Traverse Region*, 66; "Benzie County," in State Board of Agriculture, *Ninth Annual Report of the Secretary of the State Board of Agriculture for the Year 1870* (Lansing: W. S. George, 1870), 365.

³⁵H. S. Clubb, "Fruit Lands of Western Michigan," in *Report of the Commissioner of Agriculture for the Year 1869* (Washington, D. C.: Government Printing Office, 1870), 443; homestead application forms on file in the National Archives and Records Service.

manuscript census for townships from which the National Lakeshore was created reveals that, of 150 farms enumerated, 144 grew potatoes.³⁶

Not surprisingly, the farms with the largest amount of improved acreage were located on the Manitou Islands, where the cutting of fuel wood had cleared hundreds of acres by 1870. Nicholas Pickard, a fuel wood operator on North Manitou, estimated the cash value of his 320-acre farm at \$3,000. He kept eight horses, three milk cows, and six swine. Crops grown on the Pickard farm included rye, oats, potatoes, and hay.³⁷

On South Manitou, George [Johann] Hutzler operated a 320-acre farm with 10 cows and 16 other cattle. Hutzler had worked as a wood cutter for W. N. Burton prior to settling on the island with his family in 1856. On 9 January 1863, Hutzler became the first person to make a claim for land on South Manitou under the Homestead Act, when he filed for 160 acres of property in Section 32. When filing his homestead proof five and one-half years later, the South Manitou pioneer reported that the holding included a 20' X 20' house with board floors and a shingle roof, two barns, and a dug well. A total of 60 fruit trees existed on the property, while 15 acres of land were under cultivation. Hutzler also noted that he and his wife had seven children.³⁸ By the time of the 1870 census, Hutzler had cleared 40 acres, on which he grew rye, spring wheat, oats, potatoes, and hay. He also kept six horses and four oxen. Forest products and slaughtered livestock also contributed income to the farm, which was valued at \$600.³⁹

Seven other homestead claims were filed for South Manitou land during the 1860s. The names of these individuals, and the dates and locations of their claims, were as follows: Christopher Beck, 25 February 1863 (Section 33); Albert Evans, 11 July 1863 (Section 4); Mary Kitchen, 15 July 1863 (Section 33); George Haas, 1 August 1863 (Section 15); Conrad Hutzler, 1 August 1867 (Section 4); Aaron Sheridan, 15 August 1867 (Section 4); and Thomas Armstrong, 20 May 1868 (Section 3). By the time the seven homesteaders filed their proofs some five

³⁶Manuscript schedules, Ninth Census of the United States, Productions of Agriculture (1870) for the townships of Crystal Lake, Platt[e], Glen Arbor, and Sleeping Bear, and for the Manitou and Fox Islands; microfilm copy on file at State Archives of Michigan, Lansing.

³⁷*Ibid.*

³⁸Homestead application No. 99, Traverse City Land Office, on with the National Archives and Records Service.

³⁹*Ibid.*, Myron H. Vent, *South Manitou Island: From Pioneer Community to National Park* (Nassau, Delaware: Manitou Publications, 1973), 28; U. S. Land Office, Local Tract Books; microfilm copy on file at State Archives of Michigan, Lansing.

to six years later, they had, on average, placed 17 acres of land under cultivation, while a number noted that additional land had been "chopped" (i.e., cleared). All of the claimants had planted up to 50 fruit trees (apple, peach, or plum), while several listed currants and strawberries.⁴⁰

Few of the mainland's farms were as well-developed as those on the Manitou Islands in 1870. The most highly-developed farms in the Port Oneida district, which at that time was part of Sleeping Bear Township, were owned by Carsten Burfiend and Thomas Kelderhouse. Burfiend owned a 295-acre farm valued at \$7,000. On the farm's 63 improved acres, Burfiend grew oats, winter wheat, buckwheat, rye, potatoes, and hay. The livestock included three cows, a team of oxen, and a flock of eight sheep. Forest products also contributed to farm income.⁴¹

Thomas Kelderhouse, the developer of Port Oneida and by far its largest landowner, operated a 2,000-acre farm. Only 40 acres of the Kelderhouse farm were listed as improved in the 1870 census, however. Valued at \$5,000, the Kelderhouse operation appears to have focused on livestock, with four cows, three oxen, eight horses, five swine, and a flock of ten sheep. Crops included oats, winter wheat, rye, and hay.⁴²

In neighboring Glen Arbor Township, the maximum cash value ascribed to any farm was \$2,000, but only three of the township's 49 farms were valued at this level. They were operated by Nicholas Harvey, Clark Baldwin, and Henry Krechert. Several farms were valued at \$1,500, including those of John Krubner, John Hartung, Stephen Murphy, John Dago, Ezra Bragdon, Carsten Miller, and Richard Snow. Rye was the most popular grain crop in Glen Arbor Township, with 37 of 49 farms growing it. Winter wheat was cultivated on 34 farms, followed by corn and oats (each grown on 27 farms), and barley (17 farms).⁴³

By comparison, only 18 farms were enumerated in the Benzie County township of Crystal Lake in 1870, but eight of them were valued at \$2,000 or more. Nevertheless, all of these farms appear to have been subsistence-level operations, supporting only a few head of livestock and relatively low yields of

⁴⁰Homestead application numbers 153, 427, 133, 154, 2974, 2907, 3006, Traverse City Land Office, on file with the National Archives and Records Service.

⁴¹Manuscript schedules, Productions of Agriculture (1870). See Leelanaw [sic] County: Sleeping Bear Township. Burfiend is listed as "Bovine, Castan."

⁴²*Ibid.*

⁴³Manuscript schedules, Productions of Agriculture (1870). See Leelanaw [sic] County: Glen Arbor Township.

grains and hay. All grew potatoes, the yield averaging 260 bushels per farm. Four reported income from market gardens, and another four farms produced maple sugar and/or syrup.⁴⁴

In neighboring Platte Township, farms were more numerous but at a more rudimentary stage of development. The poor soil conditions that existed in some areas of the county were quickly detected by a few homesteaders. Peter Raymond, who planted 30 fruit trees, 100 currant bushes, and 500 strawberry plants after he claimed 143 acres of land along the boundary between Platte and Lake Townships in 1869, noted that few of the plantings had survived. "The land will not raise crops of any kind," he reported in 1875. About a quarter century later, Peter Rubien established a homestead on 50 acres of nearby land. Rubien, who worked as a fisherman to support himself, his wife, and two children, commented on the property in the following manner: "It is impossible to raise crops on any of the land, as it is a barren sandy plains, only valuable for fishing grounds for which I use it."⁴⁵

Of Platte Township's 44 farms, only one was valued at \$2,000, with most appraised well below this figure. The most highly-valued farm, a 135-acre tract operated by Thomas Gilmore, supported only one ox and one animal classified as "other cattle." Gilmore grew 100 bushels of various grains, 150 bushels of potatoes, and two tons of hay. As was the case in Crystal Lake Township, the farms of Platte Township appear to have been subsistence-level operations in 1870. All but four farms grew potatoes, yielding an average of 112 bushels per farm. Maple sugar and/or syrup was produced on 19 farms, including that of Velorous Thurston, who reported making 500 pounds of sugar, the township's highest yield.⁴⁶

Sugar making was an important subsistence activity on pioneer farms during this period. The 1870 agricultural census reports maple sugar and/or syrup produced on 14 farms in Glen Arbor Township and on seven farms in Sleeping Bear Township, in addition to a combined total of 23 farms in Crystal Lake and Platte Townships. (No maple products were enumerated on Manitow Island farms; the maple trees probably had been cut down for fuel wood.) The

⁴⁴Manuscript schedules, Productions of Agriculture (1870). See Benzie County: Platt [sic] Township.

⁴⁵Homestead application No. 3710, Traverse City Land Office, and No. 9937, Marquette Land Office; both on file with the National Archives and Records Service.

⁴⁶Manuscript schedules, Productions of Agriculture (1870). See Benzie County: Platt [sic] Township.

locally abundant stands of sugar maple provided an important source of nourishment and a welcome enhancement to the settlers' typically bland and monotonous diet. The trees occurred naturally throughout the region, requiring no cultivation. Sugar making took place during a few weeks in early spring, a time when farm chores were relatively light. Sugaring required an intense but relatively brief span of labor, producing a relatively high yield for the effort invested.

The advantages of sugar making had long been appreciated by the Indians of the Grand Traverse region. Euro-American settlers arriving in the 1840s, many of whom had migrated from sugaring regions in New England and New York State, also recognized the potential of the sugar bush. Joseph Dame of Northport, writing to the *New York Daily Tribune* in 1854, noted the predominance of "Hard or Rock Maple" in the forests, affording "the best chance to make Maple Sugar that I ever saw in any country." (Before arriving at Old Mission in 1841, Dame had lived in New Hampshire, Maine, New York State, and Wisconsin.)⁴⁷

As described earlier, Chief Ahgosa's band had an extensive sugar operation on the Old Mission Peninsula in the late 1840s, a practice that was continued by the Ottawa living in the New Mission community near Omena in subsequent years. One New Mission resident, Mrs. Susan Pequongay (b. 1853), recalled that her father often tapped more than a thousand trees at a time. To collect the sap, wooden spiles were driven into a gash in the tree trunk. Canoe-shaped containers made of birch bark caught the sap, which next was deposited into 100-gallon containers carved from a basswood tree to await boiling in large copper kettles. The sap was reduced to syrup, wax, or sugar. Sugar was packed into birch bark boxes called mococks, each having a capacity of 80 to 100 pounds.⁴⁸

Surplus maple products also served as trade items in the cash-poor pioneer economy, as suggested by the story of Mrs. Margaret Schaub, an early resident of Provement (Lake Leelanau). In 1864, the community had built its first church, a log structure constructed by Father Ignatius Mrak. The required ecclesiastical furnishings not being available locally, Mrs. Schaub took passage

⁴⁷Joseph Dame, letter to *New York Daily Tribune*, 3 March 1854.

⁴⁸Craker, *The First Protestant Mission*, 85.

on a ship for Buffalo, with "maple syrup and maple sugar which she had made herself to barter for the holy objects of worship."⁴⁹

Similarly, the Elijah Stata family, pioneer settlers of Benzie County, relied upon sugaring to generate the cash income needed to purchase supplies. The Stata family had arrived at Glen Arbor in the fall of 1868, settling on an isolated clearing in Platte Township. After a disappointing harvest of corn and potatoes the following year, "starvation seemed near," recalled Martha Stata Gray, Elijah's daughter. "We had seen nothing but work with no results. . . . One thing was sure, we could make arrangements and another season see how large a crop of maple sugar we could gather."⁵⁰

That winter, Elijah Stata made hundreds of wooden sap buckets and syrup tubs in preparation for the following spring's sugaring season, and the family subsequently produced "many hundred pounds of fine maple sugar," wrote Mrs. Gray. "Father took the sugar with an ox team to Glen Arbor where it was shipped to a rich uncle of mother's in Detroit and sold to good advantage. With the money we bought a horse and wagon and many things needed" (The 1870 federal census of agriculture recorded that Elijah Stata produced 100 pounds of sugar and four gallons of syrup.) After Martha Stata's marriage, she and her husband also made maple sugar, one year selling 300 pounds of it in Frankfort.⁵¹

As described above, some limited trading in agricultural goods did take place in the Sleeping Bear region during the eotechnic period. In addition to the maple sugar trade, Indians and established settlers sold food to new arrivals in the community whose supplies ran low. With the extension of railroads into northwestern Michigan in the 1870s and the subsequent growth in the forest products industry, broader opportunities for commercial agriculture arose.

"Nothing has had more to do with changing the pattern of rural life than the improvement of transportation facilities," noted historian Willis F. Dunbar in a 1943 study of rural life in Michigan.⁵² Certainly, this observation holds true in the case of the Grand Traverse region, which achieved a rail connection with southern Michigan in the early 1870s. Martha Stata Gray, an eyewitness to the

⁴⁹Dickinson, *Story of Leelanau*, 18.

⁵⁰Gray, "Reminiscences of Grand Traverse Region," 298.

⁵¹*Ibid.*, 299; Manuscript schedules, Productions of Agriculture (1870). See Platte Township.

⁵²Willis F. Dunbar, "The Transformation of Rural Life in Michigan since 1865," *Papers of the Michigan Academy of Science, Arts, and Letters* XXIX (1943), 480.

phenomenon from her Benzie County farm, noted many years afterwards: "The coming of the railroad brought great changes to the country. It brought the millmen, speculators and the agents." The millmen erected sawmills throughout the region's interior to process timber, the profitable exploitation of which had not been possible before the railroad's advent. Previously inaccessible stands of timber suddenly increased in value, a situation upon which land speculators were quick to capitalize. With hundreds of men employed in the booming logging industry, cash became less scarce and "agents" selling a variety of goods--from sewing machines to fruit trees--traveled the countryside.⁵³

How did the arrival of the railroad and the growth of logging affect the farmers of the Sleeping Bear region? Did their agricultural practices change, now that the railroad provided access to new markets, both local and remote? What percentage of the population was engaged in farming, as compared with those working in the forest products industry? How many residents farmed in the warm months and worked for logging operations in the winter? With the influx of population due to the growth of logging, were the region's farmers able to sell most of their surplus locally? How much produce did they ship to outside markets such as Chicago?

While answering all of these questions is beyond the scope of this study, the following overview of state and federal census data provides some basic information about agricultural development in the Sleeping Bear Dunes area during the paleotechnic period, which began in the Grand Traverse region with the arrival of the railroads in the early 1870s.

Elsewhere in the state of Michigan, particularly in the southern four tiers of counties, the paleotechnic period had begun several decades earlier and was characterized by the transition from subsistence farming to commercial agriculture. On southern Michigan farms, the predominant cash crop of the period was wheat, the price of which reached new heights during the Civil War. By 1866, more than one million acres in Michigan were devoted to wheat culture. That December, the price of wheat peaked at \$1.77 per bushel.⁵⁴

Although prices fell in subsequent years, by 1879 more than one-quarter of the state's improved land in farms was sowed to wheat. Observed Secretary of State William Jenney in his 1879 annual report on farm products:

⁵³Gray, "Reminiscences of Grand Traverse Region," 314-315.

⁵⁴George N. Fuller, *Michigan: A Centennial History of the State and Its People*, Vol. I (Chicago: Lewis Publishing Co., 1939), 477.

While we may reasonably rejoice at the enlarged wheat production of the State in view of the benefits that have resulted to both producer and consumer, we should not regard the present situation too complacently, or with wholly unmixed satisfaction. Wheat growing, instead of being a branch merely in a proper system of mixed husbandry, threatens to become a specialty. . . . So large and undue a proportion of tillable land devoted to this single crop, if persevered in, cannot fail to permanently reduce the fertility of the soil.⁵⁵

Contemporary agricultural data suggest that Sleeping Bear area farmers also may have taken part in the wheat bonanza, albeit on a smaller scale than farmers in southern Michigan. In 1878, about 24 percent of Leelanau County's improved land in farms was in wheat—the highest proportion for any single crop grown in the county that year. The percentage of farm land devoted to wheat was somewhat less that year in Benzie County, where about 18 percent of the improved acreage was in wheat.⁵⁶

It should be noted, nonetheless, that the total amount of improved farm land in both counties was as yet relatively small. In Leelanau County, only 18,000 farm acres were classified as "improved" in 1879, a figure representing just 9 percent of the county's tillable land. Benzie County had a substantially lower degree of agricultural development, with some 8,300 improved acres, or about 4 percent of its total tillable land.⁵⁷ By comparison, Washtenaw County, located in one of southern Michigan's leading agricultural districts, in the same year had more than 270,000 improved acres, representing 66 percent of its tillable land.⁵⁸

Michigan's peak wheat years occurred in the early 1880s, when almost two million acres were under cultivation. By the decade's end, however, "it was the general conviction of Michigan farmers that they could no longer put their

⁵⁵William Jenney, "Introductory Letter," in Secretary of State of the State of Michigan, *First Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1878-9* (Lansing: W. S. George & Co., 1880), vii.

⁵⁶Authors' calculations, based on wheat acreage data from Secretary of State, *First Annual Report of the Secretary of State*.

⁵⁷Authors' calculations, based on data from Frank Leverett, *Surface Geology and Agricultural Conditions of the Southern Peninsula of Michigan*, Michigan Geological and Biological Survey Publication 9, Geological Series 7 (Lansing: Wynkoop Hallenbeck Crawford, 1912), 93, 114; and Secretary of State, *First Annual Report of the Secretary of State*.

⁵⁸Authors' calculations, based on Washtenaw County data from Leverett, *Surface Geology*, 138; Secretary of State, *First Annual Report of the Secretary of State*, 35.

reliance upon wheat as the main money crop," wrote historian George N. Fuller.⁵⁹ As the railroads had advanced westward to the Great Plains, new wheat growing regions were opened up, bringing increased competition and lower prices. W. L. Webber, a southern Michigan farmer who had observed the wheat bonanza firsthand, described its aftermath in an 1886 speech:

The trouble with the country just now is that there are not markets enough to take the surplus A few years since, the country west of the Mississippi took from the farmers east its supply of breadstuffs. Now more than half of the cereal surplus of the country is produced west of the Mississippi, and probably not one-sixth of the capacity of that territory has been called upon. What are we to do with this surplus? Will farmers ever see the day again when they will get a dollar a bushel for their wheat?⁶⁰

Throughout the remainder of the nineteenth century, the acreage devoted to wheat in Benzie and Leelanau counties remained relatively small, especially when compared with the leading wheat-producing counties of southern Michigan. While the amount of surplus wheat that Sleeping Bear area farmers marketed outside the region is unknown, production occurred on such a modest scale that it's reasonable to assume most of the grain was consumed locally. The percentage of improved farm land in wheat declined steadily in both Benzie and Leelanau counties until just before the turn of the century. Wheat acreage jumped in both counties in the late 1890s, however, only to decline sharply in the early 1900s.⁶¹

Perhaps more important to the farm economy than wheat in the Sleeping Bear region were feed crops such as hay, corn, and oats, which must have been in considerable demand during the late 1800s, not only to maintain the draft animals used in local logging operations, but to produce the beef, pork, and milk consumed by the human population. In 1878, Benzie County farmers devoted 17

⁵⁹Fuller, *Michigan: A Centennial History*, 477-8.

⁶⁰W. L. Webber, "Agriculture," in *The Semi-Centennial of the Admission of the State of Michigan into the Union: Addresses Delivered at Its Celebration, June 15, 1886* (Detroit: Free Press Printing Co., 1886), 404.

⁶¹Secretary of State, *First Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products* (1878-9); *Fifth Annual Report* (1882-3); *Tenth Annual Report* (1887-8); *Fifteenth Annual Report* (1892-3); *Twentieth Annual Report* (1897-8); *Twenty-Fifth Annual Report* (1902-3.)



Figure 13. Making maple sugar on North Manitou Island, date unknown.



Figure 14. Sugar maples lining road near Port Oneida, 1992.



Figure 15. Exterior of sugar shack on Frank Klett farm, Port Oneida, 1992.



Figure 16. Klett farm, Port Oneida, looking east, 1992.

percent of their improved land to hay, 16 percent to corn, and 7 percent to oats. In Leelanau County, 20 percent of the improved acreage was devoted to hay, 8 percent to corn, and 10 percent to oats.⁶²

Nevertheless, the farm livestock population was relatively small. On the average, each of Benzie County's 360 farms in 1878 supported one cow, one horse, and one hog. In the same year, Leelanau County had an estimated 678 farms, each supporting on the average two cows, one horse, three hogs, and one sheep.⁶³ These figures would suggest that few farms in the Sleeping Bear region were producing meat or dairy products on a commercial basis in 1878.⁶⁴

It appears that, in the 1870s, the majority of farms in the Sleeping Bear region still were operating at a subsistence level, and probably provided only small amounts of food to local markets, such as those created by logging camps. In northwestern Wisconsin in the 1860s and 1870s, for example, the absence of local sources of supply led some large logging companies to develop company-owned farms in proximity to their logging operations. In the Wisconsin pinery, maintaining a company farm proved far less expensive than transporting provisions into the wilderness.⁶⁵

At least one such company-owned farm was in operation in the Sleeping Bear region during the 1870s. The Northern Transportation Company (NTC), a Cleveland-based firm operating steamships between Chicago and Ogdensburg, N. Y., purchased all of Charles McCartney's Glen Haven area properties in 1870. NTC ships made regular stops at the Glen Haven dock, where they took on fuel supplied by McCartney's wooding operation. NTC acquired the dock, a sawmill McCartney had built on nearby Little Glen Lake, and some 2,000 acres of land. Early in the 1870s, NTC developed a large farm south of the village. In 1878, the company hired 24-year-old David Henry Day as its Glen Haven agent. In

⁶²Authors' calculations, based on data from Secretary of State, *First Annual Report of the Secretary of State*.

⁶³*Ibid.*

⁶⁴For a discussion of methods for estimating farm self-sufficiency and marketable surplus, see Jeremy Atack and Fred Bateman, *To Their Own Soil: Agriculture in the Antebellum North* (Ames: Iowa State University Press, 1987), 201-224.

⁶⁵Susan O. Haswell, "Colonizing the Cutover: the Environmental and Historical Context for Changing Land Use Patterns in Northwestern Wisconsin, from Earliest Settlement to Planned Communities of the Progressive Era." Unpublished M. A. thesis, University of Wisconsin-Madison, 1992, 92-95.

addition to supervising the company's shipping and cordwood operations at Glen Haven, Day also took responsibility for its farm.⁶⁶

Day was listed as agent of NTC's 1,600-acre farm in the 1880 federal census of agriculture, which enumerated 44 farms in Glen Arbor Township. The NTC farm supported 20 sheep, 16 swine, and 20 milk cows--by far the largest dairy herd in the township at that time. Thomas Kelderhouse, whose 2,800-acre farm near Port Oneida was the largest in Glen Arbor Township, maintained a herd of eight cows. His neighbor, Carsten Burhend, had the township's third-largest herd, with five cows. All three farms grew corn, oats, wheat, hay, and potatoes.⁶⁷

By 1880, more than half the township's farms also featured apple or peach orchards. (None had reported income from orchard products in the 1870 agricultural census, although there probably were some bearing trees in the township.) Washington Brotherton's farm had the largest single apple orchard, with 125 bearing trees, while Joseph St. Peters and Carsten Burfiend each reported 100 apple trees. Several members of the Miller family--Daniel Miller and sons Wells, Marshall, Silas, and Albert--also grew fruit. Some 200 apple trees and 100 peach trees were enumerated on four Miller farms. The Millers, who lived on Miller's Hill overlooking the eastern shore of Glen Lake, had begun planting orchards in the 1860s and were among the first producers to ship fruit from Glen Arbor and Glen Haven.⁶⁸

In some Lakeshore townships, orchards apparently had been planted prior to the 1880 census, but the young trees were not bearing fruit as yet. For example, in Platte Township, 18 farms reported acreage in orchards, but no bearing trees were enumerated. Only one Platte Township farmer, Calvin Peck, had producing trees: 120 peach and 20 apple. In Benzie County's longer-settled communities, more orchards had reached maturity. For instance, the leaders of the Benzonia colony, the Rev. C. E. Bailey and his brother, John, had planted peach and apple trees soon after their arrival in 1858, as did several other settlers in the community. Many varieties raised by the pioneer orchardists proved

⁶⁶Ron Cockrell, *D.H. Day's Kingdom: A Special History Study of Glen Haven Village Historic District, Sleeping Bear Dunes National Lakeshore, Michigan* (Omaha: National Park Service, Midwest Regional Office, 1984), 5, 8; Robert Dwight Rader, *Beautiful Glen Arbor Township: Facts, Fantasy & FOTOS* (Glen Arbor, Michigan: Glen Arbor History Group, Inc., 1991), 29.

