



MULTIDISCIPLINARY RESEARCH



IN THE GREAT LAKES BASIN

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# **GRAND TRAVERSE BAY**

## **IN THE GREAT LAKES BASIN**

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**A History of a Changing Area**

By  
**Lila Colby**

GRAND TRAVERSE BAY IN THE GREAT LAKES BASIN

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A FEW WORDS ABOUT THIS PUBLICATION

To establish an historical framework and foundation for the University of Michigan's Sea Grant ecological and societal research in the Grand Traverse Bay area, we commissioned Lila Colby, research librarian and archivist, to compile a history of this fascinating and changing region in the Great Lakes basin.

The Michigan Sea Grant program, which is cosponsored by NOAA, the U.S. Department of Commerce's National Oceanic and Atmospheric Administration, believes that this history of Grand Traverse Bay will prove useful to local leaders who are helping our University team investigate this part of the Great Lakes system. We trust too, that other public officials, librarians, archivists, historians, educators, civic leaders, school children, and the many thousands of visitors who enjoy the recreational and cultural advantages of the Grand Traverse Bay area will profit from, and enjoy, this historical narrative.

Dr. John M. Armstrong, Director  
U. of M. Sea Grant Program

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# GRAND TRAVERSE BAY IN THE GREAT LAKES BASIN

## A History of a Changing Area

### FOREWORD

For many hundreds of years, Mound Builders, woodland Indians, explorers, and vacationists have "discovered" the Grand Traverse Bay region in the northwestern corner of Michigan's Lower Peninsula and each, according to his needs, has received from the bountiful blue waters such needed natural gifts as fish, transportation, fresh drinking water, and many other boons.

Whether it is a voyageur or fur trader from yesteryear or an ichthyologist, a poet, a yacht owner, a water skier, or a Coho fisherman of the present century, all who enter this enchanted region have a serendipitous feeling that they, personally, have discovered Grand Traverse Bay.

Much has been recorded about this Michigan area from early missionary days to current University researchers representing many disciplines. Some of the accounts have been whimsical, some poetic, some deeply scientific, and others are the highly colorful accounts dreamed up and disseminated by travel promoters and real estate press agents.

Today, in the 1970's, a multidisciplinary team of University of Michigan scientists and their research assistants are deeply involved in studies of the Bay and the surrounding region. Their 'discoveries,' it is hoped, will help in determining and influencing the long range ecological effect of man on the future of the Grand Traverse Bay.

Lila Colby

Ann Arbor, Michigan

May 4, 1971

### SEA GRANT PUBLICATIONS

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# GRAND TRAVERSE BAY IN THE GREAT LAKES BASIN

## A History of a Changing Area

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## GRAND TRAVERSE BAY IN THE GREAT LAKES BASIN

### A History of a Changing Area

#### Recorded History Started in 1600's

The recorded history of the Bay reaches back at least to the late seventeenth century. Father Jaques Marquette is believed to have known of the area. Legend has it that this great priest and explorer was in the vicinity and that he went through the Grand Traverse region putting up crosses and planting fruit trees, on the other hand, some historians suggest that in his extensive travels he would not have had time to explore the Bay.

Although Father Marquette is recognized as one of the discoverers of the Great Lakes, it must not be forgotten that he was foremost a priest. It is said that "Father Marquette came to Canada passed through the Sault and carried on Father Allouez's work on the shores of Lake Superior. From La Pointe, Wisconsin he went to St. Ignace on the Straits in the summer of 1671, to instruct in the ways of God the 'untutored