⁶⁷Manuscript schedules, Tenth Census of the United States, Productions of Agriculture (1880). See Glen Arbor Township. Microfilm copy on file at State Archives of Michigan, Lansing.

⁶⁸*Ibid.*; Rader, *Beautiful Glen Arbor*, 28.

unsuited to local conditions, however. "It was all guess work as to what would succeed," recalled one Benzonia resident years later.⁶⁹

Although some farmers of the Sleeping Bear region were starting to take advantage of the district's potential for fruit-growing, general farming remained the predominant form of agriculture throughout the Lakeshore townships in 1880. Potatoes, hay, and feed grains were grown on most farms, few of which supported more livestock than would have been needed to supply meat and dairy products for the resident family. Maple sugaring continued to be practiced on many farms, especially in Benzie County.

At the time of the 1880 census, the Manitou Islands supported a total of 18 farms, which generally followed the same patterns of production as those on the mainland. Among the islands' leading producers was the George Johann Hutzler farm on South Manitou. Hutzler kept the island's largest dairy herd (eight cows) and produced its largest rye crop (500 bushels on 20 acres). George Conrad Hutzler, a half-brother to George Johann, operated a 160-acre farm near the center of South Manitou. Conrad Hutzler (as he is listed on the 1880 federal census of agriculture) had claimed land on the island in 1868 under the Homestead Act, arriving some years after his half-brother. Although George Johann Hutzler's farm was enumerated in the federal agricultural census of 1870, Conrad's was not. By 1880, however, Conrad Hutzler had cleared 20 acres and kept five cows, ten other cattle, and eight swine. His farm also produced hay, barley, oats, potatoes, and rye; the latter crop subsequently brought national renown to the Hutzler farm.⁷⁰

Throughout Benzie and Leelanau counties, the amount of improved agricultural land in the region increased slightly during the closing decades of the nineteenth century. In 1880, for example, the region's farms embraced 162,000 acres of land (54,000 acres in Benzie and 108,000 in Leelanau). Of the entire amount, some 45,000 acres (28%) were listed as improved. Between 1880 and 1890 a slight decline occurred in the total amount of land being farmed

⁶⁹J. Hubbell, "Benzie County," [History of Michigan Horticulture], in State Horticultural Society of Michigan, *Tenth Annual Report of the Secretary of the State Horticultural Society of Michigan, 1880* (Lansing: W. S. George & Co., 1881), 218.

⁷⁰Manuscript schedules, *Productions of Agriculture (1880)*; see Manitou County, South Manitou Island; Vent, *South Manitou Island*, 37; U. S. Land Office, *Local Tract Books*, State Archives of Michigan.



Figure 17. D. H. Day farm, near Glen Haven, 1992.



Figure 18. Harvesting grain at the John Dechow farm with one of the earliest self-binders in Cleveland Township, date unknown.

(156,000 acres), but the amount of improved land increased to 57,000 acres (36% of the total).⁷¹

Even though agriculture was gaining in importance, the forest products industry still dominated the local economy. Many lakeshore farmers supplemented their income by providing cordwood for passing steamships; but changes in maritime technology in the late 1800s curtailed the once-thriving fuel wood trade. The new metal-hulled steamships burned coal, obviating routine fueling stops along the Manitou Passage. This development not only slowed the demand for cordwood, but also threatened to eliminate the region's primary trade connection with the outside world. Among the many Lakeshore settlers who had earned their livelihoods from the cordwood trade was George Conrad Hutzler, who by 1880 had re-directed his energies into clearing more farm land on his South Manitou homestead. "We had to farm so as to eat," his son recalled years later.⁷²

Across the Manitou Passage at Glen Haven, the National Transportation Company's wooding operation also was in decline by 1880. Ships no longer were stopping at the dock, and the company's directors subsequently voted to sell the Glen Haven properties. In 1881, D. H. Day raised the funds necessary to purchase most of NTC's real estate in the Sleeping Bear area, including the village of Glen Haven. Day also acquired two steamships, with which he established a freight and passenger service between Chicago and Cheboygan.⁷³

In an effort to keep Glen Haven alive and repay his debts, Day subsequently bought the sawmill at Glen Lake, which cut daily some 2,000 board feet of hardwood lumber and more than 30,000 board feet of hemlock.⁷⁴ Although his goal clearly was financial gain, Day hoped to realize more than a profit from his logging operation. In contrast to most contemporary lumbermen, who took the "cut and get out" approach to logging, Day envisioned a more

⁷¹U. S. Census Office, *Report on the Productions of Agriculture as Returned at the Tenth Census, June 1, 1880* (Washington, D. C.: Government Printing Office, 1883); U. S. Census Office, *Report of the Statistics of Agriculture in the United States at the Eleventh Census: 1890* (Washington, D.C.: Government Printing Office, 1895).

⁷²Russell Lord, "My Visit with the Island Farmers Who Grow the Best Rosen Seed Rye in the Country," *Farm and Fireside*, December 1925, 11.

⁷³Cockrell, *D. H. Day's Kingdom*, 9-10.

⁷⁴*ibid.*, 10.

sustainable operation.⁷⁵ Included in the approximately 8,000 acres in Leelanau County that Day eventually acquired was a tract of about 1,400 acres of cutover land that had been logged by the National Transportation Company in the 1870s. On this tract, which stretched from the northwestern shore of Glen Lake to Lake Michigan, Day raised a second-growth forest of oak, ash, cherry, birch, and maple. By the 1920s, the so-called Day Forest was nearing maturity, and Day was gaining regional acclaim as a pioneer in the state's reforestation movement.⁷⁶

Day's passion for stewardship motivated not only his reforestation efforts, but also his agricultural pursuits. He developed the former NTC farm into a showplace, naming it "Oswagatchie."⁷⁷ Here, within sight of the Sleeping Bear Dune, Day's employees ran a large livestock operation that eventually housed 200 Holstein cattle and 400 hogs. By 1903, the 400-acre farm was described as:

. . . one of the best appointed in the county. It is free from stumps and the latest farm machinery is utilized in the cultivation of the land. On this [Day] is extensively engaged in the production of fruit and has set out an ample orchard of over three thousand trees, which are now in excellent bearing condition, and his sales from the orchard amount to a gratifying figure annually.⁷⁸

⁷⁵As a young botany professor on the faculty of Michigan Agricultural College in 1888, Liberty Hyde Bailey, Jr., toured the cutover lands of the northern Lower Peninsula, later describing typical logging practices of the day: "The whole business of lumbering impresses one as exceedingly slovenly. Every move of the ordinary lumberman proves that his desire is to skin the country, to pocket the 'almighty dollar,' irrespective of the ultimate and permanent damage wrought to the country. Your reporter, for one, can entertain little respect for the man who buys his land solely for the timber it contains, slashes off the forest in the most reckless manner, and then allows the denuded and devastated land to revert to the State." [Bailey's observations are included within W. J. Beal, "Report of the Botanist of the Experiment Station," in *First Annual Report of the Agricultural Experiment Station of the State Agricultural College of Michigan for the Year Ending June 30, 1888* (Lansing: Thorp & Godfrey, 1888), 65].

⁷⁶"King David' of Leelanau," reprinted from *Traverse City Record-Eagle*, in *The Michigan Property Owner*, Sept. [n.d.--c. 1922-27], 13; photocopy of article on file at Sleeping Bear Dunes National Lakeshore Library, Empire, Michigan.

⁷⁷Listed among the steamers operated by the Northern Transportation Company in 1874 was the "Oswegatchie." See Charles Armstrong, "Cape Vincent's Role in the Northern Transportation Company Fleet," *Inland Seas* 4 (Fall 1948): 156.

⁷⁸Elvin Sprague, *Sprague's History of Grand Traverse and Leelanaw Counties, Michigan* (Indianapolis: B. F. Bowen Publishers, 1903), 512.

Day also has been credited with planting the first cherry orchard in the Glen Haven area, supposedly in the 1890s.⁷⁹ By that time, however, cherry orchards were well established elsewhere in the Sleeping Bear region. The Rev. George Smith had planted cherry trees at Northport in 1853. Fourteen years later, Sanford Howard, the secretary of the state board of agriculture, visited Smith's cherry orchard, which he found "handsomely set to fruit, and the trees appeared healthy and thrifty." Howard further observed:

No reason appears why cherries may not succeed over nearly the whole of the Grand Traverse region. The comparative mildness and uniform temperature of the winter, together with the generally porous nature of the soil, may be regarded as favorable to the finer kinds of this fruit, or the so-called "heart" cherries.⁸⁰

By the 1870s, many farms in the area maintained at least a few cherry trees for home use, while Wellis B. Miller of Glen Arbor Township had a cherry orchard with 100 bearing trees as early as 1872.⁸¹

Fifty years before the Grand Traverse region attained renown as a cherry producing district, however, other types of fruit were being raised successfully there, with the surplus produce being shipped to markets in Chicago, Wisconsin, and the Upper Peninsula. An estimate of fruit shipped from Northport in 1869 included 700 baskets of peaches, 250 bushels of apples, and 600 pounds of grapes. Smaller quantities of pears, blackberries, and strawberries also were shipped that year.⁸² By the early 1880s, the *Leelanau Enterprise* was reporting shipments of apples, peaches, and plums leaving port for Chicago.⁸³ Fruit shipping started somewhat later from Benzie County. "No fruit to speak of has been shipped as yet from this county," reported J. J. Hubbell of Benzonia in an 1880 report to the State Pomological Society of Michigan. "The old orchards are

⁷⁹Ron Cockrell and Thomas Hensley, National Register of Historic Places Inventory/Nomination Form for Glen Haven Village Historic District, 22 November 1982. Item number 8, page 2.

⁸⁰Sanford Howard, "Fruit Culture at Grand Traverse [1867]," in *Third Annual Report of the Secretary of the State Pomological Society of Michigan, 1873* (Lansing: W. S. George & Co., 1874), 126.

⁸¹Lawrence and Lucille Wakefield, "Early History of Cherry Growing in the Grand Traverse Region," in *Traverse City's National Cherry Festival: A Pictorial History* (Chelsea, Michigan: Book Crafters, Inc., 1987), 117.

⁸²Clubb, "Fruit Lands of Western Michigan," 443.

⁸³Wakefield, ed., *A History of Leelanau Township*, 86.

small, and set only for family supply."⁸⁴ As local orchardists continued to expand their operations, the Grand Traverse region became identified as the northern extension of Michigan's "Fruit Belt," a 300-mile-long strip along the Lake Michigan shoreline from Berrien County to Grand Traverse Bay.⁸⁵

The fruit belt had its origins in Berrien County, where the first permanent Euro-American settlers at St. Joseph had found mature peach trees that had been planted years earlier by Indian trader William Burnett. Several followed his example and set out peach and apple seedlings. In 1840, Capt. Curtis Boughton carried Michigan peaches in his vessel to Chicago. He found a ready market, and by 1850 was shipping 10,000 bushels per year. News of Boughton's huge profits inspired growers in southwestern Michigan to start peach orchards. Fruit culture spread rapidly northward to the Grand Traverse region. By the beginning of the Civil War, Michigan's fruit belt was attracting national attention.⁸⁶

One of the St. Joseph district's leading orchardists, George Parmalee, acquired land on the Old Mission Peninsula in the mid-1860s with the intention of growing peaches and grapes.⁸⁷ Other veteran fruit growers also began to establish orchards in the region. In the August 1870 edition of the *Atlantic Monthly*, the prominent landscape architect H. W. S. Cleveland reported that "some of the principal fruit growers of St. Joseph have recently purchased large tracts in the Grand Traverse region for horticultural purposes," noting further that, "apples, cherries, pears, plums, and all of the best varieties of vegetables, attain their highest degree of perfection in this favored land."⁸⁸

Members of local agricultural societies were among the most enthusiastic promoters of fruit culture. "Fruit-orchards that have commenced bearing are small, but the fruit is of very excellent quality," reported the secretary of the Benzie County Agricultural Society in 1871. In the same year, the Rev. George Smith reported a good crop of peaches and apples in Leelanau County,

⁸⁴Hubbell, "Benzie County," 219.

⁸⁵Clubb, "Fruit Lands of Western Michigan," 442.

⁸⁶Larry B. Massie, "Plows, Ships and Shovels: Economic Development in Michigan, 1836-1866," in *Michigan: Visions of Our Past*, ed. Richard J. Hathaway (East Lansing: MSU Press, 1989), 97-112.

⁸⁷Howard, "Fruit Culture at Grand Traverse," 125.

⁸⁸H. W. S. Cleveland, "The Grand Traverse Region of Michigan," *Atlantic Monthly* 26 (August 1870): 191-195.

predicting that "the Grand Traverse country is destined to become a rich farming and fruit-growing region."⁸⁹

Two years later, State Pomological Society judges awarded premiums to Benzie County fruit at a state-wide exhibition in Traverse City. The growing importance of fruit to local agriculture was apparent at the Benzie County Agricultural Society's 1873 fair, which featured the largest number of fruit entries to date. According to the society's secretary:

The country is improving very fast, and all are satisfied that fruit is a success, and people are setting out all the fruit trees that they can get means to buy. . . .Benzonia county [sic] stands second to none in the State in the quality of its fruits, as has been decided by the officers of the State Pomological Society at their meetings this fall.⁹⁰

Two years later, the fruit exhibit had become the "crowning glory" of the Benzie fair, featuring 112 entries of apples, pears, plums, and grapes. At a pomological exposition in Chicago, Benzie County was judged one of Michigan's ten leading fruit-growing counties.⁹¹

New orchards also were reaching maturity along the coasts of Leelanau County in the 1870s. A journalist touring the fruit-growing regions of Michigan in 1874 reported that orchards of peach, apple, pear, and plum trees had recently begun bearing fruit at Glen Arbor, Leland, Northport, New Mission (Omena), and Lee's Point (in present-day Bingham Township).⁹²

Although orchardists experimented with several species and varieties, apples were to remain the most widely-grown fruit in the Sleeping Bear region until the 1930s. One factor behind the enduring popularity of apples was that the local crop matured later in the fall than apples grown farther south, with the result that their "shelf life" extended well into the following spring. This

⁸⁹State Board of Agriculture, *Tenth Annual Report of the Secretary of the State Board of Agriculture of the State of Michigan for the Year 1871* (Lansing: W. S. George, 1871), 402, 422.

⁹⁰State Board of Agriculture, *Twelfth Annual Report of the Secretary of the State Board of Agriculture of the State of Michigan for the Year 1873* (Lansing: W. S. George, 1875), 244.

⁹¹State Board of Agriculture, *Fourteenth Annual Report of the Secretary of the State Board of Agriculture of the State of Michigan for the Year 1875* (Lansing: W. S. George, 1876), 497.

⁹²Henry S. Clubb, "Fruit Regions of Michigan, Eleventh Article: Grand Traverse, Benzie, Leelanaw. . ." in *Twelfth Annual Report of the Secretary of the State Board of Agriculture of the State of Michigan for the Year 1873* (Lansing: W. S. George, 1875), 87-90.

marketing advantage was noted as early as 1867 by Sanford Howard, then secretary of the state board of agriculture:

The further north apples can be grown, or the later they are in ripening, provided they do fully ripen, the later they will keep in the spring, and the better will be their quality. We are informed that the apples taken from the vicinity of Northport to Chicago, in spring, have been pronounced superior in quality to any others of the same kinds in that market.⁹³

By 1874, late-ripening apples from the Grand Traverse region had established a niche in the Chicago market, reported journalist Henry S. Clubb:

. . . the finest of winter apples can be raised in the highest perfection, keeping sound and good as late as June the following season--apples that will command a ready sale at \$10 a barrel in Chicago, as soon as navigation opens in the spring . . .⁹⁴

The Michigan secretary of state's annual reports on farms and farm products, first published in 1879, document the increase of acreage in apple and peach orchards in Benzie and Leelanau counties.⁹⁵ In 1879, nearly 1,400 acres were devoted to apple orchards in Benzie and Leelanau counties, while peach orchards comprised only 38 acres.⁹⁶ Four years later, there were still twenty times as many acres in apple orchards as in peach orchards. By 1883, apple orchards had increased to about 1,750 acres, while peach orchards increased only slightly to 88 acres.⁹⁷

Another increase in apple orchard acreage was recorded in the 1888 Michigan agriculture census. A total of almost 2,000 acres was planted to apple

⁹³Howard, "Fruit Culture at Grand Traverse," 124-5.

⁹⁴Clubb, "Fruit Regions of Michigan," 99.

⁹⁵Data on Manitou County's fruit crops are fragmentary, due to changes in township boundaries and incomplete returns, and therefore are not included in the following summary. After 1895, data from the Manitou Islands are included with Leelanau County returns. Data on the acreage of other types of fruit trees grown in the Sleeping Bear region, including cherries, plums, and pears, were not included in the secretary of state's annual reports until around the turn of the century.

⁹⁶Secretary of State, First Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1878-9. (Lansing: W. S. George & Co., 1880), 145, 156.

⁹⁷Secretary of State, Fifth Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1882-3. (Lansing: W. S. George & Co., 1884), 160, 174.

trees in both counties, while peach acreage dropped to 61 acres only.⁹⁸ By 1893, another increase had taken place in both apple and peach acreage, with almost 2,400 acres in apples and 200 acres in peach orchards documented in Benzie and Leelanau counties.⁹⁹ Over the succeeding five years, land in orchards jumped sharply. In 1898, the total area in apple orchards in both counties (including the Manitou Islands) was nearly 4,000 acres, with just over 1,000 acres in peach orchards.¹⁰⁰

The secretary of state's report for 1902-3 included orchard acreage not only for apples and peaches, but for cherries, pears, and plums, as well. Apples remained the most widely-grown orchard fruit in both counties in 1902, with nearly 2,700 acres in Leelanau County and about 1,300 in Benzie County. As in previous years, peaches ranked second in the number of acres in orchards. Benzie County, with approximately 800 acres of peach orchards, had about five times the peach acreage of Leelanau County, with about 150 acres.¹⁰¹

Acreage in cherries, plums, and pears remained comparatively low across the two counties in 1902. In Benzie County, cherries ranked a distant third in acreage, with only 72 acres in orchards. Plums ranked fourth (40 acres), and pears, fifth (37 acres). In Leelanau County, pears were the third most widely-grown orchard fruit, with 38 acres. Plum orchards comprised 37 acres, and cherries ranked last of the five fruits documented, with only 31 acres under cultivation.¹⁰²

While the data demonstrate that fruit culture clearly was gaining in importance in the Sleeping Bear region in the two decades prior to the turn of the century, the amount of improved land devoted to orchards remained relatively low. Between 1879 and 1902, the percentage of Benzie County's improved land devoted to orchards varied between 6 and 11 percent. In Leelanau County

⁹⁸Secretary of State, *Tenth Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1887-8*. (Lansing: Darius D. Thorp, 1889), 110, 119.

⁹⁹Secretary of State, *Fifteenth Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1892-3* (Lansing: Robert Smith & Co., 1894), 114, 123.

¹⁰⁰Secretary of State, *Twentieth Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1897-8* (Lansing: Robert Smith & Co., 1899), 116, 120.

¹⁰¹Secretary of State, *Twenty-Fifth Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1902-3* (Lansing: Robert Smith & Co., 1904), 139, 148.

¹⁰²*Ibid.*

during the same period, the percentage of improved land in orchards varied between 4 and 6 percent.¹⁰³

After the popularity of wheat waned in the early 1880s, the agricultural landscape of both counties was dominated by hay and forage crops, corn, and oats. As previously discussed, wheat occupied the highest percentage of improved acres in the Sleeping Bear region in 1878. In Benzie County, 18 percent of the improved acreage was in wheat, while 24 percent of Leelanau County's improved land was in that crop. In both counties, however, an almost equal amount of acreage was devoted to hay and forage crops as was cultivated for wheat. In Benzie County, 17 percent of improved land was in hay and forage, with 20 percent in Leelanau County. The third most widely-grown crop in Benzie County in 1878 was corn (16 percent of the improved acres) and in Leelanau County, oats (10 percent). Compared with other principal crops, orchard fruits ranked fifth in both counties in terms of the percentage of improved land they occupied. Potatoes, an important cash crop, ranked just below orchards.¹⁰⁴

Throughout most of the 1880s and 1890s, hay and forage crops occupied the highest percentage of improved land in both counties, with other feed crops such as corn or oats usually ranking second. Wheat continued to be one of the region's principal crops, but in most years it ranked third or lower in terms of the percentage of improved land. Potatoes and orchard fruits generally ranked fifth or sixth. These comparisons suggest that a pattern of general farming prevailed throughout the region, with the majority of improved land being devoted to raising food for livestock. Overall, the amount of land in farms in the two counties (excluding Manitou) grew from 156,000 acres in 1890 to 211,000 acres in 1900; the number of improved acres demonstrated a commensurate gain from 59,000 to 72,000 acres.¹⁰⁵

With the exception of some local agricultural society members, few farmers in the Sleeping Bear region had embraced the principles of "scientific agriculture." Fertilization and soil conservation techniques remained virtually

¹⁰³ Authors' calculations, based upon data from Secretary of State, Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1878-9 to 1902-3.

¹⁰⁴ Authors' calculations, based upon data from Secretary of State, First Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1878-9. (Lansing: W. S. George & Co., 1880).

¹⁰⁵ Authors' calculations, based upon data from Secretary of State, Annual Report of the Secretary of State of the State of Michigan Relating to Farms and Farm Products, 1878-9 to 1902-3.

unknown, purebred livestock was scarce, and the testing of new crop varieties took place on individual farms on a trial-and-error basis.

Contemporary accounts suggest that the region's orchardists were more actively involved in agricultural experimentation than their peers in the general farming sector. One of the earliest known attempts at experimental farming in the Grand Traverse region took place at Grove Hill Farm on the Old Mission Peninsula. By the early 1870s, a test orchard with 88 varieties of pears and 72 varieties of apples was under development by W. W. Tracy, a seed expert and former botany professor at Michigan Agricultural College (MAC). Tracy's partner in the venture, Henry G. Reynolds, had graduated from MAC in 1870, afterwards pursuing a year of postgraduate study in Germany. Several years after establishing Grove Hill Farm, Reynolds was appointed to the State Board of Agriculture, on which he served as secretary from 1885 to 1892.¹⁰⁶

In addition to its experimental orchards, Grove Hill Farm supported the commercial production of apples, pears, and farm crops, including Hubbard squash intended for the Detroit and Boston markets.¹⁰⁷ While it was managed by MAC alumni, Grove Hill Farm nevertheless was a privately-owned enterprise whose main objective was profit, not research. More than a decade was to pass before the agricultural problems of northern Michigan found a place on the research agenda of publicly-funded MAC investigators.

William J. Beal, MAC's legendary botany professor and botanist of the state agricultural experiment station, made four trips through the Lower Peninsula's northern counties in 1888, "in the interests of scientific agriculture in its broadest sense." On one of these expeditions, Beal and a party of scientists traveled west from Harrisville, on Lake Huron in Alcona County, across the pine plains to Grayling, in Crawford County, and thence through Kalkaska, Grand Traverse, and Benzie counties. They ended their two-week journey at Frankfort, boarding a lake steamer for their return to East Lansing.¹⁰⁸

As a result of the expedition, Beal compiled a partial list of the region's flora. After comparing the northern Lower Peninsula's east and west coasts, Beal's party concluded: "we could not help thinking that, with some exceptions,

¹⁰⁶Madison Kuhn, *Michigan State: The First Hundred Years* (East Lansing: Michigan State University Press, 1955), 109, 114, 130, 183.

¹⁰⁷Clubb, "Fruit Regions of Michigan," 97.

¹⁰⁸W. J. Beal, "Report of the Botanist of the Experiment Station," in *First Annual Report of the Agricultural Experiment Station of the State Agricultural College of Michigan for the Year Ending June 30, 1888* (Lansing: Thorp & Godfrey, 1888), 51.

the west part of the State was better than the east side, especially when we consider the raising of orchard fruits." Although they passed through extensive sections of jack-pine plains and observed many abandoned farms, they did find some land suited to agriculture. "Much of this northern country, from Alcona to Benzie counties, appeared to us admirably adapted to dairying," noted Beal. "Potatoes, oats, spring wheat, peas, grasses and clovers thrive admirably when properly managed on suitable soil."¹⁰⁹

Unfortunately, many of northern Michigan's new farmers did not have the skills and capital necessary for success, Beal maintained:

One serious trouble with the farming in this new country is the lack of experience and lack of means of many who are engaged in the business. They cannot work to advantage. They work on the farm a little, but mostly at lumbering. Many of those living there on small farms have been educated in other pursuits. They do not seem to understand that farming is a complicated business which for success needs a long and special training.¹¹⁰

One objective of the Beal expedition--to find a native grass that could be used agriculturally to build the organic content of sandy soils--met with failure. Undaunted, Beal planted several exotic varieties of grass on a newly-established experimental farm just outside of Grayling. The Grayling tract was one of the first substations funded through the Hatch Act of 1887, which granted \$15,000 annually to each state for agricultural research. Ultimately, the grass experiments failed and the Grayling station was abandoned.¹¹¹

In addition to the Grayling tract, MAC's Agricultural Experiment Station developed several additional test plots in the northern Lower Peninsula. Experimental work at Oscoda (Iosco County), Baldwin (Lake County), Harrison (Clare County), and Walton (Grand Traverse County) was described in the Experiment Station's first annual report, published in 1888.¹¹²

Established about the same time in the heart of southwestern Michigan's orchard district was a fruit experiment station under the direction of T. T. Lyon, one of Michigan's pioneer horticulturists. Hundreds of varieties of peaches,

¹⁰⁹*Ibid.*, 61.

¹¹⁰*Ibid.*, 60-61.

¹¹¹Kuhn, *Michigan State*, 162-167.

¹¹²Beal, "Report of the Botanist of the Experiment Station," 50.

apples, pears, grapes, strawberries, and figs were tested at the station, located near South Haven in Berrien County. Other MAC Experiment Station scientists of the period whose work benefited orchardists were A. J. Cook, who in 1887 became the first person to record the use of insecticide sprays against the plum curculio, and Levi Rawson Taft, who in 1889 made the first application of fungicides to apple trees in Michigan. In 1895, Taft and G. C. Davis distributed the Station's first spraying calendar, a bulletin informing fruit-growers when and how to apply pesticides.¹¹³

These pomological advances had obvious implications for the orchards of the Grand Traverse region, which by the 1890s were producing large quantities of cherries for market. One of the first orchards in the region to raise cherries on a large scale was the Old Mission Peninsula's Ridgewood Farm, planted in 1893. Among the first to raise cherries commercially in Leelanau County were Fred Baumberger, Steiner Garthe, Hugh Scott, Wilbur Steele, M. O. Morgan, and Byron Woolsey, all with orchards in the Northport area. Another early cherry grower was A. J. "Gus" Rogers near Empire.¹¹⁴

After the turn of the century, cherry production "took off like a skyrocket," according to Lawrence Wakefield, author of several local histories on the Grand Traverse region. More than 200,000 new cherry trees were planted in 1909 alone. In November of that year, 80 Northport-area orchardists organized the Northport Fruit Growers' Association. Membership benefits included cooperative purchasing of spraying materials and young trees. During its first year of operation, the Association's educational program sponsored six public meetings and a spraying demonstration. A smaller group, the Suttons Bay Fruit Growers' Association, was organized about the same time as the Northport organization.¹¹⁵ Another auxiliary to the State Horticultural Society, the Benzie County Horticultural Society, was organized around 1911.¹¹⁶

¹¹³Kuhn, *Michigan State*, 163-4.

¹¹⁴L. & L. Wakefield, "Early History of Cherry Growing," 117.

¹¹⁵*Ibid.*; "Northport Fruit Growers' Association," and "Suttons Bay Fruit Growers' Association," in *State Horticultural Society of Michigan, Fortieth Annual Report of the Secretary of the State Horticultural Society of Michigan for the Year 1910* (Lansing: Wynkoop Hallenbeck Crawford Co. 1911), 201, 210.

¹¹⁶"Benzie County Horticultural Society," in *State Horticultural Society of Michigan, Forty-first Annual Report of the Secretary of the State Horticultural Society of Michigan for the Year 1911* (Lansing: Wynkoop Hallenbeck Crawford Co. 1912), 198.

In 1912, the mammoth Cherry Home Orchard was established near Northport. Partners in the venture were Francis H. Haserot, a grocer from Cleveland, Ohio, and Gilman Dame. Dame was an inspector with the State Dairy and Food Commission and also was grandson of Northport pioneer Joseph Dame. On a 200-acre tract north of the village, 14,000 Montmorency cherry trees were planted, creating what was reportedly the largest tart cherry orchard in the world. In its heyday, the Cherry Home operation included a warehouse, canning factory, and a deep-water dock that could accommodate large ships.¹¹⁷

By 1914, cherries had surpassed apples in market value in the Grand Traverse area. (Apple trees still far outnumbered cherry trees in Benzie and Leelanau Counties, however.) A Traverse City newspaper estimated the value of the local cherry crop at \$500,000, reporting that 240 refrigerated railroad cars full of cherries had been shipped to markets in Detroit and Chicago.¹¹⁸

In the vicinity of Empire, cutover tracts owned by the Empire Lumber Company had been converted to fruit production and grazing land. In Benzie County, horticulturist Paul Rose was gaining recognition state-wide for his work with Elberta peaches and muskmelons. In the early 1890s, Rose and his family had relocated from Benton Harbor to an 80-acre tract of stumps, brush, and woodland in Benzie County. Located about three miles southeast of South Frankfort in Gilmore Township, Rose Orchards by the 1910s was well-known to members of the State Horticultural Society, who invited both Mr. and Mrs. Paul Rose to address their annual conferences. Around 1910, the citizens of South Frankfort renamed their village Elberta in recognition of Rose's contributions to peach culture. A portion of state highway 685 running through Gilmore Township is named Paul Rose Road in his honor.¹¹⁹

Despite the increasing popularity of fruit culture, potatoes remained the most valuable crop in both Benzie and Leelanau counties in 1910, according to a survey of agricultural conditions in the Lower Peninsula by geologist Frank Leverett. After potatoes, Benzie County's other principal crops (ranked in order

¹¹⁷*Ibid.*; Wakefield, ed., *History of Leelanau Township*, 84.

¹¹⁸L. & L. Wakefield, "Early History of Cherry Growing," 117.

¹¹⁹Dave and Diane Taghon, compilers, *Remembering Empire Through Pictures*, 1987 ed. (Empire, Michigan: Empire Area Heritage Group, 1978), 36; Leonard Case, *Benzie County: A Bicentennial Reader* (Benzonia, Michigan: Benzie County Bi-Centennial Commission, 1976), 47; Mrs. Paul Rose, "Fruit Growing from a Woman's Standpoint," and Paul Rose, "Problems that Confront the Michigan Fruit Growers," in *State Horticultural Society of Michigan, Forty-Second Annual Report of the Secretary of the State Horticultural Society of Michigan for the Year 1912* (Lansing: Wynkoop Hallenbeck Crawford Co., 1913), 76-77; 112-120.

of economic importance) were corn, hay, rye, oats, wheat, and buckwheat. In Leelanau County, crops ranking after potatoes in value were hay, corn, oats, rye, and wheat. Describing the soils of Benzie County, Leverett noted, "The coating of loam on the gravel plains is very thin so they are but little more productive than the sandy areas. The sandy till forms excellent orchard and fair farm land." Leverett's assessment of Leelanau County was more favorable:

This county has a good soil and is in an exceptionally favored situation for growing orchards, fruits, and vegetables, being a peninsula between Lake Michigan and Grand Traverse Bay. But in this direction there has been less development than in neighboring counties. The Manitou Islands. . . are also favorably situated for growing orchards and fruits.¹²⁰

In its overall agricultural development, however, Leelanau County continued to outpace Benzie County. The 1910 federal census enumerated 1,444 farms in Leelanau County, compared with 1,245 in Benzie County. Indeed, 1910 marks the highpoint for farm numbers in the region. The average farm, however, was relatively small. A typical Leelanau County unit was 110 acres in size, while its Benzie County counterpart averaged only 80 acres. (The mean size of a Michigan farm was just over 90 acres in 1910.) Leelanau County also had a larger percentage of its total farm acreage in an improved state (74 percent), compared to the figures for Benzie County (49 percent) and the entire state of Michigan (52 percent).¹²¹

An organization formed to stimulate agricultural growth, the Western Michigan Development Bureau, pursued a vigorous publicity campaign during the 1910s to attract more farmers to the region's cutover lands. Led by D. H. Day and other prominent members of the business community, the Western Michigan Development Bureau distributed bulletins, magazines, and newspaper columns extolling the region's agricultural potential. Bureau secretary John I. Gibson delivered illustrated lectures with titles such as "Western Michigan, the Land of

¹²⁰Frank Leverett, *Surface Geology and Agricultural Conditions of the Southern Peninsula of Michigan* (Lansing: Michigan Geological and Biological Survey, Publication 9, Geological Series 7, 1912), 93,114.

¹²¹U. S. Department of Commerce, Bureau of the Census, *Thirteenth Census of the United States, Taken in the Year 1910-Vol. VI, Agriculture: Reports by States, with Statistics for Counties* (Washington, D. C.: U. S. Government Printing Office, 1913).

Fruit and Fortune" throughout the state and as far afield as northern Illinois and eastern Iowa. In 1913, Bureau-sponsored exhibits were sent to Pittsburgh, Cleveland, Detroit, and many other Michigan towns. Officials of the region's railroads, such as the Manistee & North Eastern, also got into the act by speaking at local "booster" meetings, where funds were raised to sustain the Bureau's publicity efforts.¹²²

By the early 1920s, the Western Michigan Development Bureau was operating in 20 counties stretching from Grand Rapids to Mackinac, a territory in which lumbering had created millions of acres of unproductive cutover land. The Bureau's secretary reported that 650 settlers had been introduced to the region in one year, and the Bureau also had helped to promote good roads and better methods of farming. Meanwhile, Bureau president D. H. Day continued his personal campaign to bolster the local economy. Convinced of the Sleeping Bear region's potential as a tourist playground, Day in 1922 sold his beloved forest preserve to a Chicago firm, American Park Builders, which planned to turn the property into a deluxe recreational housing development. When complete, "Day Forest Estates" was to include a golf course, bridle paths, and a landing strip. In 1923, the Day Lumber Company ceased operations, but Day had launched a new enterprise--a fruit cannery at Glen Haven--perhaps hoping to counteract the negative economic impact of the mill's closing.¹²³

Its large tracts of cutover notwithstanding, the Sleeping Bear area was beginning to resemble the "farming and fruit-growing region" that the Rev. George Smith had envisioned some 50 years earlier. At the same time that orchardists on the mainland were establishing a reputation for cherry production, farmers on South Manitou Island began attracting national attention for their production of certified rye seed. In the same way that the orchardists had capitalized on the Leelanau Peninsula's unique climate, farmers on South Manitou were discovering the agricultural advantages of their offshore location.

"Coming through with rye": Island Agriculture

In 1919, several South Manitou farmers entered into an agreement with the Michigan Crop Improvement Association to grow only one type of rye on the

¹²²Muhn, *Historic Resource Study: Sleeping Bear Dunes National Lakeshore*, 131-132; Leo Alilunas, "Michigan's Cut-Over 'Canaan'," *Michigan History Magazine* (Spring 1942): 193-196.

¹²³Chase, *Rural Michigan*, 425-426; "How Many Men Will Wait Fifty Years to Watch a Forest Grow? David Henry Day Did!" *The Michigan Property Owner*, Sept. [n.d.-c. 1922? Photocopied article on file at library of SBDNL Headquarters, Empire]; Cockrell, *D. H. Day's Kingdom*, 30.



Figure 19. Andrew Beck farm, South Manitou Island, 1992.

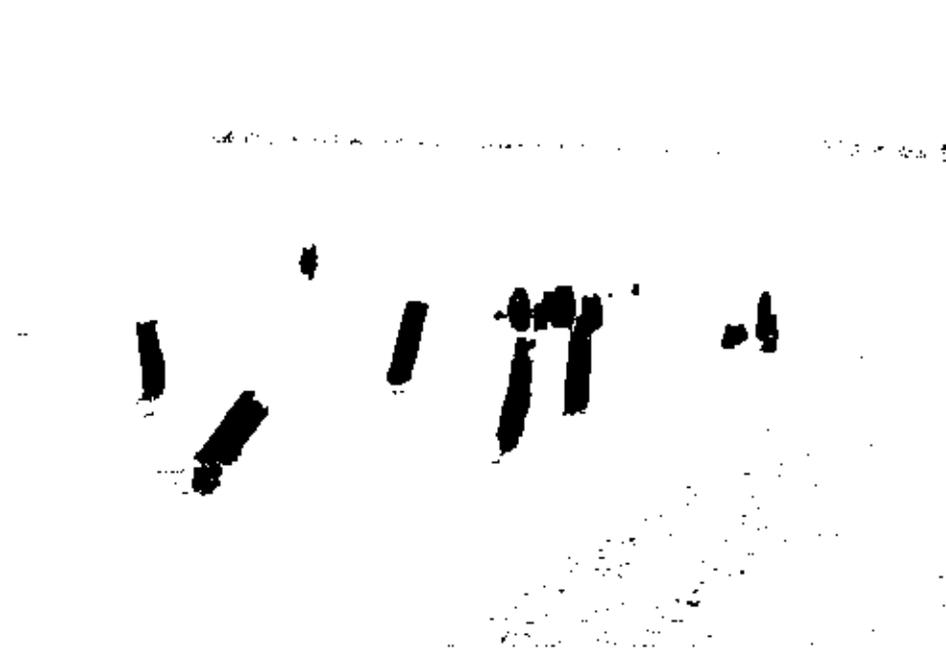


Figure 20. Remnants of dock at South Manitou Bay, 1992.

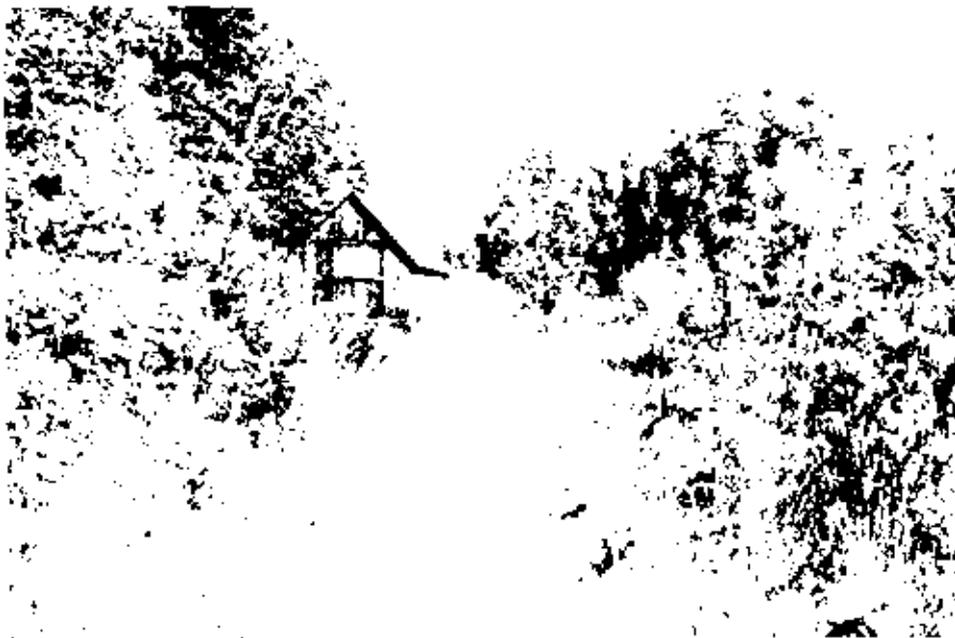


Figure 21. Road to Johann Hutzler farm, South Manitou Island, 1992.



Figure 22. Seasonal residence of the Bournique family, North Manitou Island, 1993.

island: "Rosen," a high-yielding variety that had been discovered ten years earlier on a Russian estate and propagated at Michigan Agricultural College by plant breeder Frank A. Spragg. After three years of propagation at East Lansing, Rosen rye seed was distributed in 1912 to Michigan farmers, with whom it quickly became popular for its unprecedented yields. While the yield of the most commonly-grown varieties averaged about 15 bushels per acre, yields of 40 to 45 bushels per acre were not uncommon with Rosen rye.¹²⁴

Unfortunately, Rosen is an "open fertilized" variety that cross-breeds readily with other types of rye. Under normal field conditions, the strain quickly becomes adulterated from one generation to the next. To ensure a crop of pure Rosen with its high yields, seed must be obtained from plants that have not cross-bred with common varieties of rye. Spragg concluded that, in order to remain pure, a seed crop of Rosen rye would have to be grown at least a quarter of a mile away from common rye. Spragg also had learned that in Denmark, pure seed was raised successfully on offshore islands. Working with the Michigan Crop Improvement Association, which inspected and approved certified seed farms, Spragg and his associates began in 1917 to search for a location where pure Rosen rye seed might be grown. They hoped to find a site for a parent farm that could supply a network of seed farms on the mainland. They found on South Manitou Island the ideal environment.¹²⁵

In 1918, the crop improvement association sent 50 bushels of Rosen rye seed to South Manitou. Grown "in the perfect isolation of the island's forest-surrounded fields," the resulting crop produced some of the purest and best quality seed known, reported Association secretary Howard Rather.¹²⁶ From the start, George Conrad Hutzler, Jr., and his son, Louis, played a major role in the rye experiment:

The Hutzlers took the lead and the next year--after they'd got 20 bushels to the acre compared to 9 and 11 bushels of the native ryes--the other six farmers [on South Manitou]

¹²⁴Russell Lord, "My Visit With the Island Farmers Who Grow the Best Rosen Seed Rye in the Country," *Farm & Fireside* (December 1925): 10; Howard C. Rather, *Coming Through With Rye*, Extension Series No. 44 (East Lansing: Extension Division, Michigan State College of Agriculture and Applied Science, 1925), n. p.; Frank A. Spragg and J. W. Nicolson, *Rosen Rye*, Bulletin No. 10 (East Lansing: Extension Division, Michigan Agricultural College, 1917), 1-2.

¹²⁵Spragg and Nicolson, *Rosen Rye*, 1; Lord, "My Visit With the Island Farmers," 10.

¹²⁶Rather, *Coming Through With Rye*, n. p.

said they'd drown anybody who raised anything but Rosen on the island.¹²⁷

Although the Hutzlers' initial yield was notably lower than those recorded for Rosen rye elsewhere in Michigan, the resulting seed met the experimenters' expectations for genetic purity. Representatives of the MAC Crops Department trained the South Manitou farmers in "head selecting," a laborious process in which the best seed heads were chosen for propagation. Within a few years, "island rye" was gaining national attention for South Manitou and the Hutzlers, whose seeds began winning top prizes at agricultural competitions such as the International Grain and Hay Show in Chicago. Dozens of ribbons, awarded to the Hutzlers for their entries in state and regional competitions, fill three display cases at the South Manitou Island Visitors' Center.¹²⁸

On North Manitou Island, agriculture had evolved quite differently. While South Manitou's reputation as a unique agricultural environment was growing in the 1920s, farming on North Manitou had been in decline since the 1880s. After the arrival of Euro-American settlers, agricultural activity there had been characterized by cycles of development and decline. Census manuscript schedules listed nine farmers on North Manitou in 1860, none in 1870, and seven in 1880.¹²⁹

Silas R. Boardman, a retired banker from Chicago who arrived on North Manitou in the 1880s, played a role in both the recreational and agricultural development of the island. It was largely through Boardman's effort that an enclave of vacation homes, known locally as "Cottage Row," was established at North Manitou village. The Cottage Row subdivision was part of a larger plan envisioned by Boardman to develop island holdings for agricultural and horticultural purposes.¹³⁰

In 1900, a Chicago fruit merchant named Frank Newhall acquired the Boardman properties. Newhall eventually amassed some 8,000 acres, thus becoming the largest landowner on North Manitou. In addition to planting

¹²⁷Lord, "My Visit With the Island Farmers," 10; quoting Howard Rather.

¹²⁸Rather, *Coming Through With Rye*, n.p.; ribbon exhibit observed by authors at South Manitou Island Visitors' Center, 24 Sept. 1992.

¹²⁹Fritz, *History Report on North Manitou Island*, ii.

¹³⁰Robert H. Ruchhoft, *Exploring North Manitou, South Manitou, High, and Garden Islands of the Lake Michigan Archipelago* (Cincinnati, Ohio: The Pucelle Press, 1991), 183.



Figure 23. Hay making on North Manitou Island, date unknown.

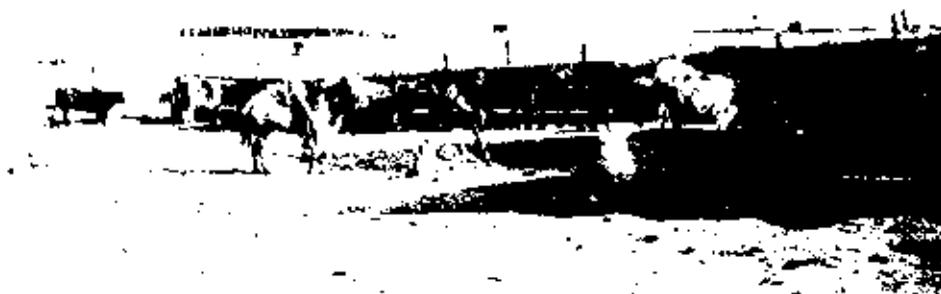


Figure 24. Cattle roundup on North Manitou Island, c. 1900.

apple, pear, and cherry orchards, Newhall raised corn, oats, rye, wheat, and potatoes. After 1908, Newhall's son, John, managed his father's properties. John Newhall continued to buy land on North Manitou, with the goal of turning the island into a fruit plantation. He had few competitors on the island, where only two persons were listed as farmers in the 1910 census. Newhall's enterprise was not entirely successful, however, and he subsequently lost his property to a group of investors, known informally as the "Syndicate," who held his mortgage.¹³¹

The Syndicate controlled the former Newhall properties until 1926, when an automobile executive named William R. Angell bought controlling interest. At the time of Angell's acquisitions, agricultural activities on the east side of the island included fruit raising and some limited production of corn, potatoes, and hay. On the west side, a cattle operation was located at the site of Crescent City. Angell directed his employees to increase hay production and to raise oats and barley.¹³²

Under the aegis of various Angell-owned organizations such as the Manitou Island Association and the Angell Foundation, agricultural activity continued on a limited basis until the 1950s. The largest orchard on North Manitou during this period was the Frank Farm, located northwest of North Manitou village. Additional orchards were located adjacent to the island's landing strip. Four bunkhouses were built near the landing strip by the Manitou Island Association to house migrant workers brought to the island to harvest fruit.¹³³

Paul Maleski, Sr., the island's last independent farmer, left North Manitou in 1940. Around the turn of the century, the Maleski family had operated a cattle business until their practice of allowing the livestock free range of the island had to be discontinued because of the dangers it posed for visiting tourists. The Maleskis then turned to truck farming, an enterprise that proved only marginally successful after the introduction of deer to the island by William Angell in the 1920s.¹³⁴

¹³¹*Ibid.*, 183-185.

¹³²Fritz, *History Report on North Manitou Island*, ii.

¹³³Ruchhoft, *Exploring North Manitou*, 225, 251.

¹³⁴*Ibid.*, 200-223.

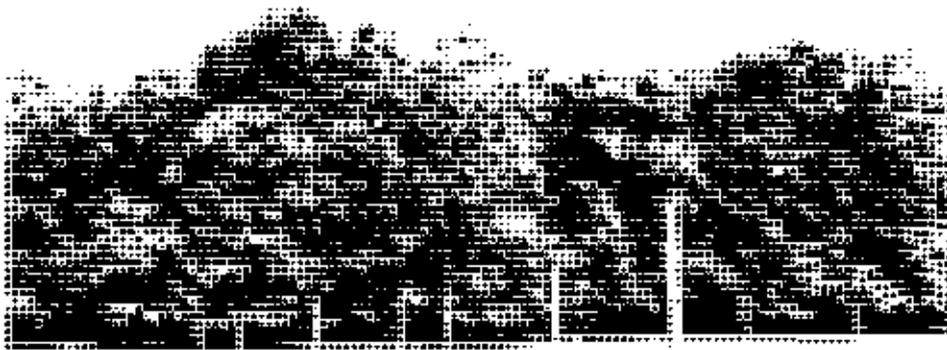


Figure 25. Remnants of deer fence around garden plot, North Manitou Island, 1993.



Figure 26. Abandoned road, North Manitou Island, 1993.

Meanwhile, crop improvement work was under way on the mainland. In a cherry orchard near Benzonia, Benzie County agricultural agent James L. Kraker in 1920 had begun applying fertilizers to young trees of the popular Montmorency variety. A summary of Kraker's experiment, which was directed by MAC horticulturist Victor R. Gardner, appeared in the May 1923 *Michigan Quarterly Bulletin*. The fertilized trees in Kraker's experiment each produced about 30 pounds more fruit than the untreated trees.¹³⁵

Benzie County fruit dominated the competition at the first annual Apple and Potato Show, held at Grand Rapids in December 1922. "We had things pretty much our own way, and brought home 75 percent of the premiums," Kraker reported. Labels placed on all the fruit exhibits, identifying them as "Grown in Benzie," caused one visitor to inquire what kind of fertilizer "Benzie" was.¹³⁶

Despite these successes, the Benzie County Board of Supervisors denied the appropriation for extension work for 1924. A campaign by the local Farm Bureau to raise private funds to continue the county agent's position apparently met with failure, and following Kraker's departure in April 1924, Benzie County went without an agricultural agent until January 1929. Extension work in Leelanau County suffered a similar hiatus in the early 1920s. The county agent's position was vacant from January 1923 to March 1925, when Charles E. Atwater was appointed to serve both Leelanau and Grand Traverse counties.¹³⁷

A possible explanation for the local lack of support for extension work in the early 1920s is that farmers throughout Michigan were struggling to adjust to the aftershocks of a post-war depression, which had caused a catastrophic drop in farm prices.¹³⁸ County boards in hard-hit rural areas must have been under considerable pressure to trim services deemed "non-essential" by their

¹³⁵J. L. Kraker, "Fertilization of a Sour Cherry Orchard: The Use of Ammonium Sulphate and Acid Phosphate on an Orchard of Montmorency Cherries Made an Increased Net Gain of \$34.29 per Acre in 1922," *Michigan Quarterly Bulletin* (May 1923): 162-164.

¹³⁶"Narrative Report of James L. Kraker, County Agricultural Agent, Benzie County, Michigan, Dec. 1, 1922 to Nov. 30, 1923" (on file at Benzie County Cooperative Extension Service office, Beulah).

¹³⁷*Ibid.*: Einar Olstrom and Howard Miller, *Plus Two Score: The Cooperative Extension in Michigan, 1940-1980*, (East Lansing: Cooperative Extension Service, Michigan State University, 1984), 264.

¹³⁸Kuhn, *Michigan State*, 273.

constituents. Acknowledging the questionable future of extension work in Benzie County, agent James L. Kraker noted in his annual report for 1923:

The present status of the farmer who is not profitably producing cream, and who has cheap potatoes to sell, is not conducive to wanting to spend money to increase production. There is no doubt that he needs lots of education, but lots of them won't take it.¹³⁹

A comparison between 1920 and 1925 federal agricultural census data reveals the impact of the post-World War I conditions on local farming. In Benzie County, the number of farms dropped from 970 to 810, and the county had some 8,000 fewer acres of improved land in 1925 than in 1920. The acreage of all principal crops except oats dropped, along with the population of farm livestock. Nevertheless, some 18,000 additional apple trees were planted between 1920 and 1925 in Benzie County, attesting to the continued vigor of the fruit industry. (The 1925 census did not enumerate cherry trees.)¹⁴⁰

A similar picture emerges for Leelanau County, which lost some 90 farms and more than 11,000 acres of improved farm land between 1920 and 1925. (The number of farms decreased from 1,345 to 1,255; and the improved acreage dropped from 90,825 to 79,325.) The acreage of all principal crops except corn dropped, as well as the population of farm livestock. As in Benzie County, the number of apple trees increased between 1920 and 1925, but by a smaller number. The 1925 census enumerated some 154,000 apples trees in Leelanau County, an increase of about 8,000 over the 1920 count.¹⁴¹

By continuing to plant more apple trees, local orchardists were filling a market niche that had been created by the decrease in apple orchards elsewhere in the state. Earlier in Michigan's agricultural history, the source of a large percentage of the apple crop had been the small farm orchard, which commonly was one component of a general farming operation. As new farming districts were cleared and planted with orchards, diseases and insects quickly spread.

¹³⁹Narrative Report of James L. Kraker," 1923.

¹⁴⁰U. S. Department of Commerce, Bureau of the Census, Fourteenth Census of the United States, Taken in the Year 1920-Vol. VI, Part I: Agriculture (Washington, D. C.: U. S. Government Printing Office, 1922); U. S. Department of Commerce, Bureau of the Census, U. S. Census of Agriculture, 1925, Part I: The Northern States (Washington, D. C.: U. S. Government Printing Office, 1927).

¹⁴¹*ibid.*



Figure 27. Harvest crew at Cherry Home Orchard near Northport, 1924.



Figure 28. Remnant orchard and cattle guard, G. Conrad Hutzler farm, South Manitou Island, 1992.

Eventually, spraying became necessary to produce high quality fruit. The successful use of pesticides required special training and expensive machinery. Spraying also required considerable labor at a time of year when field crops needed the farmer's attention. As a result, increasing numbers of farm orchards were abandoned and apple production became a more specialized endeavor, concentrating in areas to which it was best adapted, such as the Sleeping Bear region.¹⁴²

By 1925, several distinct agricultural districts had emerged across Michigan, each defined by its characteristic crops and livestock, farm practices, and markets. Elton B. Hill, an MAC specialist in farm management, identified 14 such "type-of-farming areas" by analyzing state and federal agricultural census data from the period 1922 to 1928. Hill included the lakeshore of Benzie and Leelanau counties in Area 12A, the northern portion of Michigan's Fruit Belt, which stretched from Ottawa County to southwestern Charlevoix County. A sampling of 1925 data from Leelanau County farms revealed that the prevailing type of organization there was a combination of fruit, potatoes, and dairying.¹⁴³

Central Leelanau County and the eastern half of Benzie County, however, were part of a different type-of-farming region. Area 11A, a dairy and potato district, covered parts of several other counties of the northwestern Lower Peninsula, including Manistee, Wexford, Missaukee, Grand Traverse, Kalkaska, Antrim, Otsego, Charlevoix, Emmet, and Cheboygan. Here, the major factors determining the type of farming practiced were light soils, a cool, moist growing season favorable to potatoes, and extensive tracts of rough, rolling pasture land. Besides potatoes, other principal crops were corn, oats, hay, rye, and wheat.¹⁴⁴

The findings of E. B. Hill's type-of-farming study correlate with the observations of E. L. Hammond, who, in 1929, became Benzie County's agricultural agent. Charged with the task of resuming extension work after a five-year hiatus, Hammond quickly analyzed the county's agricultural status:

Benzie County is somewhat divided as to farming enterprise. The western third of the county is what we might call a fruit section. Cherries and apples are the main crops. A little general farming is practiced in this third. The other two-

¹⁴²E. B. Hill, F. T. Riddell, and F. F. Elliott, *Types of Farming in Michigan*, Special Bulletin 206 (East Lansing: Michigan Agricultural Experiment Station, 1930), 18.

¹⁴³*Ibid.*, 72, 74.

¹⁴⁴*Ibid.*, 48, 68.

thirds is practically all 'general farming.' . . . A hasty survey by the State Extension Supervisors determined that these fruit growers were not the ones that were in urgent need of extension services, but rather the larger group of general farmers. . . .¹⁴⁵

Hammond had observed a "great number of abandoned farms in the county," indicating to him a depletion in soil fertility. "Livestock, the first important requisite to any general farming and especially important to this soil type, is way below par in quantity and quality," he wrote in 1929. Accordingly, that year's extension work in Benzie County had focused on livestock improvement and the introduction of soil management techniques, such as the addition of lime to correct acidity.¹⁴⁶

Whatever success the county agricultural agent may have had in promoting these goals, there were increasingly fewer farmers to assist in implementing them. Agricultural census data for 1930 show a continuing decrease in the number of farms in both Benzie and Leelanau counties. In the five-year period between 1925 and 1930, almost 200 farms ceased operations in Benzie County, while Leelanau County experienced a net loss of about 150 farms. During the same period, Benzie County lost well over 2,000 acres of improved farmland, whereas Leelanau County had almost 4,000 fewer improved acres by 1930. Acreages of almost every principal crop also dropped, with the exception of oats and hay in Benzie County and hay in Leelanau County.¹⁴⁷

In addition to aggregate figures for each county, the 1930 census also provides data on individual townships, including the number of farms and the acreage of land in farms (Table 5). Ranking the townships in order of the area of farm acreage in each provides a measure of their comparative degree of agricultural development in 1930. By this criterion, the Lakeshore townships (Platte and Lake in Benzie County, and Cleveland, Empire, and Glen Arbor in

¹⁴⁵E. L. Hammond, "Annual Report/Narrative Account of Cooperative Extension Work in Agriculture and Home Economics, Benzie County, 1929" (on file at Benzie County Cooperative Extension Service office, Beulah).

¹⁴⁶*Ibid.*

¹⁴⁷U. S. Department of Commerce, Bureau of the Census, *U. S. Census of Agriculture, 1925: U. S. Department of Commerce, Bureau of the Census, Fifteenth Census of the United States: 1930- Agriculture. Vol. II: Reports by States, with Statistics for Counties and a Summary for the United States, Part I: The Northern States* (Washington, D. C.: U. S. Government Printing Office, 1931).

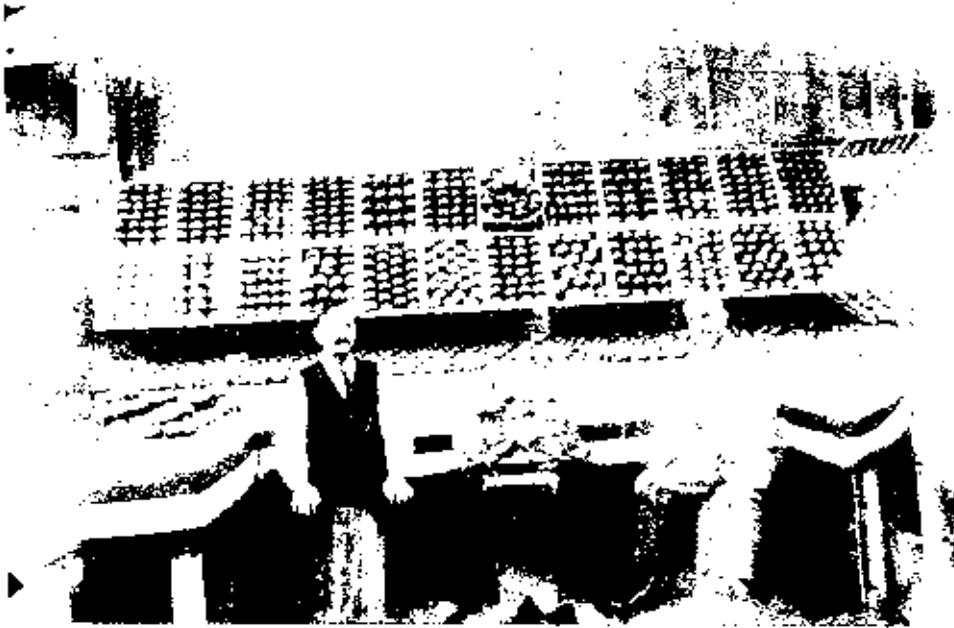


Figure 29. Apple display at Empire Fair, date unknown.



Figure 30. View of Empire village from from Orchard Hill looking north, early twentieth century.

Table 5
AGRICULTURAL CHARACTERISTICS
FOR BENZIE AND LEELANAU COUNTIES, 1930

Township	Total land area (acres)	All land in farms (acres)	Proportion of land in farms	Number of farms	Average farm size (acres)
<u>Benzie County</u>					
Almira	21,570	5,572	26 %	30	186
Benzonia	17,116	8,806	51 %	113	78
Blaine	12,941	8,975	69 %	93	97
Colfax	23,136	5,594	24 %	42	133
Crystal L.	6,578	3,164	48 %	47	67
Gilmore	4,332	3,006	69 %	29	104
Homestead	19,276	7,039	37 %	77	91
Inland	23,240	6,571	28 %	50	131
Joyfield	12,784	8,783	69 %	61	144
Lake	13,247	1,391	11 %	7	199
Platte	23,278	5,675	24 %	33	172
Weldon	23,290	7,984	34 %	34	235
TOTALS	200,788	72,560	36 %	616	116
<u>Leelanau County</u>					
Bingham	15,319	13,753	90 %	109	126
Centerville	18,347	16,251	89 %	139	117
Cleveland	19,062	11,765	62 %	79	149
Elmwood	13,183	10,162	77 %	100	102
Empire	21,944	7,139	33 %	59	121
Glen Arbor	18,693	5,146	28 %	32	161
Kasson	22,620	11,985	53 %	111	108
Leelanau	37,925	20,076	53 %	190	106
Leland	30,679	12,250	40 %	94	130
Solon	20,044	11,194	56 %	72	155
Suttons Bay	17,102	13,102	77 %	115	114
TOTALS	234,918*	132,823	57 %	1,100	121

Sleeping Bear Dunes National Lakeshore townships in boldface.

Sources: "Number of Farms, Farm Acreage, and Specified Farm Values, by Counties and Minor Civil Divisions: 1930," in *Fifteenth Census of the United States, 1930, Agriculture, Vol. I: Farm Acreage and Farm Values by Minor Civil Divisions* (Washington, D. C.: U. S. Government Printing Office, 1931), 275, 282; Wilbur Smith and Associates, *Base Studies: Inventories and Analyses, Benzie Co., Michigan* (Columbia, SC: Wilbur Smith and Associates, 1973), Table 21.

*The 1930 agricultural census used an approximate area for Leelanau County (216,320 acres), and did not provide acreages for individual townships. The figures used in this column were provided by the Leelanau County Planning Department.

Leelanau County) were among the least developed agriculturally in the two-county area. Of Benzie County's twelve townships, Platte and Lake ranked seventh and twelfth in farm acreage. (Platte Township had about 5,600 acres in farmland, while Lake had only 1,400.) A total of 33 farms were enumerated in Platte Township in 1930, while only 7 were listed in Lake Township. Benzie County's leading farming townships were Blaine, Benzonia, Joyfield, Weldon, Homestead, and Inland. Blaine had the highest amount of land in farms (almost 9,000 acres), while Benzonia Township had the largest number of farms (113).¹⁴⁸

Leelanau County's National Lakeshore townships also had relatively little farm acreage in 1930. Of the county's eleven townships, Cleveland ranked seventh (about 11,800 farm acres), Empire ranked tenth (7,000 acres), and Glen Arbor was last (5,000 acres). Cleveland had 79 farms, compared with 59 in Empire and 32 in Glen Arbor. By contrast, the county's leading agricultural township, Leelanau, had more than 20,000 acres of farmland and 190 farms. Other leading agricultural townships were Centerville, Bingham, Suttons Bay, Leland, and Kasson.¹⁴⁹

From a county-wide perspective, the 1930 census revealed that the populations of most livestock types had decreased during the late 1920s. In Benzie County, the only category of livestock that increased in number was cattle other than milk cows. Leelanau County also saw a slight increase in that category.¹⁵⁰

It also was a time of retrenchment for orchardists. The number of apple trees decreased by more than 5,000 during the five-year period in Benzie County, and exceeded 23,000 in Leelanau County. In addition, Benzie County orchardists were tending almost 33,000 fewer peach trees in 1930 than they had in 1925; in Leelanau County, where peaches never had been as extensively grown as in Benzie County, the number of peach trees decreased by more than 5,000 in the same period. Since cherry trees were not enumerated in the 1925 census, it is not possible to document changes between that year and 1930. It is interesting to

¹⁴⁸U. S. Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States: 1930-Agriculture*, Vol. I: *Farm Acreage and Farm Values by Minor Civil Divisions* (Washington, D. C.: U. S. Government Printing Office, 1931).

¹⁴⁹*Ibid.*

¹⁵⁰U. S. Department of Commerce, Bureau of the Census, *U. S. Census of Agriculture: 1925*; U. S. Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States, Agriculture, Vol. II: Reports by States*.

note, nevertheless, that the number of cherry trees decreased by more than 18,000 in Benzie County between 1920 and 1930, while in Leelanau County during the same the ten-year period, the number of cherry trees increased by more than 89,000. By 1930, Leelanau County had 173,000 cherry trees--more than twice the number counted in Benzie County.¹⁵¹

As the Great Depression deepened in the early 1930s, Benzie County agricultural agent E. L. Hammond and his successor, D. B. Jewell, continued to emphasize soil management and the upgrading of livestock, but their primary goal was helping farmers to survive the economic crisis. Jewell, who began his assignment as county agent in the depths of the Depression, wrote in his annual report for 1932:

The coming program will have to pay more attention to the garden, poultry, and farm as a source of living. People have to eat to live and if they don't grow a living they are apt to go hungry unless they can get help from the welfare.¹⁵²

In addition to welfare payments, local farmers received assistance through a variety of New Deal agencies, including the Agricultural Adjustment Administration (AAA), which was authorized by Congress in May 1933.¹⁵³ Farmers who participated in AAA programs received payments for withdrawing farm land from production. By reducing crop surpluses, the program sought to increase farm income. By 1935, Agent Jewell reported that Benzie County's farm income had "picked up, and farmers as a whole are more optimistic," although what effect AAA programs may have had on local conditions is conjectural. The county agent's position also gained a firmer footing, with funding now provided by the state Extension Division. But with increased security came a larger

¹⁵¹U. S. Department of Commerce, Bureau of the Census, *Fourteenth Census of the United States: 1920-Vol. VI, Agriculture*; U. S. Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States, Agriculture, Vol. II: Reports by States*.

¹⁵²D. B. Jewell, "Annual Report/(Narrative Report) of Cooperative Extension Work in Benzie County, Michigan, from Dec. 1st, 1931, to Nov. 30th, 1932, inclusive" (on file at Benzie County Cooperative Extension Service office, Beulah).

¹⁵³Paul W. Glad, *The History of Wisconsin, Vol. V: War, a New Era, and Depression, 1914-1940* (Madison: State Historical Society of Wisconsin, 1990), 418.



Figure 31. Overview of John Thoreson farm, Port Oneida looking northwest, 1992.



Figure 32. Granary on John Thoreson farm, Port Oneida, 1993.

workload; in the early 1930s, D. B. Jewell's territory was expanded to include Leelanau County.¹⁵⁴

Assisting with various New Deal programs began to take up increasing portions of the agent's time. In addition to coordinating AAA crop reduction initiatives, Jewell met frequently with the county representatives of the Resettlement Administration, consulted with farm credit officials, and planned organizational meetings for the Rural Electrification Administration.¹⁵⁵

Rural Electrification

Of all the federal programs intended to aid farmers during the New Deal era, the Rural Electrification Administration (REA) stands out as one of the most successful in fulfilling its mandate. Created by the executive order of President Franklin D. Roosevelt in May 1935, the REA was assigned the task of extending electrical service to rural areas not served by private power companies. While many of the nation's cities and towns had enjoyed electric service for decades, only one American farm in ten had electricity by 1933. On farms where electricity was not available, living conditions resembled those of the preindustrial era. Rural people endured the same hardships and drudgery that their ancestors had.¹⁵⁶

In the mid-1930s, rural electrification was at a rudimentary stage of development in the Sleeping Bear region. In communities where a sufficient customer base made electrification economically feasible, power plants had been established as early as the 1890s. Benzie County's first generator was installed at Frankfort in 1893, and the village of Thompsonville had built a hydroelectric plant on the Betsie River around the same time. In Leelanau County, the village of Northport had electricity by 1904. A few years later, a hydroelectric plant on the Carp River was providing power to customers in Leland, Northport, Northport Point, Omena, Suttons Bay, Provoment, and Cedar. At Glen Haven, D. H. Day supplied electricity to the village by means of a gas-powered generator. Rural residents of the Gills Pier area acquired their own generator in

¹⁵⁴D. B. Jewell, "Annual Report / (Narrative Report) of Cooperative Extension Work in Leelanau and Benzie Counties, Michigan, Dec. 1, 1934, to Nov. 30, 1935, inclusive" (on file at Benzie County Cooperative Extension Service office, Beulah).

¹⁵⁵*Ibid.*

¹⁵⁶Theodore Saloutos, *The American Farmer and the New Deal* (Ames: Iowa State University Press, 1982), 208, 213, 221.



Figure 33. Farm buildings on Martin Basch farm, Port Oneida, 1993.



Figure 34. House on Carsten Burfiend farm, Port Oneida, 1993.

the 1920s. But with few exceptions, the only rural residents who had electrical service by the 1930s were those who lived near power lines.¹⁵⁷

The reluctance of private utilities to provide rural service is understandable, considering that the cost of extending distribution lines into rural areas was about \$2,000 per mile in the 1930s. In addition, rural areas yielded about one-fifth the revenue received from urban areas. As a result, power companies usually required farmers living well beyond existing lines to pay a large deposit or to cover the cost of extending a line to their property. Policies on the extension of service could vary significantly between companies, however. A power company serving Leelanau County extended a line free of charge to the farm of Ellsworth Esch, located south of Empire and at least one-quarter mile from the main line. At the same time, another company serving Leelanau County required a \$400 deposit from a farmer located a comparable distance from its main line.¹⁵⁸

County agent D. B. Jewell's campaign to persuade utility companies to extend lines to farming communities, including Port Oneida, proved largely unsuccessful, and rural residents began inquiring about the possibility of help from the REA. In 1937, Cooperative Extension sponsored a survey of rural areas that might qualify for assistance from the REA in Benzie and Leelanau counties. In Benzie County, the study found that "in no section was it possible to get enough subscribers per mile or enough miles to justify a REA project," Jewell wrote. A similar situation prevailed in Leelanau County, where "there is a real demand for farm electricity, but there is no opportunity to get volume enough for a REA project." The most lucrative territories already were serviced by private power companies.¹⁵⁹

In order to obtain a loan from the REA, a more regional approach became necessary. In 1938, representatives from Benzie, Leelanau, Grand Traverse, and Manistee counties joined forces to organize the Cherryland Rural Electrification Association and submitted a proposal to the REA, which quickly approved a loan. By the end of 1939, a number of lines had been completed and Extension meetings were being held to teach farmers how to install home wiring

¹⁵⁷Leonard L. Case, *The Crystal Gazer* (Benzonia: Benzie Area Historical Society, 1985), 87, 92; Wakefield, ed., *History of Leelanau Township*, 107-108.

¹⁵⁸D. B. Jewell, "Annual Report/(Narrative Report) of Cooperative Extension Work in Benzie and Leelanau Counties, Michigan, Dec. 1st, 1936, to Nov. 30th, 1937, inclusive" (on file at Benzie County Cooperative Extension Service office, Beulah).

¹⁵⁹*Ibid.*

and select power equipment. The electrification of the region's farms displayed a dramatic gain during the period and in subsequent years. In 1930, for example, only 16 percent of Benzie and Leelanau Counties' farms were electrified, whereas the figure for the state slightly exceeded 20 percent. By 1940, the regional figure had increased to 42 percent, although it should be noted that a significantly larger proportion of the state (71 percent) was electrified by this time. During the war years the figure for the region grew only slightly, increasing from 42 to 45 percent during the 1940 to 1945 interim (meanwhile, the electrified proportion of the state's farms expanded to 82 percent). Between 1945 and 1959, however, the expansion of electrical service was especially noticeable throughout the two county region, reaching 95 percent by the latter year. As was true throughout Michigan, the rural electrification of Benzie and Leelanau Counties was virtually completed by the late 1950s.¹⁶⁰

In addition to lightening the farmer's workload and improving productivity through the use of labor-saving equipment, rural electrification brought farm families into closer contact with the outside world through radio. Along with news and entertainment, rural residents now had immediate access to information on weather conditions, crop prices, and agricultural trends. Quick to take advantage of the new medium, agent D. B. Jewell and other Extension specialists began broadcasting radio talks from station WTCM in Traverse City.¹⁶¹

¹⁶⁰D. B. Jewell, "Annual Report/(Narrative Report) of Cooperative Extension work in Benzie and Leelanau Counties, Michigan, Dec. 1st, 1937, to Nov. 30, 1938, inclusive," "Annual Report/(Narrative Report) of Cooperative Extension work in Benzie and Leelanau Counties, Michigan, Dec. 1st, 1938, to Nov. 30, 1939, inclusive," (both on file at Benzie County Cooperative Extension Service office, Beulah); U. S. Department of Commerce, Bureau of the Census, Fifteenth Census of the United States:1930-Agriculture, Vol. II: Reports by States; U. S. Department of Commerce, Bureau of the Census, Sixteenth Census of the United States: 1940-Agriculture, Vol. I, First and Second Series State Reports-Part 2, Statistics for Counties (Washington, D. C.: U. S. Government Printing Office, 1942); U. S. Department of Commerce, Bureau of the Census, United States Census of Agriculture: 1945-Vol. I, Part 6: Michigan Statistics by Counties (Washington, D. C.: U. S. Government Printing Office, 1947); U. S. Department of Commerce, Bureau of the Census, United States Census of Agriculture: 1950-Counties and State Economic Areas: Michigan-Vol. I, Part 6 (Washington, D. C.: U. S. Government Printing Office, 1952); U. S. Department of Commerce, Bureau of the Census, U. S. Census of Agriculture: 1959-Final Report, Vol. I, Part 13-Michigan Counties (Washington, D. C.: U. S. Government Printing Office, 1961).

¹⁶¹Saloutos, American Farmer, 220; D. B. Jewell, "Annual Narrative Report of Cooperative Extension work in Benzie and Leelanau Counties, Michigan, Dec. 1st, 1940, to Nov. 30, 1941, inclusive," (on file at Benzie County Cooperative Extension Service office, Beulah).

Neotechnic Agriculture

With the advent of rural electrification, agriculture in the Sleeping Bear region made a major advance in its gradual evolution from the paleotechnic practices of the late 1800s to the neotechnic patterns of modern industrial society. This evolutionary process had begun several decades earlier in the world's major manufacturing centers, where the introduction of electricity and new alloys had revolutionized industry.¹⁶² In the Sleeping Bear region, however, technological advances from the outside world were assimilated more slowly, due in large part to the region's isolation and its relative lack of manufacturing activity.

While never entirely leaving behind all paleotechnic practices, farmers of the Sleeping Bear region readily embraced neotechnic advances such as electric appliances. Another neotechnic development was the direct application of scientific knowledge to all realms of endeavor, including farming.¹⁶³ Although some segments of the rural population were more receptive to "scientific agriculture" than others, none could ignore the improved crop yields that had been achieved by scientists at Michigan State College and other agricultural research centers. Agriculturalists of the Sleeping Bear region, such as Paul Rose and George and Louis Hutzler, played a significant role in this process. Several years after achieving national acclaim for its rye seed, the Hutzler farm was chosen by Michigan State plant breeders to become one of a handful of sites to which seeds of "Michelite," an improved variety of navy bean, were introduced. The Hutzlers began raising Michelite beans in 1937; four years later, the new variety covered 40 percent of the state's navy bean acreage. By the 1950s, Michelite beans were estimated to have increased farm income by a sum greater than the entire cost of the Michigan agricultural experiment station since its founding in 1888.¹⁶⁴

Another significant episode in the advance of scientific agriculture took place in the late 1930s at the farm of Herrick Waterman in Leland Township, where dairy cattle were suffering from an mysterious ailment that destroyed their appetites. Despite supposedly adequate nutrition, cattle throughout the northwestern Lower Peninsula were becoming so emaciated during the winter

¹⁶²Mumford, *Technics and Civilization*, 212 ff.

¹⁶³*Ibid.*, 216-217.

¹⁶⁴"Guardians: From Lonely Manitou Island Come Nation's Blueblood Seeds," [Lansing] *State Journal*, 29 September 1946; Kuhn, *Michigan State*, 382-3.

that many died in the spring. Watching Waterman's herd grow progressively weaker, his sister recalled a lecture on cobalt deficiency that she had attended during a Farmers' Week program at Michigan State College. She suggested that her brother supplement the cows' feed. Mixing small amounts of cobalt into the feed caused a dramatic improvement, which county agent D. B. Jewell reported to animal nutritionists at Michigan State. Subsequent experiments by researchers A. C. Baltzer and Carl F. Huffman proved the efficacy of the cobalt treatment for the ailment, known as "Grand Traverse" or "Lake Shore" disease.¹⁶⁵

As farmers benefited from research on crops and livestock, they also were becoming more aware of the fragility of the land which supported them. The sandy soils of Benzie and Leelanau counties were highly susceptible to wind and water erosion. On many cutover acres, intensely hot fires had consumed not only the waste left behind by logging operations, but the soil's humus layer, as well. The low organic content, combined with high acidity, called for soil treatments such as fertilizers and lime. Throughout the 1920s and 1930s, local Extension work emphasized soil management techniques such as alfalfa culture and the application of marl, a locally abundant source of lime.

The Agricultural Adjustment Administration offered farmers financial incentives for practicing soil conservation. The AAA's initial policy of reducing the acreage of targeted crops had proven only partly successful in bolstering farm income. Designed to improve the program's efficacy, the Soil Conservation and Domestic Allotment Act of 1936 directed the AAA to promote land use planning measures and to encourage farmers to adapt practices that maintained soil fertility.¹⁶⁶

One of the first steps in implementing this new policy in the Sleeping Bear region was the County Agricultural Planning Project, an exercise in which local farm and community leaders met "to get ideas regarding the county problem of soil conservation, cropping, and farm management to be solved in a long-time program." Members of the Leelanau County Planning Committee were Howard Burfiend of Port Oneida, Fred Dechow of Northport, Everett DeLong of Northport, Albert Sheck of Leland, Rudolph Lautner of Cedar, and Frank Blosswick of Maple City. Burfiend, who ran a dairy and veal operation, was one of the county's most prominent farmers. He served on the county Board

¹⁶⁵Jewell, "Annual Narrative Report, 1940-1941," Kuhn, *Michigan State*, 384.

¹⁶⁶Saloutos, *The American Farmer*, 255.

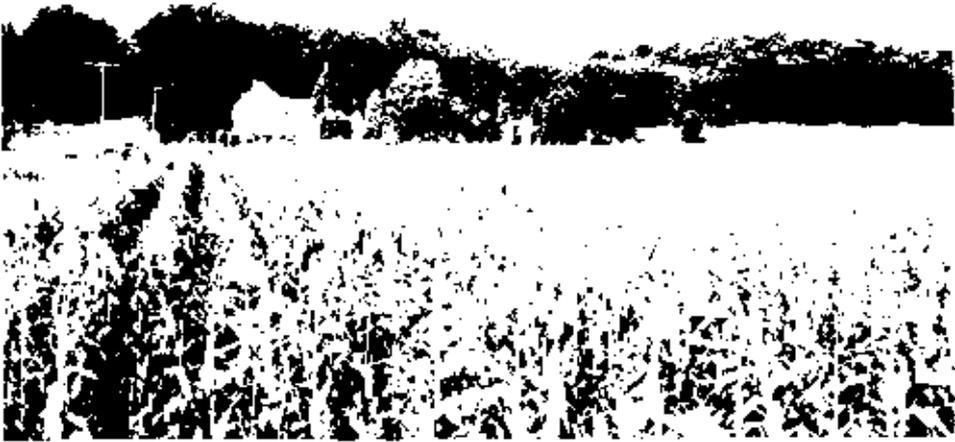


Figure 35. Cornfield and buildings, Ellsworth Esch farm, Platte Township, Benzie County, 1992.



Figure 36. Otter Creek flowing into Lake Michigan near the site of Aral, Benzie County, 1992.

of Supervisors and also chaired both the county agricultural committee and the soil conservation committee. Members of the Benzie County Planning Committee were John B. Hopkins of Beulah, Ivan Jaquish of Bendon, Jay Robotham of Beulah, Dan Lathwell of Benzonia, and William Johnson and W. J. Fish, both of Thompsonville.¹⁶⁷

In both counties, the planning committees concluded that there were too many farms. For Leelanau County, the committee suggested a reduction from 1,200 farms to 1,000, noting that: "There are farms of very small cleared acreage . . . in some sections of very light soil, subject to erosion and worn out, which could be retired from agriculture with no loss and a definite benefit to the county." The Benzie County committee recommended reducing the number of farms to 600, about 100 fewer than existed at that time. "This would throw out most of the unprofitable land now being farmed," the committee concluded. "A land policy for the county should be adopted which keeps settlers off the poor land and the non-agricultural land developed for resort, recreational, game cover, or forestry purposes, as conditions warrant."¹⁶⁸

In the closing years of the New Deal era, many conservation measures were under way in the Sleeping Bear region: hundreds of thousands of trees were planted in school and community forests; soil maps were compiled; and public meetings on erosion were held, including a session at Isadore featuring discussions in both English and Polish. By the end of 1940, the Soil Conservation Service had established a demonstration project in each county: one at Jay Robotham's farm near Beulah, and a second at the Lars Halvorsen farm near Cedar. The groundwork was being laid for the creation of county soil conservation districts. With the bombing of Pearl Harbor in December 1941, however, local agriculture officials immediately assigned top priority to the war effort. The work of organizing soil conservation districts would be postponed.¹⁶⁹

¹⁶⁷Jewell, "Annual Narrative Report, 1936-1937," Russell E. Frost, "Lincoln Signed Deed: On the Rugged Shores of Lake Michigan Live Three Generations of Burfiends," *Hoard's Dairyman* 82 (10 Dec. 1937): 662-3.

¹⁶⁸Jewell, "Annual Narrative Report, 1936-1937."

¹⁶⁹Jewell, "Annual Narrative Report, 1939-1940," "Annual Narrative Report, 1940-1941."

The War Effort

The official policy that had prevailed throughout the Depression--that of rewarding farmers to cut production--underwent drastic modifications as the nation threw itself into the war effort. The government requested farmers to increase production of certain crops, such as beans and tomatoes, that would be used to feed the troops. Some local farmers obtained government contracts for specific crops, such as A. G. Graham of Elberta, who raised 10 acres of tomatoes under contract. In 1943, Michigan State College recognized Graham and the firm of Trapp and Sons, Beulah, for "superior service in producing agricultural products so vitally needed by the United Nations in winning the war." Marshall Brothers of Beulah, a commercial turkey farm, also received an award for its outstanding production, which included raising 13,000 birds for market and hatching some 20,000 chicks.¹⁷⁰

Meanwhile, the orchardists of Benzie and Leelanau counties coped with war-time labor shortages by hiring Mexican and African-American laborers to pick a bumper crop of cherries in 1942. A much smaller yield the following year was harvested by about 400 Jamaican workers. In the smaller orchards, local residents were pressed into service to help with the harvest.

While acknowledging that the war effort demanded increased production, county agent D. B. Jewell hoped to prevent local farmers from putting more land under cultivation. "While acreage is necessary to production, increased production is the big need," he observed in 1942. "Where more acres simply mean poor farming and small yields, emphasis will be placed on making every acre produce its best."¹⁷¹

Despite the renewed emphasis on production, local support for soil conservation remained strong. In 1942, Leelanau County farmers petitioned the State Planning Board to create a soil conservation district. The document was signed by 672 of the county's 1,100 farmers. Organization of the district was completed in April 1943 with the election of district directors Herrick Waterman, Frank Schaub, and Otto Lautner. Frank Viers, a land planner for the Soil Conservation Service, was assigned to Leelanau County to work with the farmers

¹⁷⁰D. B. Jewell, "Annual Report/(Narrative Report) of Cooperative Extension Work in Benzie and Leelanau Counties, Michigan, Dec. 1st, 1942, to Nov. 30, 1943, inclusive," (on file at Benzie County Cooperative Extension Service office, Beulah).

¹⁷¹Jewell, "Annual Narrative Report, 1941-1942."

in controlling soil erosion and conserving other natural resources. During its first year, the program assisted 310 farmers to implement such practices as contouring, strip cropping, shaping waterways, and establishing cover crops.¹⁷²

Patterns on the Landscape

While the servicemen and women of the Sleeping Bear region fought overseas, their families back home were engaged in the ongoing struggle to make a living from the land. This homefront war also had its casualties: between 1940 and 1945, Leelanau County lost 125 farms. By contrast, Benzie County lost only three farms during the same period. At the close of the war, there were 795 farms in Benzie County and 993 farms in Leelanau County. The amount of improved acreage, however, had been increasing steadily in both counties since the 1930s. Typically, those who remained in agriculture were tending toward progressively larger farms.

While rural landscapes in Benzie and Leelanau counties bore many similarities, the agricultural profile of the two counties differed significantly. Subsistence-level farms, the products of which were used almost exclusively by the resident family, were the most common type of agricultural operation in Benzie County in 1945, comprising 27 percent of farms classified (Figure 37). "General" farming was practiced on 21 percent, while fruit farms comprised 18 percent of the total. In Leelanau County, a different picture had emerged. There, general farming was the most common type of operation, representing 33 percent of the classified farms. Fruit farms comprised 26 percent of the total, followed by subsistence farms with 15 percent.¹⁷³

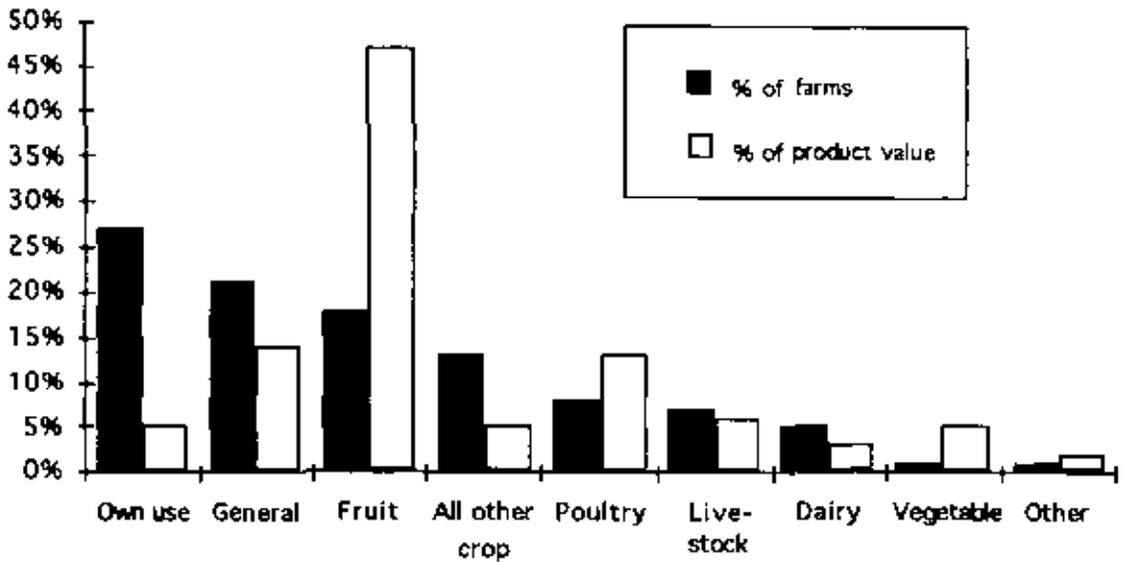
The income generated by fruit farming, however, far surpassed that of any other type of agriculture. In Benzie County, the total value of all agricultural products in 1945 was approximately \$1.9 million, of which 47 percent came from fruit farming. In Leelanau County, fruit farming accounted for 58 percent of the value of all agricultural products, which totalled some \$3.1 million in 1945. In both counties, general farming was the second most productive type of operation, comprising 14 percent of the total farm product in Benzie and 24 percent in Leelanau. The success of Benzie County's commercial turkey farms is

¹⁷²Jewell, "Annual Narrative Report, 1942-1943."

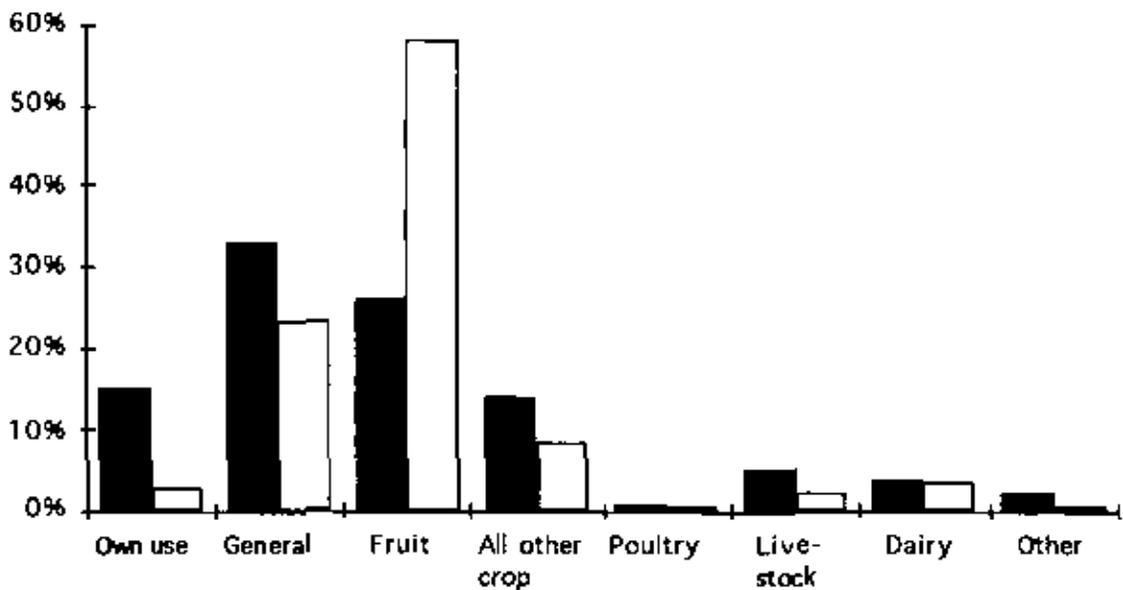
¹⁷³U. S. Department of Commerce, Bureau of the Census, *United States Census of Agriculture, 1945-Vol. I, Part 6: Michigan*.

Figure 37
TYPES OF FARMS AND VALUE OF AGRICULTURAL PRODUCTS
IN BENZIE AND LEELANAU COUNTIES, 1945

Benzie County



Leelanau County



Source: United States Census of Agriculture, 1945, Vol. I, Part 6: Michigan, Table VIII, "Farms Classified by Type and Total Value of Farm Products," 137, 145.

also reflected in the fact that poultry farming accounted for 13 percent of the value of all agricultural products in 1945.¹⁷⁴

While most farms kept a few dairy cows or beef cattle, farms devoted primarily to milk production and livestock raising played a relatively minor role in the agricultural economy. In Benzie County, only seven farms were classified as livestock operations and five as dairies in 1945. Similarly, Leelanau County had only five livestock farms and four dairy farms. The combined value of products from these operations comprised less than 9 percent of the total farm output in Benzie County and only 6 percent in Leelanau County.¹⁷⁵

Seen through the eyes of a returning soldier, the agricultural landscape of the Sleeping Bear region would not have looked remarkably different from its pre-war appearance. It was a landscape dominated by hillside orchards and hay fields, dotted with woodlots and grazing cattle. In the wake of war-time prosperity, its many well-tended farms reflected their owners' increased affluence; but here and there could be seen evidence of poor stewardship. In the Port Oneida district, a mile-long gully attested to careless grazing practices on the adjacent farms.¹⁷⁶ There were many battles to be fought in the war against soil erosion, and evidence of the struggle could be seen on the landscape in the form of contour plowing, strip cropping, and rows of trees planted in windbreaks. In some communities, regularly-spaced young pine trees were taking root in abandoned farm fields, the reforestation projects of school children and 4-H groups.

In many orchards, where weeds previously had covered the space between the trees, cover crops such as rye now were being seeded to protect the fragile soil. An especially attentive summer observer might have noticed seedlings of green brome grass in a few brown pastures, where farmers were experimenting in hopes of finding a grass that would provide grazing for their cattle throughout the season. Passing along the country roads, a returning soldier could not have failed to notice the proliferation of those advancing sentinels of electrification, utility poles strung with wire, which linked town and country both symbolically and literally.

The Sleeping Bear region, long a dominion unto itself whose inhabitants for years had referred to the rest of the world as "Outside," was beginning to

¹⁷⁴*Ibid.*

¹⁷⁵*Ibid.*

¹⁷⁶Jewell, "Annual Narrative Report, 1941-1942."

come to terms with its isolation. While it remained geographically removed from the major urban centers, rapidly expanding technologies such as the telephone, the automobile, and mass communications media were conquering once-formidable barriers of space and time. While general or subsistence-level farming still prevailed on the majority of farms at the close of World War II, it had become clear that specialized agriculture--with its dependence upon millions of fruit consumers in Chicago, Detroit, and other cities--offered the greatest profits. As the Sleeping Bear region entered the post-war era, the "Outside" drew ever closer.

Epilogue: From Post-War to Lakeshore

The inexorable agricultural changes set into motion by the Depression and World War II continued to accelerate during the immediate post-war years. Improved tractors, grain combines, hay balers, and many other forms of equipment were developed by agricultural engineers; and agronomists, horticulturalists, and numerous scientists introduced new methods of crop and animal production. The increased presence of farm tractors began to be especially noticeable immediately after the war. Only 12 percent of the region's farmers owned a tractor in 1930; and by 1940, the figure had increased only to 18 percent. In 1945, however, 40 percent of the farms boasted of at least one tractor, and five years later the figure had grown to 61 percent. Soon thereafter, virtually every farm in the region would include at least one tractor, and several farm units had two or more.¹⁷⁷

Since the new technologies led to appreciable declines in the amount of labor required to operate a single farm, the size of an average unit increased as total farm numbers decreased. These transitions also had a profound impact upon the social fabric of agricultural areas. As rural sociologist Joseph Vandiver reported in 1951, the greater opportunities in industry fostered during the war, along with the broader horizons and new relationships that resulted from military experience, gave impetus to the out-migration of surplus populations from the nation's farms and rural areas. As many studies have demonstrated, it

¹⁷⁷U. S. Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States: 1930-Agriculture, Vol. II: Reports by States*; U. S. Department of Commerce, Bureau of the Census, *Sixteenth Census of the United States: 1940-Agriculture, Vol. I, Part 2*; U. S. Department of Commerce, Bureau of the Census, *United States Census of Agriculture: 1945-Vol. I, Part 6*; U. S. Department of Commerce, Bureau of the Census, *United States Census of Agriculture: 1950-Vol. I, Part 6*.

was the young adult age groups who, as early as the late 1930s, spearheaded this rural-to-urban migration phenomenon.¹⁷⁸

Such changes may be readily observed by considering some basic agricultural facts for the Sleeping Bear Dunes region. Whereas 312,000 acres of land were devoted to agriculture during the last year of the war effort (1945), the figure had declined to 191,000 acres just five years later—a decrease of almost 40 percent. It must be noted, however, that much of the abandoned land was relatively marginal since the amount of improved acreage declined by 10 percent only. An even more telling insight to the rapid evolution of agriculture at this time was the loss of 365 farms (a 20 percent decline) experienced during the five-year period; this figure represented an average loss of 75 farms during each year. The size and value of an average farm also increased in the region, just as they did throughout Michigan and the nation.¹⁷⁹

Between 1950 and 1959, additional land was taken out of agricultural production. Total farm acreage in the region fell by 61,000 acres (32 percent), whereas the amount of improved acreage declined by 15,500 acres (18 percent). Because of the significant agricultural surpluses that contributed to the farm problem of the 1950s, the federal government now encouraged farmers to place their least productive land into a "soil bank." By agreeing to keep the land out of production for a set number of years, farmers who participated in the program received an annual stipend from the government. Also mirroring the decline in agricultural acreage was the continued loss of farms throughout the region. Although changes in farm definition do not allow one to make exact comparisons from one agricultural census year to another, at least one-fourth of the farms that had been counted in 1950 were no longer in existence nine years later. In 1959, an average farm in the region was 16 acres larger than its counterpart elsewhere in the state, but the mean value of an agricultural unit in Benzie and Leelanau Counties trailed the average state figure by some \$7,000.¹⁸⁰

¹⁷⁸Joseph S. Vandiver, "Some Population Trends in the More Rural States, 1940-1950." *Rural Sociology* 16 (1951): 154.

¹⁷⁹U. S. Department of Commerce, Bureau of the Census, *United States Census of Agriculture: 1945-Vol. I, Part 6*; U. S. Department of Commerce, Bureau of the Census, *United States Census of Agriculture: 1950-Vol. I, Part 6*.

¹⁸⁰U. S. Department of Commerce, Bureau of the Census, *United States Census of Agriculture: 1950-Vol. I, Part 6*; U. S. Department of Commerce, Bureau of the Census, *U. S. Census of Agriculture: 1959-Final Report, Vol. I, Part 13*.

Information from the 1969 agricultural census, which marks the end of the period just prior to Lakeshore designation, illustrates the steady reduction in farm numbers and farm size experienced throughout the region. One-fourth of the existing farm acreage and one-fourth of all improved agricultural land were taken out of production between 1959 and 1969. By the latter year, only 19 percent of Benzie County's total area was devoted to agriculture, although the 35 percent of land utilized for similar pursuits in Leelanau County slightly exceeded the state-wide figure. The remarkable decline in Benzie's agricultural land use may be compared to 1910 when almost 50 percent of the county's total land was being farmed, and to 1920 in Leelanau when its figure exceeded 75 percent.¹⁸¹

More of the region's farms were removed from the roster of active units between 1959 and 1969. Whereas 770 farms were counted in Leelanau in 1959, the figure fell to 670 in 1964 and to 510 by 1969 (of the latter farms, 35 percent were part-time units). In Benzie, farm numbers declined only slightly between 1959 and 1964 (from 310 to 305), but then tumbled to 230 units in 1969 (almost one-half of the farms in 1969 were part-time or retirement operations). As could be expected, commensurate gains in farm size also took place. An average Benzie County farm embraced 168 acres of land in 1969, while a typical Leelanau County farm, at 152 acres, virtually replicated the mean size of a Michigan farm unit. The value of an average farm in the Sleeping Bear Dunes region increased noticeably from 1959 to 1969, but continued to trail the state-wide figure. Nevertheless, there was some convergence in the figures for Michigan and Leelanau County, given that a farm in the latter was valued at \$42,500 in 1969--only \$3,000 under the mean figure for the state; a typical Benzie County farm, however, trailed the state value by \$7,500. Land values revealed a similar pattern. At \$308, an acre of land in Leelanau County differed from the state-wide mean by less than \$20, but in Benzie County the differential reached \$75.¹⁸²

The agricultural census of 1969 also revealed that rather few of the region's full-time farms were either Class 1 or Class 2 units--i. e., having more than \$20,000 in annual sales of farm products (18 percent in Benzie, 21 percent in Leelanau). Overall, 23 percent of Leelanau's farms and only 9 percent of Benzie's

¹⁸¹U. S. Department of Commerce, Bureau of the Census, 1969 Census of Agriculture, Vol. I: Area Reports-Part 13: Michigan/Section 2, County Data (Washington, D. C.: U. S. Government Printing Office, 1972).

¹⁸²Ibid.; U. S. Department of Commerce, Bureau of the Census, 1964 United States Census of Agriculture: Vol. I, Part 13-Michigan (Washington, D. C.: U. S. Government Printing Office, 1967).

were termed Class 3 operations--having annual sales of \$10,000 to \$20,000. The largest proportion of farms in both counties were designated as Class 4 or Class 5 units--sales ranging from \$2,500 to \$10,000--but the figure for Benzie (68 percent) was considerably greater than that displayed by Leelanau (48 percent). The latter's superior agricultural position was demonstrated even more vividly by the market value of an average farm in 1969: \$7,375 in Benzie and \$11,125 in Leelanau.¹⁸³

The data for 1969 indicate that the role of dairying in the region's agricultural economy continued its post-war decline. Benzie County included only 9 producing dairy farms in 1969, whereas the figure totaled 33 in Leelanau. On the other hand, the relative importance of the region's orchards and fruit production enterprise continued to grow during the 1960s--even as the total number of fruit farms declined. Between 1950 and 1969, the number of farms with orchards dropped from 320 to 90 in Benzie and from 595 to 255 in Leelanau. Many small farm orchards obviously were discontinued during this period, but it is also clear that larger-scale commercial fruit-growing operations began to play a much larger role in the region. In Benzie, the total amount of land area devoted to orchards increased very slightly from 1950 to 1969 (4,660 to 4,840 acres), whereas the figure almost doubled in Leelanau (6,880 to 12,900 acres). Cherry production clearly dominated the horticultural picture of the region, with apples playing a secondary role. In 1969, the region's 345 orchards included more than one million cherry trees (792,000 in Leelanau and 227,000 in Benzie). The number of apple trees approached 175,000 in 1969 (106,000 in Leelanau and 67,000 in Benzie), as did the total number of plum, peach, and pear trees (142,000 in Leelanau and 32,000 in Benzie).¹⁸⁴

Thus, by the time Sleeping Bear Dunes National Lakeshore was established by congressional enactment in October 1970, the region reflected many of the broad-scale agricultural trends and changes then being experienced throughout Michigan and the United States--especially in terms of smaller farm numbers and increasing specialization. Within the region, however, Benzie and Leelanau displayed some noticeable differences. As the 1970s dawned, Leelanau County's farms stood out as being more productive and profitable than Benzie's--a phenomenon that began to be evident as early as the 1890s.

¹⁸³*Ibid.*

¹⁸⁴*Ibid.*

The same trends continue today. By 1987, the number of farms in Benzie County had fallen to 150 (155 fewer than in 1969), and to 395 in Leelanau (a decline of 115). By this time, the annual market value of agricultural products sold per farm amounted to \$25,700 in Benzie, and reached \$38,500 in Leelanau.¹⁸⁵

The dominant role of fruit growing continued to be exhibited in 1987, when almost 60 percent of Leelanau's and 35 percent of Benzie's farms included commercial orchards. As had been true for decades, Leelanau continued to make an especially large contribution to Michigan's fruit-growing operations, with almost 16,000 acres of land devoted to orchards in 1987--the fourth highest county total in the state. (Benzie's 4,200 acres ranked twelfth.) Both counties continued as relatively important apple producers in 1987 (Leelanau ranked eleventh in output, Benzie twelfth), but cherries clearly were the region's predominant orchard crop. Indeed, Leelanau's fruit growers raised close to 60 million pounds of cherries in 1987--the largest amount produced by any county in Michigan. Benzie's 8.6 million pounds ranked ninth. Overall, more than \$10 million worth of fruit were sold in Leelanau County, with an additional \$2.5 million contributed by Benzie County. Though Benzie and Leelanau display several similarities in their historic and contemporary patterns of agricultural development, it is obvious that Leelanau has been the dominant player for more than a century.¹⁸⁶

¹⁸⁵ U. S. Department of Commerce, Bureau of the Census, *1987 Census of Agriculture, Vol. I, Part 22-Michigan State and County Data* (Washington, D. C.: U. S. Government Printing Office, 1989).

¹⁸⁶ *Ibid.*

Chapter 5 SUMMARY AND CONCLUSIONS

To establish the historical context for interpreting agricultural development in Benzie and Leelanau Counties, the preceding report has examined three broad areas:

1. environmental factors influencing the region, including climate, soils, and vegetation;
2. patterns of settlement, from the Paleo-Indian people who hunted near the glacier's edge some 10,000 years ago, to the Americans and Canadian and European immigrants who arrived in the region in the late 1800s and early 1900s; and
3. the evolution of agricultural practices, from the subsistence regimens followed by native people prior to the arrival of Euro-American settlers, to the "scientific agriculture" that revolutionized farming in the twentieth century; all of these have been examined within the framework of Lewis Mumford's model of technological change.

The foundation for understanding the agricultural development of Benzie and Leelanau counties is based on knowledge of the region's environmental context: its geology, soils, original vegetation, and climate. In geological terms, the landscape of the Sleeping Bear Dunes region is relatively young, having been fashioned as recently as 11,000 years ago during the Wisconsin stage of glaciation. As it retreated, the glacier left behind moraines, outwash plains, and a coastline indented with numerous bays and adjacent inland lakes. Soil associations found within the boundaries of the Sleeping Bear Dunes National Lakeshore are predominantly sandy in texture and are rated marginal or submarginal for agricultural uses. Richer soils are found at various locations outside the Lakeshore.

Because of its generally mediocre soils and northern latitude, the Sleeping Bear region would have experienced only rudimentary agricultural development if not for the moderating influence of the lake effect on its climate. Both Benzie and Leelanau counties lie within a zone adjacent to Lake Michigan that enjoys 150 to 160 frost-free days annually--a growing season comparable to

locales situated 200 miles farther south. The lake effect also delays the onset of fall and spring, resulting in more favorable growing conditions for temperature-sensitive plants such as fruit trees.

When Euro-American settlers began arriving in the Sleeping Bear region in the late 1840s, most were drawn to the area not because of its agricultural potential, but because of its abundant forest resources and location adjacent to the Great Lakes shipping lanes. At that time, a hardwood-hemlock forest covered most of the area, providing an ample supply of fuel for passing steamships. Euro-American traders and woodcutters encountered Ottawa and Ojibwa Indians, who for centuries had practiced a subsistence regimen based on hunting, fishing, gathering wild foods, and raising crops such as corn, beans, and squash.

Viewed within the context of Lewis Mumford's model of technological development, Indian agriculture might be considered "pre-technic," as it was comparatively primitive in relationship to farming practices introduced subsequently by the Euro-Americans. Nevertheless, it should be noted that Indian agriculture yielded a vital dietary supplement to staple foods such as wild game, fish, berries, and maple sugar. Early Euro-American traders and settlers, while frequently deprecating native farming methods, nonetheless gladly traded with the Indians for produce when their own food supplies ran low.

The settlers benefited from Indian agriculture in other ways, as well. They readily adapted the native practice of tapping maple trees for sap, and used the resulting sugar not only for food but as an easily negotiable form of currency in the cash-poor frontier economy. Another frequently overlooked contribution of Indian farmers was that they had cleared the trees from a significant number of acres prior to the arrival of Euro-American settlers, many of whom were spared considerable labor by acquiring land previously farmed by Indians. The Indians' remarkable success with raising apple trees, documented by early settlers such as missionaries George N. Smith and Peter Dougherty, demonstrated the region's unique potential for fruit growing and may have provided the impetus for subsequent horticultural efforts by Euro-American farmers.

Traditional Indian farming practices probably persisted for several years after the arrival of white settlers; but for all practical purposes, the "pre-technic" stage of agricultural development ended in the late 1840s, when Euro-American

farmers introduced new methods and technologies, such as turning the soil with metal plowshares and employing draft animals.

The next stage of agricultural development, the eotechnic, was relatively brief in the Sleeping Bear region, lasting roughly from the 1840s to the 1860s. This was the pioneering phase of Euro-American agriculture. As settlers began clearing farms from the forests, they relied heavily on subsistence foods such as potatoes, corn, and maple syrup. Most agricultural products were consumed by the people who raised them, or by their livestock. The region's primitive roads precluded extensive overland transportation of agricultural goods, although fruit was being shipped by water from Northport as early as 1869.

The 1860s brought sweeping cultural and economic changes to the Sleeping Bear region. Among the events which took place during this period that shaped the destiny of the region for decades to come were the Civil War, the passage of the Homestead Act, the increased exploitation of forest resources, the construction of several state roads through the region, and the arrival of significant numbers of foreign-born settlers. During the Civil War decade, the two-county region served as home to more than 1,200 immigrants, with some 700 coming from Canada. While Germans comprised the region's largest nationality group in 1860, Canadians had taken the lead by 1870. Significant numbers of immigrants from Great Britain, Norway, and Bohemia also settled in the Sleeping Bear area. North Unity, established on Good Harbor in 1855, was the first rural Bohemian settlement in Michigan.

By the beginning of the 1870s, agriculture in the Sleeping Bear region was passing out of its pioneering, eotechnic phase into the next stage of development, the paleotechnic. Technological advances during this period accelerated the pace of change throughout the region. Completion of the Grand Rapids & Indiana Railroad to Grand Traverse County meant a dependable, year-round link was established with the outside world and its markets. At the same time, communities along the lake shore struggled to survive as commercial shipping went into a slump and steamships increasingly burned coal instead of wood. While the cordwood trade declined along the shore, the construction of logging railroads made possible intensified exploitation of forest resources in the region's interior.

Meanwhile, the foundations of the region's fruit-growing industry were being laid. Early orchardists in the Sleeping Bear region, inspired by the success that had been enjoyed by commercial fruit growers in southwestern Michigan

since the 1840s, attempted to grow a wide variety of species and cultivars, many of which they discovered were ill-suited to local conditions. County agricultural societies were among the most enthusiastic promoters of fruit culture, sponsoring annual fairs at which local orchardists exhibited their successes and traded information. By the 1870s, orchards of peach, apple, pear, and plum trees had begun bearing fruit throughout the region. Apples were by far the most widely grown fruit, dominating local orchards until the 1930s. Late-ripening apples from the Grand Traverse region were prized for their long shelf life, thus earning a niche in the Chicago markets. Cherries, for which the region was to become nationally renowned, had been raised on the Leelanau Peninsula as early as the 1850s, but commercial cherry operations did not commence until the 1890s.

During the last two decades of the nineteenth century, the forest products industry continued to dominate the regional economy, providing employment for large numbers of native and foreign-born workers. In 1880, the Canadians, Germans, and British continued to be the three largest nationality groups in the Sleeping Bear region, with the Bohemians also maintaining their presence as an important ethnic enclave. In addition, Scandinavians and Poles began to appear in considerably larger numbers by this time. In 1890, foreign-born persons comprised 39 percent of the region's population, the largest proportion ever recorded in any census year. The total number of foreign-born people in the two-county area peaked in 1900, but by then they comprised only 18 percent of the total population. The Poles were the only "new" immigrant group to show a noticeable increase between 1890 and 1900. Many established farms near the community of Isadore, located in Leelanau County's Centerville Township.

At the turn of the century, the most intensive period of exploitation of the Sleeping Bear region's woodlands was nearing a close. When it became apparent that the logging industry could not be sustained at previous levels, the people of the Sleeping Bear region were forced to find alternative ways to make a living. Foreseeing the exhaustion of the area's forest resources, residents turned to more sustainable forms of economic activity, including agriculture and tourism. Others simply departed to seek their livelihoods elsewhere. During the heyday of logging, agriculture and tourism had played secondary roles in the region's economic system; but as the timber disappeared, they quickly gained in importance.

At the same time, commercial cherry production "took off like a skyrocket," in the words of a local historian. The mammoth Cherry Home Orchard, at one time reportedly the largest tart cherry orchard in the world, was established near Northport in 1912. Recognizing the growing importance of the cherry crop to the region's economy, community leaders organized in the 1920s a regional cherry festival, a popular celebration that has been held annually at Traverse City ever since.

While the Leelanau Peninsula and the Grand Traverse region of which it is a part have become famous in recent decades for their cherry production, agricultural statistics reveal that orchardists represented only one segment of the local farming population and economy for much of the twentieth century. By the end of World War II, by which time the region's commercial fruit-growing operations had become well-established, "general" farms still outnumbered fruit farms in both counties. In the decades prior to World War II, county agricultural extension agents had focused their efforts on this group of farmers, among whom they promoted improved cattle breeding and soil improvement techniques. Meanwhile, plant breeding experts from Michigan Agricultural College (now Michigan State University) had found on South Manitou Island the ideal environment for propagating a promising new rye variety, "Rosen." Among the island farmers who agreed to cooperate with MAC were George Conrad Hutzler, Jr., and his son, Louis, who went on to win prizes at dozens of state and regional seed exhibitions. In the late 1930s, the Hutzlers began raising another type of hybrid, "Michelite" beans, a variety which far surpassed Rosen rye in its impact on agricultural productivity.

While the Depression years of the 1930s meant severe hardship for most local farmers, the decade also saw some positive developments in agriculture. The emphasis on unrestricted resource exploitation that had marked the paleotechnic phase gradually gave way to a more rational approach to land use in the 1930s and 1940s, marking the beginnings of the next phase of agricultural development, the neotechnic. The federal Agricultural Adjustment Administration offered farmers financial incentives for practicing soil conservation techniques. Local farm and community leaders organized county agricultural planning committees to assess current conditions and suggest improvements.

Of the many programs intended to aid farmers during the New Deal era, the Rural Electrification Administration was one of the most successful. Its

impact was felt locally in 1939, when the Cherryland Rural Electrification Association obtained a loan from the REA. Some farms previously without service in Benzie, Leelanau, Manistee, and Grand Traverse counties soon were enjoying the benefits of electrical power. Rural electrification further accelerated the mechanization of agriculture and brought farm families of the Sleeping Bear region into closer contact with the outside world by means of radio broadcasts.

The neotechnic phase also has been characterized by the growing influence of "scientific" agriculture, through which discoveries in basic research are applied to the practical problems of farming. As the neotechnic phase has progressed, farmers have had to adjust to new forms of transportation and marketing. While the decline of Great Lakes shipping isolated island farmers from their markets, the growth the trucking industry and the expansion of the interstate highway system have opened new markets for mainland producers.

The inexorable changes set into motion by the Depression and World War II continued to accelerate in the years prior to the creation of Sleeping Bear Dunes National Lakeshore in 1970. The region's agriculture reflected trends being experienced throughout the rural United States: the number of farms was decreasing, more farm acreage was being withdrawn from production, and the average farm unit was becoming larger. The 1969 agricultural census demonstrated that Leelanau County's farms remained, on average, more productive than Benzie's--a condition that had prevailed since the 1890s. Perhaps most remarkable was the dramatic increase in the relative importance of the region's orchards--especially in Leelanau County.

Since 1969, the horticultural and fruit growing specialization of the region has become even more pronounced. Extensive farming and orchard districts are still to be found throughout the two-county area. Nevertheless, the amount of acreage currently devoted to orchards appears to be declining. An examination of the 1989 Leelanau County plat book reveals that shoreline areas once occupied by orchards have been broken up into subdivisions and "small tracts," suggesting that private residential or recreational development may have supplanted agricultural use. Because of the proximity of the National Lakeshore and the region's outstanding scenic and recreational resources, it is reasonable to assume that the conversion of agricultural lands to non-farm uses will persist. As agricultural land use patterns continue to change, the preserved farmsteads within the Lakeshore will take on an ever-greater significance as cultural

resources. Monuments to the values and stewardship of the Sleeping Bear region's farming people, they tell of a way of life that has virtually disappeared.

An Overview and Some Future Directions

The primary goal of this study has been to foster a better understanding of the agricultural evolution of Sleeping Bear Dunes National Lakeshore. Restricting the scope of the research to cover only the territory administered by the National Park Service, however, would have produced a narrow, potentially inaccurate interpretation of the Lakeshore's agricultural history. To assess the significance of Lakeshore farming activities (and the cultural resources associated with them), an understanding of the larger context in which agriculture evolved is essential. Thus, the study has looked beyond the Lakeshore's boundaries to encompass the two-county region in which National Park Service property lies.

This regional approach has revealed some unique natural and cultural attributes that define the area. As noted throughout the report, Lake Michigan has played a paramount role in determining transportation routes, settlement patterns, and agricultural uses of the Sleeping Bear region. The Manitou Passage between the Manitou islands and the mainland was a heavily-traveled corridor even before the introduction of regular steamboat service to Lake Michigan in 1837. Ships frequently sought refuge at South Manitou Island, where they found safety in the only sheltered harbor between Chicago and Mackinac. When wood-burning steamboats began plying the lakes, both North and South Manitou became favored refueling stops. Many Euro-American settlers first saw the islands as passengers or workers on passing ships. Some stayed behind, finding work as wood cutters or fishermen. Others resided briefly on the islands and subsequently relocated to the mainland, where they established additional fuel wood stations. Other early business enterprises were directly related to the lake and its resources--a prime example being Dorsey and Lerue's cooperage at Glen Arbor, established in 1851 to pack locally-caught fish. With few exceptions (notably, the missionaries George N. Smith and Peter Dougherty), the vast majority of the region's early Euro-American settlers were attracted by the economic opportunities afforded by its forests and fisheries. Agriculture played only a supporting role in the region's early economic development.

In addition to providing a living, the lake and its beaches also served as the settlers' primary means of transportation. Until a rudimentary system of state-aided roads began to penetrate the region's interior in the 1860s, lakeshore

settlers might travel by lake to Chicago or Buffalo with far less inconvenience than they would encounter attempting to take a wagonload of goods overland to Traverse City. Surplus agricultural products, including potatoes and fruit, were being shipped from Northport to Chicago markets in the 1860s. Island and lakeshore farmers often took advantage of a market closer to hand, selling goods to passing ships.

Besides dictating early transportation routes and settlement patterns, the lake also has played an integral role in the region's agricultural development. In the early 1850s, Euro-American settlers noted the presence of thriving fruit trees cultivated by resident Indians, thus becoming aware of Lake Michigan's moderating influence on climate. Not until the 1870s did local orchardists begin to plant apple and peach trees in large numbers, however, thereby extending the northern limit of Michigan's coastal "fruit belt."

Another unique but sometimes overlooked cultural attribute relating to the Sleeping Bear Dunes region is the contribution made by resident Ottawa and Ojibwa Indians to the area's agricultural development. Many early Euro-American settlers acquired farmland previously occupied by Indians, thus avoiding the laborious clearing process. Others bought young fruit trees from the Indians to transplant into their own orchards. When supplies ran low, some settlers also obtained survival food from the Indians. Agriculture had been part of the Ottawa subsistence pattern long before the arrival of Euro-American settlers, and the Indians used their farming expertise to adapt to the changing conditions brought about by American settlement. After the Treaty of 1836, the Ottawa in the Grand Traverse region successfully evaded the prevailing federal removal policy by purchasing government land on the Leelanau Peninsula, where they established farms.

A third cultural attribute, while not unique to the Sleeping Bear region, nevertheless represents a significant theme in its agricultural development. Each of the region's numerous ethnic groups brought its own methods of farming, building types, and characteristic crops. How individual farmers or ethnic enclaves adapted these traditional practices to the conditions they encountered in northwestern Michigan is worthy of further examination.

Compiling a broad, general agricultural history of a two-county region necessarily precluded such in-depth research. The second phase of this study, which will explore the ethnic origins of extant agricultural landscapes, structures,

and practices within the Port Oneida district of the Lakeshore, undoubtedly will shed more light on how such individual communities evolved through time.

This study makes readily accessible much basic data on the "ethnic mosaic" of the Sleeping Bear region, thus laying the foundation for research into the impact of immigrant groups on the landscape. For example, any future effort to restore or interpret the Lakeshore's farms could benefit from an investigation of the correlation between an operator's ethnic origins and the types of crops and livestock that he or she raised. To do so, the manuscript census schedules of population and agriculture deserve careful consideration by any researcher exploring the history of agriculture in the Sleeping Bear region--especially because these sources contain data on individual farms and their resident families. This study has relied heavily on such evidence, but the extremely laborious nature of such research renders it plausible only for a relatively small geographical unit, such as a township.

Other promising primary sources include the records for those individuals who established homesteads throughout the region. Numerous forms were filled out by individuals claiming land under the Homestead Act of 1862, which required claimants to live on the land for a minimum of five years and "improve" it. On the proof, filed at the conclusion of the residency period, claimants and witnesses listed the improvements made to the property, such as the size of the house and materials used for construction, farm buildings, acreage cleared, and crops raised. Obviously, homestead records are available for some farms only, and certainly for none established prior to 1862. Nor were all homestead claims "proved up"; many were abandoned during the initial five-year development period, as noted in Alexander Winchell's report on the Grand Traverse region. Others were commuted to cash (instead of waiting five years, claimants could pay cash to gain title to their land). Nevertheless, the existing homestead materials (on file with the National Archives and Records Administration) offer a rich and illuminating primary source of information on the agricultural development of the Sleeping Bear region, and will be used in subsequent studies that focus upon specific Lakeshore districts.

Several additional primary sources await further exploration. Interviews with local residents or with the descendants of former residents may help answer questions about individual farming practices or buildings. Local historical societies and museums, such as the Empire Area Heritage Group and the Leelanau Historical Museum in Leland, maintain extensive collections of

photographs and other memorabilia relating to the region's farming history. While this study has made use of publications issued by local historical societies, the limitations of the project did not permit full use of their resources.

In concluding this report, it is appropriate to emphasize that even though the Sleeping Bear Dunes National Lakeshore region has been featured throughout these pages, Benzie and Leelanau counties exist within a larger contextual framework, whether it be defined as the state of Michigan, the Northern Great Lakes region, the Upper Midwest, or even the entire nation and world. Although a number of local phenomena have given and continue to give the Lakeshore region its distinctive stamp of uniqueness and identity, several broader or macro-scale factors also have influenced Benzie and Leelanau counties.

The interplay of both local and more wide-ranging criteria may be demonstrated in any number of ways, but one example will serve as an illustration. Because of various environmental constraints, the agricultural development of the Northern Great Lakes region (the northern areas of Michigan, Wisconsin, and Minnesota) is often described as marginal at best. Much of Benzie's and Leelanau's agricultural history is defined in a similar manner, for both counties demonstrate a significant period of time--from the mid-nineteenth century through the World War II years--that was characterized by its predominance of general and subsistence farms. Nevertheless, during a considerable portion of this period, and certainly throughout recent decades, several farmers in both counties have found an economically viable "niche" in the agricultural markets of Michigan and the entire nation. At one time, farmers on South Manitou Island were supplying rye seed for a very specialized national market, but it is the demand for Benzie and Leelanau counties' fruit products (especially cherries) that has contributed to the development of a rather thriving agricultural situation. Were it not for local climatic conditions, the existence of numerous population centers which provide markets that are relatively proximate to the two counties, and numerous technological developments that allow the crop to be shipped throughout the nation, the Sleeping Bear region would not be nearly as agriculturally significant in contemporary terms. In fact, because of its numerous cherry orchards, Leelanau County alone is one of the most viable agricultural counties in the entire Northern Great Lakes region.

Sleeping Bear Dunes National Lakeshore and its adjacent area provide numerous opportunities for agricultural interpretation. Some areas of the

Lakeshore, such as the Port Oneida district, reflect the general and part-time nature of farming activities that occurred throughout much of the region for so many years, whereas several adjacent areas situated outside the Lakeshore include orchards that employ the latest approaches to fruit-growing science and technology. Because the boundaries of Sleeping Bear Dunes National Lakeshore currently embrace such a rich array of agricultural history, the National Park Service has numerous opportunities to protect, manage, and interpret a resource that allows the past to exist within the context of the present.

SOURCES OF FIGURES

- Figure 1. County plat books and Sleeping Bear Dunes National Lakeshore boundary maps.
- Figure 2. Glacial geology maps for Benzie and Leelanau counties, Michigan Department of Conservation.
- Figure 3. J. O. Veatch, Soils and Land of Michigan.
- Figure 4. Climate and Man: U.S.D.A Yearbook of Agriculture, 1941.
- Figure 5. Numerous historic and contemporary cartographic sources.
- Figure 6. Homestead records, National Archives and Records Administration.
- Figure 7. Homestead file of Byron S. Richardson (Application No. 9705), Marquette Land Office, National Archives and Records Administration.
- Figure 8. Homestead file of Henry A. Johnson (Application No. 8098), Traverse City Land Office, National Archives and Records Administration.
- Figure 9. Manuscript schedules for the 1880 federal census.
- Figure 10. Homestead file of Gustav and Mary Olson Swan (Application 7390), Reed City Land Office, National Archives and Records Administration.
- Figure 11. Manuscript schedules for the 1910 federal census.
- Figure 12. Annual Reports of the Secretary of State of the State of Michigan, Relating to Farms and Farm Products, 1879-1903.
- Figure 13. Leelanau Historical Museum, Leland, Michigan.
- Figure 14. State Historic Preservation Office, Michigan Bureau of History, Eric MacDonald, photographer.
- Figure 15. State Historic Preservation Office, Michigan Bureau of History, Eric MacDonald, photographer.
- Figure 16. State Historic Preservation Office, Michigan Bureau of History, Eric MacDonald, photographer.
- Figure 17. Personal photographic file of Arnold R. Alanen.
- Figure 18. Leelanau Historical Museum.
- Figure 19. Personal photographic file of Arnold R. Alanen.
- Figure 20. Personal photographic file of Arnold R. Alanen.
- Figure 21. Personal photographic file of Arnold R. Alanen.
- Figure 22. Sleeping Bear Dunes National Lakeshore, Empire, Michigan, Ed Wood, photographer.
- Figure 23. Sleeping Bear Dunes National Lakeshore.
- Figure 24. Leelanau Historical Museum.
- Figure 25. Sleeping Bear Dunes National Lakeshore, Ed Wood, photographer.
- Figure 26. Sleeping Bear Dunes National Lakeshore, Ed Wood, photographer.
- Figure 27. Leelanau Historical Museum.
- Figure 28. Personal photographic file of Arnold R. Alanen.
- Figure 29. Personal photographic file of Arnold R. Alanen.
- Figure 30. Sleeping Bear Dunes National Lakeshore, Ed Wood, photographer.
- Figure 31. Sleeping Bear Dunes National Lakeshore, Ed Wood, photographer.
- Figure 32. Sleeping Bear Dunes National Lakeshore, Ed Wood, photographer.
- Figure 33. Personal photographic file of Arnold R. Alanen.
- Figure 34. Personal photographic file of Arnold R. Alanen.
- Figure 35. Personal photographic file of Arnold R. Alanen.
- Figure 36. Personal photographic file of Arnold R. Alanen.
- Figure 37. U.S. Census of Agriculture, 1945.

APPENDIX

Table A-1
FOREIGN-BORN POPULATION OF LEELANAU COUNTY,
BY TOWNSHIPS, 1860

	Center- ville	Crystal Lake	Glen Arbor	Leelanau Totals:	
Austria	1		1		2
Belgium			5		5
Bohemia	2		31	9	42
Britain:					
England	13	9		39	61
Scotland	2	5	4	10	21
Wales					0
(Brit. totals)	15	14	4	49	82
Canada	33	31	6	81	151
Denmark				1	1
France	3		11	2	16
Germany:					
Alsace					0
Baden	10	1	17	6	34
Bavaria	11		4		15
Bremen		1			1
Brunswick					0
"Germany"	1	1	3	6	11
Hamburg	9				9
Hanover	12		23		35
Hesse-cassel					0
H. Darmst.	2		1		3
Lorraine					0
Mecklenbg.	1		4		5
Nassau					0
Prussia	32	1	23		56
Saxony	3		5	1	9
So. Holstein	9				9
Wurtembg.	3		1	8	12
(German totals)	93	4	81	21	199
Ireland	4	7	2	13	26
Luxemburg					0
Moravia					0
Norway		2		1	3
Poland					0
Spain					0
Sweden					0
Switzerland	1	1			2
TOTALS					
Foreign-born	152	59	141	177	529
Unknown		1			1
U. S.-born					
White	235	156	112	428	931
Indian	204			354	618
Black		1			1
Total U.S.	499	157	112	782	1550
GRAND TOTAL	651	217	253	959	2080

Source: Manuscript schedules, Eighth Census of the United States (1860).

Table A-2
FOREIGN-BORN POPULATION OF THE MANITOU ISLANDS, 1860

	North	South	Totals
	Manitou	Manitou	
Austria			0
Belgium			0
Bohemia			0
Britain			
England	3	5	8
Scotland		2	2
Wales			0
(Brit. totals)	3	7	10
Canada	4		4
Denmark	1	3	4
France	13		13
Germany:			
Alsace			0
Baden	4		4
Bavaria			0
Bremen			0
Brunswick			0
"Germany"	5		5
Hamburg	4		4
Hanover	24		24
Hesse-cassel			0
H. Darmst.			0
Lothaire			0
Mecklenbg.	3		3
Nassau			0
Prussia	13		13
Saxony			0
So. Holstein			0
Wuertembg.	7		7
(German totals)	60	0	60
Holland		1	1
Ireland	5	3	8
Luxemburg			0
Moravia			0
Norway	42	15	57
Poland			0
Spain			0
Sweden	5		5
Switzerland	3		3
TOTALS			
Foreign-born	136	29	165
Unknown	6		6
U. S.-born			
White	129	44	173
Indian			0
Black			0
Total U.S.	129	44	173
GRAND TOTAL	271	73	344

Source: Manuscript schedules, Eighth Census of the United States (1860).

Table A-3
AMERICAN-BORN POPULATION OF LEELANAU COUNTY,
BY STATE, 1860

	Center- ville	Crystal Lake	Glen Arbor	Leelanau	Totals
Midwestern states					
Michigan	358	35	36	502	931
Illinois	4	2	9	16	31
Indiana	2				2
Iowa		2			2
Minnesota					0
Missouri					0
Wisconsin	13	5	11	31	32
Ohio	8	50	3	37	98
Region total	388	94	69	556	1096
New England states					
Connecticut	1	3		4	8
Maine	21	2		9	32
Massachusetts	1		2	9	12
New Hampshire	1			4	5
Rhode Island				2	2
Vermont	2	2		13	17
Region total	26	7	2	41	76
Mid-Atlantic states					
Delaware					
New Jersey	1			3	4
New York	71	49	47	158	325
Pennsylvania	14	7	3	20	44
Region total	86	56	50	181	379
Southern states					
Arkansas					
District of Columbia					
Florida					
Georgia				2	2
Kentucky					
Louisiana					
North Carolina					
South Carolina					
Tennessee					
Virginia			1		1
Region total			1	2	3
Total U.S.-born					1548

Source: Manuscript schedules, Eighth Census of the United States (1860).

Table A-4
AMERICAN-BORN POPULATION OF THE MANITOU ISLANDS,
BY STATE, 1860

	North	South	Totals
	Manitou	Manitou	
Midwestern states			
Michigan	58	21	79
Illinois	3		3
Indiana			0
Iowa			0
Minnesota			0
Missouri			0
Wisconsin	9		9
Ohio		11	11
Region total	70	32	102
New England states			
Connecticut			0
Maine			0
Massachusetts	1		1
New Hampshire			0
Rhode Island			0
Vermont	3	4	7
Region total	4	4	8
Mid-Atlantic states			
Delaware			0
New Jersey			0
New York	52	7	59
Pennsylvania	3	1	4
Region total	55	8	63
Total U.S.-born			173

Source: Manuscript schedules, Eighth Census of the United States (1860).

**Table A-5
FOREIGN-BORN POPULATION OF BENZIE COUNTY,
BY TOWNSHIPS, 1870**

	Crystal Lake	Platte	Totals SBDNL	Almira	Ben- zonia	Collax	Gilmore	Home- stead	Inland	Joy- field	Weldon	Totals
Austria			0									0
Belgium	7		7									7
Bohemia			0									0
Britain:												0
England	14	11	25	7	4	3	1	7	9	5	4	65
Scotland	14	2	16	2			1	2				21
Wales			0									0
(Brit. totals)	28	13	41	9	4	3	2	9	9	5	4	86
Canada	60	23	83	11	9	4	26	13	2	6	7	161
Denmark			0									0
France			0		1							1
Germany:												
Alsace			0									0
Baden	1	1	2	1	1							4
Bavaria			0					1				1
Bremen			0									0
Frankfort			0									0
"Germany"			0									0
Hamburg			0									0
Hanover			0									0
Hesse-cassel			0									0
H. Darmst.	1		1									1
Lorraine			0									0
Mecklenbg.			0									0
Nassau			0									0
Prussia	19	1	20					1				21
Saxony			0		1							1
Wurtembg.	4	2	6					1				7
(German totals)	25	4	29	1	2	0	0	3	0	0	0	35
Holland	4		4								2	6
Ireland	13	1	14	1	1	4	3	2	2		1	28
Luxemburg			0									0
Moravia			0									0
Norway	13		13		2							15
Poland			0									0
Russia	1		1									1
Sweden	1		1		1							2
Switzerland			0									0
TOTALS												
Foreign-born	152	41	193	22	20	11	31	27	13	11	14	342
Unknown			0									0
U.S.-born												
White	433	140	573	371	194	60	138	136	191	119	60	1842
Indian			0									0
Black			0					12		7	5	24
Total U.S.-born	433	140	573	371	194	60	138	148	191	126	65	1866
GRAND TOTAL	585	181	766	393	214	71	169	175	204	137	79	2208

Source: Manuscript schedules, Ninth Census of the United States (1870).

**Table A-6
FOREIGN-BORN POPULATION OF LEELANAU COUNTY,
BY TOWNSHIPS AND VILLAGES, 1870**

	Center ville	Empire	Glen Arbor	Sleeping Bear	Total SBDNI	Bing- ham	Elm- wood	Casson	Lee- lanau	North port vil.	Totals
Austria			2	1	3	10	21			11	35
Belgium				1	3						4
Bohemia	33		60		93		27				120
Britain											
England	4	15	4	9	32	7	18	18	28	12	115
Scotland	2	4	9	2	17	3	6	3	2	1	32
Wales	1		1		2			1	1		4
(Brit. totals)	7	19	14	11	51	10	24	22	31	13	151
Canada	236	104	22	55	417	26	51	53	63	24	684
Denmark					0		3			2	5
France	11		4	2	17	1	3		3	4	28
Germany											
Alsace					0						0
Baden	15		2		17	20	6		31		46
Bavaria	19	8	7		34	2	7		4		47
Bremen					0						0
Brunswick			2		2						2
"Germany"					0						0
Hamburg					0						0
Hanover	26	12	27	8	73	3					76
Hessecausel					0	1	1				2
H. Darmst.			3		3	5					8
Lorraine					0						0
Mecklenbg.	2		3	1	6	9					15
Nassau					0						0
Prussia	28	1	15	1	45	25	18		9		77
Saxony	3		4		7	2	4			2	15
Sn. Holstein	1				1	2	1		1		5
Wurtembg.	7		4		11	2	7		1		21
(German totals)	101	21	67	10	199	71	44	0	18	2	334
Holland			5		5						5
Ireland	16	42	11	13	82	7	13	7	4	3	114
Luxemburg					0						0
Moravia					0						0
Norway	8				8	1	7		9	11	36
Poland					0						0
Russia		1			1						1
Spain					0		1				1
Sweden					0		1			4	5
Switzerland				3	3	1			1		5
TOTALS											
Foreign-born	412	189	184	98	883	177	195	82	132	59	1,528
Unknown											0
U.S.-born											
White	458	260	221	242	1,181	211	338	358	294	162	2,534
Indian	69				69	249			167	16	501
Black		1			1		7				8
Total U.S.	527	261	221	242	1,251	460	340	358	461	178	3,043
GRAND TOTAL	939	450	405	340	2,134	637	535	440	593	237	4,571

Source: Manuscript schedules, Ninth Census of the United States (1870).

Table A-7
FOREIGN-BORN POPULATION OF THE MANITOU ISLANDS, 1870

	North Manitou	South Manitou	Totals
Austria			0
Belgium			0
Bohemia			0
Britain:			
England		4	4
Scotland			0
Wales			0
(Brit. totals)	0	4	4
Canada	13		13
Denmark	3		3
France			0
Germany:			
Alsace			0
Baden	1	2	3
Baer			0
Bavaria	2	8	10
Bremen			0
Brunswick		5	5
"Germany"			0
Hamburg			0
Hanover	1		1
Hesse-Cassel			0
H. Durme L.			0
Lorraine			0
Mecklenbg.			0
Nassau			0
Prussia	3	2	5
Saxony	1	1	2
Wurtembg.			0
(German totals)	8	18	26
Holland			0
Ireland	1	3	4
Luxemburg			0
Moravia			0
Norway	19		19
Poland	11		11
Sweden	15		15
Switzerland			0
TOTALS			
Foreign-born	70	25	95
Unknown			0
U.S.-born			
Whites	21	51	72
Indian			0
Black			0
Total U. S.	21	51	72
GRAND TOTAL	91	76	167

Source: Manuscript schedules, Ninth Census of the United States (1870).

**Table A-8
AMERICAN-BORN POPULATION OF BENZIE COUNTY,
BY STATE, 1870**

	Crystal Lake	Platte	TOTALS: SBUNL	Almira	Benzonia	Collas	Galmere	Home- stead	Inland	Jayfield	Weldon	TOTALS
Midwestern states												
Michigan	179	49	228	63	37	29	46	39	57	32	16	549
Illinois	14	3	17	1	2				4			24
Indiana	4		4	12			5		7			28
Iowa	3		3	1	3		5					12
Minnesota			0		10							10
Missouri	2		2				1					3
Wisconsin	5	8	13	3			5	2		3		26
Ohio	51	5	56	39	63	7	32	42	34	39	22	334
Region total	298	65	323	119	115	36	96	83	102	74	38	966
New England states												
Connecticut	3	4	7	5	7	1		2	1	1	1	25
Maine	9	2	11				1	3	4	3		22
Massachusetts	9	1	10	2	12		9	4	2	1		37
New Hampshire	1	1	2				2			3		7
Rhode Island	1		1						6			7
Vermont	10	5	15	40		2	2	2	10	4	2	77
Region total	33	13	46	47	19	3	11	11	23	12	3	175
Mid-Atlantic states												
Delaware	3		3									4
New Jersey	3		3									4
New York	114	61	175	186	36	11	16	13	55	18	8	518
Pennsylvania	15	1	16	12	16	10	12	24	20	9	8	129
Region total	135	62	197	198	52	21	30	37	75	27	16	653
Southern states												
Arkansas	1		1									1
District of Columbia			0									0
Florida			0									0
Georgia			0						1			1
Kentucky			0					1				1
Louisiana			0									0
Maryland			0	4	1							5
North Carolina			0		1							1
South Carolina			0					1				1
Tennessee	6		6									6
Virginia	1		1		5		1	3		6	3	19
Region total	8	0	8	4	7	0	1	5	1	6	3	35
All other states												
California	1		1									1
Total, all other	1	0	1	0	0	0	0	0	0	0	0	1
Total U.S.-born												1850

Source: Manuscript schedules, Ninth Census of the United States (1870).

**Table A-9
AMERICAN-BORN POPULATION OF LEELANAU COUNTY,
BY STATE, 1870**

	Center- ville	Empire	Glen Arbor	Sleeping Bear	TOTALS SBDNL	Bing- ham	Elm- wood	Kasson	Lee- lanau	North- port vlg.	Totals
Midwestern states											
Michigan	341	128	144	94	707	379	171	93	320	82	1752
Illinois	21		6	4	31	5	16	24	8	11	95
Indiana	8		7	9	24	1	3		7		35
Iowa				1	1	1		1	3	3	9
Minnesota					0	1	1	1			3
Missouri	5				5	2	2				9
Wisconsin	14	3	9	15	41	5		12	1	5	64
Ohio	9	8	7	12	36	18	59	57	30	11	211
Region total	398	139	173	135	845	412	252	188	369	112	2178
New England states											
Connecticut	3		2	1	6		6	1	4	3	20
Maine			4		4	8	4		2	3	21
Massachusetts	2		2	2	6			11	7	8	32
New Hampshire	1				1	1	5			4	11
Rhode Island	1		1		2						2
Vermont	1		4	4	9		3	18	6	4	40
Region total	8	0	13	7	28	9	18	30	19	22	126
Mid-Atlantic states											
New Jersey	2	12		1	15	7	1	2	2		27
New York	88	99	33	97	317	26	64	129	59	42	637
Pennsylvania	28	7	1		36	5	2	9	12	2	66
Region total	118	118	34	98	368	38	67	140	73	44	730
Southern states											
Florida					0		2				2
Louisiana					0		1				1
Maryland	2		1	1	4						4
North Carolina			1	1	2						2
South Carolina			1		1						1
Tennessee					0	1					1
Virginia		2			2						2
Region total	2	4	1	2	9	1	3	0	0	0	13
All other states											
California	1				1						1
Total, all other	1	0	0	0	1	0	0	0	0	0	1
Total U.S.-born	527	261	221	242	1251	460	340	358	463	178	3049

Source: Manuscript schedules, Ninth Census of the United States (1870).

Table A-10
AMERICAN-BORN POPULATION OF THE MANITOU ISLANDS,
BY STATE, 1870

	North	South	Totals
	Manitou	Manitou	
Midwestern states			
Michigan	12	28	40
Illinois		1	1
Wisconsin		2	2
Ohio		2	2
Region total	12	33	45
New England states			
Rhode Island		1	0
Vermont		1	0
Region total	0	2	2
Mid-Atlantic states			
New York	9	13	22
Pennsylvania		3	3
Region total	9	16	25
Total U.S.-born			72

Source: Manuscript schedules, Ninth Census of the United States (1870).

**Table A-11
FOREIGN-BORN POPULATION OF BENZIE COUNTY,
BY TOWNSHIPS AND VILLAGES, 1880**

	Lake	Platte	Totals: SBDONL	Alcova	Ben zona	Blaine	CoDax	Crystal Lake	Frank- fort	Galmore	South Frankf.	Home- stead	Inland	Joy- field	Weldon	Totals
Austria			0						2							2
Belgium			0								4	7				11
Bohemia			0													0
Britann:																
England		4	4	2	20	1	2	21	16	1	4	14	5	10	5	98
Scotland	3		3		1	3	1		5	1	5	2		1		22
Wales			0	4												5
(Brit. totals)	3	4	7	6	21	4	3	21	24	2	9	16	5	11	5	125
Canada	1	31	32	12	20	35	10	15	89	15	32	6	6	19	6	297
Denmark			0				5		1			12				18
France		2	2		1							1				4
Germany:																
Alsace			0													0
Baden			0						3							3
Bavaria		4	4						1							5
Bremer			0									1				1
Frankfort		1	1													1
"Germany"		1	1	2	1	1	1		6	2	8		2	2	4	30
Hamburg			0													0
Hanover			0						1							1
Hesse-cassel			0						1	1						2
H. Darmst.			0													0
Lorraine			0													0
Mecklenbg.			0									1				1
Prussia		6	6						12		11	2	1			30
Saxony			0						1							1
Schle. Hols.			0						5			1				6
Shwarzburg			0						1							1
Wuertemb.		3	3						1	2	1	2				9
(German totals)	0	13	13	2	1	1	1	0	34	5	22	5	3	2	4	93
Holland			0												2	2
Ireland	3		1		2	3	6	1	15		9	1	1	2		41
Luxemburg			0													0
Moravia			0													0
Norway			0			2		7	7	1	15					32
Poland			0									13				13
Portugal			0					1								1
Spain			0									1				1
Sweden			0	2	1				1	1	27					32
Switzerland			0									2				2
TOTALS																
Foreign born	4	51	55	22	46	50	20	26	172	25	150	29	15	34	17	664
Unknown			0		4				2			1				7
U.S.-born																
White	38	119	157	104	265	191	111	92	606	79	229	165	272	121	77	2707
Indian			0								4					4
Black			0				3	7		2	1	1		18		49
Total U.S.	38	119	157	104	272	194	114	100	606	81	234	179	272	139	77	2760
GRAND TOTAL	42	170	212	356	322	244	131	130	780	105	385	208	287	173	94	3431

Source: Manuscript schedules, Tenth Census of the United States (1880).

**Table A-12
FOREIGN-BORN POPULATION OF LEELANAU COUNTY,
BY TOWNSHIPS AND VILLAGES, 1880**

	Center ville	Cleve- land	Empire	Glen Arbor	Totals SBDNL	Birg- ham	Elm- wood	Kasson	Lee- lanau	North- port	Leland twp.	Leland village	Solon	Totals
Austria					0	5	13	3				3	26	50
Belgium		1		4	5									5
Bohemia	4	64			68	3	1	1	28		32	8	6	137
Britains:														0
England	5	3	12	0	24	13	2	12	39	12	9	7	6	119
Scotland			2	2	4	2	1						6	19
Wales					0				2			2		4
(Brit. totals)	5	3	19	2	33	15	3	12	42	12	9	9	12	142
Canada	112	18	51	36	217	115	35	34	52	8	52	34	21	568
Denmark	2				2	16			3					21
France	2	4		1	7	3				1	1	2	1	15
Germany:														0
Alsace	3				3	3			1		1	1		9
Baden	5	1	4		10	12	4		3		3	2	2	36
Bavaria		1	3		4	1			1		7		1	14
Bremen					0		2							2
"Germany"	23			1	24	38	5		1	1	5	18	4	146
Hamburg					0									1
Hanover	7	20	4		31	1	2				15	10		59
Hesseassel					0					1				1
H. Darmst.	1	3			4								1	5
Lorraine					0							2		2
Mecklenbg.	8	5			13	2						2	1	18
Prussia	54	13	7	7	81	30	20	5	9	1	18	4	11	179
Saxony		3			3	1					1			5
Wurtemberg		5	1		6	2	6		2		4	4	2	26
(German totals)	101	51	19	8	179	140	39	5	18	2	56	43	21	503
Ireland	4	7	25	9	45	7	9	4	6		8	14	6	99
Luxemburg					0							1		1
Moravia					0									1
Norway	13	1			14	7			43	3		4	4	155
Poland	41	2			43	4								47
Sweden	12				12	1	1		9		13	33	4	73
Switzerland	1				1	8			1					11
TOTALS														
Foreign-born	295	151	114	66	626	392	102	59	202	26	172	151	106	1836
Unknown					1	4			1				1	8
U.S.-born														
White	362	244	302	262	1170	532	335	424	429	124	241	238	196	3689
Indian					0	359			185		69			613
Black		1	3		4			4						9
Total U.S.	362	245	305	262	1174	891	335	428	614	124	310	238	196	4311
GRAND TOTAL	657	396	419	329	1801	1287	438	487	817	150	482	390	303	6155

Source: Manuscript schedules, Tenth Census of the United States (1880).

**Table A-13
FOREIGN-BORN POPULATION,
OF THE MANITOU ISLANDS, 1880**

	North Manitou	South Manitou	Totals
Austria			0
Belgium			0
Bohemia			0
Britains			
England		4	4
Scotland		1	1
Wales			0
(Brit. totals)	0	5	5
Canada	1	4	5
Denmark	14	4	18
France			0
Germany:			
Alsace			0
Baden		2	2
Baer	1	6	7
Bavaria			0
Bremen			0
"Germany"		5	5
Hamburg	1		1
Hanover	1		1
Hessecauel			0
H. Darmst.			0
Lorraine			0
Mecklenbg.	3		3
Nassau			0
Prussia	4	2	6
Saxony		1	1
Wurtembg.			0
(German totals)	10	16	26
Ireland		6	6
Luxemburg			0
Moravia			0
Norway	1		1
Poland	2		2
Sweden	8		8
Switzerland	1		1
TOTALS			
Foreign-born	37	35	72
Unknown			0
U.S.-born			
White	36	63	99
Indian			0
Black			0
Total U.S.	36	63	99
GRAND TOTAL	73	98	171

Source: Manuscript schedules, Tenth Census of the United States (1880).

**Table A-14
FOREIGN-BORN POPULATION OF BENZIE COUNTY,
BY TOWNSHIPS AND VILLAGES, 1900**

	Lake	Platte	Totals	Almon	J. Ann	Ben-	Benz.	Blaine	Collis	Crystal	Frank-	Gal	South	Hoens-	Inland	Jay-	Weidon	Thom-	Totals
			NBDNL		vlg.	zonsa	vlg.			Lake	fort	more	Fridt.	stead		Avell	ville		
Austria			0								3		1					1	5
Belgium		1	1								2		22				2		27
Bohemia			0																0
Britannic			0																0
England	4	8	12	3	1	2	17	3	3	6	21	2	5	19	8	9	14	4	135
Scotland	2	1	3			2		7	4		2	9	2	2	1		4	2	34
Wales			0					1	1										2
(Brit. total)	6	9	15	3	1	10	17	6	8	6	24	11	7	21	9	9	18	6	171
Canada	3	46	49	16	7	39	24	42	50	19	99	23	45	66	16	46	24	72	637
Chile			0								2								2
Denmark		1	1					4		2	4		9	1			7		28
Finland			0													1	1	2	4
France			0			1							1						2
Germany	5	15	23	1	2	4	1	7	15	15	43	12	16	11	2	1	7	9	199
Ireland	1	1	2	1	1	6	2		4	4	9		7	5		1		2	44
Netherlands		1	1						3		3		4			1	10	1	23
Norway	6	1	7		1	7	1	11	19	70	75	8	27			5	6		237
Poland		1	1			1				1									3
Portugal			0							1									1
Russia			0	2							3	2		2	11			2	22
Sweden	1	4	5	2	3	1		2	7	13	16	4	22	9		5	15	8	112
Switzerland		1	1						1				1						4
Turkey			0																0
TOTALS																			
Foreign-born	25	81	106	25	15	69	45	72	107	132	282	60	162	115	38	78	81	104	1,491
Unknown			0			1	5			1	4		2			1			14
U.S.-born																			
White	98	349	447	494	226	568	434	376	622	301	1,183	187	475	893	446	299	358	789	8,098
Indian		28	28	20															48
Black	3	19	22																23
Total U.S.	101	396	497	514	226	568	434	376	622	301	1,183	187	475	894	446	299	358	789	8,169
GRAND TOTAL	126	477	603	539	241	638	484	448	729	434	1,469	247	639	1,009	484	378	439	893	9,674

Source: Manuscript schedules, Twelfth Census of the United States (1900).

**Table A-15
FOREIGN-BORN POPULATION OF LEELANAU COUNTY,
BY TOWNSHIPS AND VILLAGES, 1900**

	Center- ville	Cleve- land	Empire	Glen Arbor	Total SBDNL	Bing- ham	Em- wood	Kasson	Lee- lanau	Leland	Solon	Suttons Bay	S. Bay village	Total Leelanau County
Austria		3			3	2	24		4	3	7	3	1	47
Belgium			13		13					21				15
Bohemia	5	55	3	1	64	4		4	40	13	17	2	1	145
Britain														0
England	1	1	11	4	17	4	4	5	39	1	10	1	1	82
Scotland			6	5	11	2	1				3		1	18
Wales					0				1					1
Brit. totals	1	1	17		19	6	5	5	40	1	13	1	2	92
Canada	58	13	89	31	191	62	25	31	62	67	33	23	12	506
Denmark	7			6	13		1	1	4	3				22
Finland				1	1									1
France	1				1	1	3		3	7		1		16
Germany	52	45	18	25	140	83	79	16	37	76	26	31	18	516
Ireland	2	3	25	4	34	4	6	3	2	3	7	2		61
Netherlands	4		1	1	6		4							10
Norway	10	1	64	19	94	26	3	1	85	19	4	119	52	403
Poland	165	12			177	5	15	3		2	28	1		231
Russia		1	4		5	1		2						8
Sweden	29	1	10	26	66	7	14		57	33	3	5	1	186
Switzerland	2				2	3			5	3		3	9	25
Turkey					0		1							1
TOTALS														
Foreign born	336	135	244	123	838	204	180	66	339	232	148	191	96	2,794
Unknown		1	19	1	21		2	2		3	13			41
U.S. born														
White	949	370	863	469	2,651	605	655	618	1,065	702	720	414	302	7,732
Indian			22		22				215	8		237		482
Black			7		7						7	2		16
Total U.S.	949	370	892	469	2,680	605	655	618	1,280	710	727	653	302	8,230
Grand Total	1,285	506	1,155	593	3,539	809	837	686	1,619	945	888	844	398	10,565

Source: Manuscript schedules, Twelfth Census of the United States (1900).

**Table A-16
FOREIGN-BORN POPULATION OF BENZIE COUNTY,
BY TOWNSHIPS AND VILLAGES, 1910**

	Lake	Plate	Total SBDNL	Almira Vlg.	L. Ann Zionia Vlg.	Ben- zie Vlg.	Blaine	Cedax	Crystal Lake	Frank- fort	Gil- more	South Fridt.	Home- stead	Inland	Joy field	Weldon	Thom- ville	Totals
Belgium		1	1			1		4		2	3		13				5	29
Bohemia			0	2							1				3			6
Britain																		
England	11	3	14	3	1	3	11	3	3		23	4	7	12	3	5	6	103
Scotland	1		1		1			3	2		1			1	1			12
Wales			0															0
(Brit. totals)	12	3	15	3	2	3	11	6	4	0	24	4	7	13	4	6	6	115
Canada																		
English	4	28	32	4	7	23	24	28	26	6	59	19	46	53	19	76	13	441
French	1	2	3				3	4	2	5	11	1	2	3			2	36
German	1	5	6	1		1				1	2			11				22
(Canada totals)	6	35	41	5	7	23	26	32	28	12	72	20	48	67	19	26	15	501
China			0								1							1
Denmark	2		2					11		3	3		2					21
Finland			0		3			1	2	1		2					3	11
France			0								1							2
Germany	5	13	18	4	2	5	1		11	7	35	12	13	10	5	2	6	138
Hungary			0															0
Ireland	1		1	1		3			4	1	7	2	2	3				24
Netherlands			0					1	1	1	1			1		1	3	13
Norway	1		1			6	1	3	17	22	105	9	27	5	1	2	1	250
Poland		1	1			1			4		2	1	3					12
Russia			0								2			3				10
Sweden	1	3	4	5	2	1	2	5	5	13	13	14	13	6		2	4	93
Switzerland			0	1					1				1	1			1	6
Turkey			0															0
TOTALS																		
Foreign born	28	56	84	21	16	44	42	62	76	113	271	66	127	109	32	40	42	1,232
Unknown	12		12					3						1		1	1	19
U.S. born																		
White	147	369	516	495	355	718	520	567	500	353	1270	216	553	1196	618	370	400	7,211
Indian		23	23											109			10	142
Black			0								18	5				31	2	57
Total U.S.	147	392	539	495	355	718	520	567	500	353	1288	221	553	1305	618	401	412	7,407
GRAND TOTAL	187	448	630	516	371	762	562	632	576	666	1559	287	680	1415	650	442	452	10,618

Source: Manuscript schedules, Thirteenth Census of the United States (1910).

Table A-17
FOREIGN-BORN POPULATION OF LEELANAU COUNTY,
BY TOWNSHIPS AND VILLAGES, 1910

	Center-ville	Clevo-lund	Empire	Glen-Arbor	S. Man-island	N. Man-island	Totals-SBDNC	Bay-ham	Lin-wood	Kanon	Lee-lane	North-port	Leland	Solon	Sutton's Bay	S. Bay-vlg.	Totals
Belgium			23				23										23
Bohemia	2	46	3				51	1	19	13	52	2	16	2	2	1	159
Britain																	
England		1	10	9			20	2	1		14	14	1	7			59
Scotland							0							1			1
(Brit. totals)	0	1	10	9	0	0	20	0	2	1	14	14	1	8	0	0	60
Canada																	
English	2	10	50	10	1	3	76	23	22	7	14	21	7	10	7	3	190
French	30	1	12	1		1	45		1	5	4	5	26	5	10		101
German			12				12	11	3			2	7	6	2	3	40
(Canada totals)	32	11	74	11	1	4	133	34	26	12	20	28	40	21	19	6	330
Denmark	5		1	4		1	11		1		3		1	1			17
Ireland							0		1								1
France							0		1			1	4			1	7
Germany	29	28	10	6	7	5	85	72	31	21	19	9	47	36	21	11	352
Hungary							0					1					1
Italy	3	2	19				24	1	1	4			1	5			36
Netherlands	2			1		1	4		4				1				9
Norway	8		62	11	3	10	94	26	3	1	55	15	14	3	106	60	377
Poland	142	20	1				163	3	24	25			2	42	7		264
Russia							0										0
Sweden	15	1	20	7	2	8	53		11	3	36	16	17	2	5	2	149
Switzerland							0	3			6		5		1	4	19
Turkey			3				3										3
TOTALS																	
Foreign-born	230	109	226	69	13	29	664	340	124	80	206	87	149	120	161	85	1,618
Unknown	3	3					6	1					6				13
U.S.-born																	
White	810	465	972	405	55	186	2,893	597	620	755	696	436	864	623	486	317	8,299
Indian		8		26			34	8			231		10	21	152		456
Black			7				7			3			1	2			13
Total U.S.	810	473	979	431	55	186	2,934	605	620	758	729	436	875	646	638	317	8,758
GRAND TOTAL	1,041	582	1,205	490	68	215	3,604	746	744	838	1,177	523	1,030	766	799	402	10,389

Source: Manuscript schedules, Thirteenth Census of the United States (1910).

Table A-18
COUNTRY OF BIRTH FOR THE FOREIGN-BORN POPULATIONS OF BENZIE AND LELLANAU COUNTIES AND THE MANITOU ISLANDS, 1860-1940

AREA	Austria	Bohemia	Britain	Canada	Denmark	Germany	Ireland	Norway	Poland	Sweden	Other	TOTAL
1860												
Benzie County	-	-	14	31	-	5	7	2	-	-	-	1
Lellanau County	2	42	78	120	-	195	19	1	-	-	-	22
Manitou Islands	-	-	10	4	4	60	8	57	-	-	-	165
TOTAL	2	42	102	155	4	260	34	60	0	0	5	704
1870												
Benzie County	-	-	86	161	-	41	28	15	-	-	2	342
Lellanau County	35	120	151	694	5	304	114	36	-	-	5	1528
Manitou Islands	-	-	4	13	3	26	4	19	11	-	15	95
TOTAL	35	120	241	858	8	401	146	70	11	-	22	1965
1880												
Benzie County	1	-	115	297	18	93	41	32	13	32	22	664
Lellanau County	50	147	142	566	21	298	99	183	47	73	37	1635
Manitou Islands	-	-	5	5	18	76	6	1	2	8	-	71
TOTAL	51	147	262	870	57	417	146	166	62	113	59	2370
1890												
Benzie County	2	1	170	375	29	144	44	255	6	58	57	1141
Lellanau County	33	183	210	391	11	645	80	319	69	98	65	2104
TOTAL	35	184	380	766	40	789	124	574	75	156	122	3245
1900												
Benzie County	4	-	168	594	28	171	43	228	3	111	97	1447
Lellanau County	46	147	401	494	22	515	61	401	242	188	78	2285
TOTAL	50	147	269	1078	50	686	104	629	245	299	175	3732
1910												
Benzie County	-	8	110	501	27	132	24	230	12	93	76	1242
Lellanau County	-	156	61	346	17	355	36	327	266	149	64	1829
TOTAL	0	164	171	847	44	487	60	627	278	242	140	3069
1920												
Benzie County	5	5	34	269	24	66	13	193	25	57	51	762
Lellanau County	40	119	46	233	12	179	25	226	155	99	51	1285
TOTAL	45	124	100	502	36	345	38	419	180	156	102	2047
1930												
Benzie County	6	10	43	178	16	38	5	163	9	49	48	585
Lellanau County	12	85	33	134	5	127	13	160	139	58	32	798
TOTAL	18	95	76	312	21	165	18	323	148	107	80	1383
1940												
Benzie County	6	11	21	120	6	36	2	110	10	27	41	390
Lellanau County	10	59	16	83	3	100	7	104	64	40	26	512
TOTAL	16	70	37	203	9	136	9	214	74	67	67	902

Since the manuscript schedules for the 1890 census are not available, it was not possible to determine how many of Manitou County's residents lived on North or South Manitou Islands. In 1896, North Manitou merged with Lellanau Township, and South Manitou with Cretz Acker Township. Bohemians are referred to as Czechs in 1920 and thereafter.

Sources: Manuscript schedules for the 1860, 1870, 1880, 1890, and 1910 Federal censuses of population; and published reports for the 1890, 1920, 1930, and 1940 U.S. Census of Population.

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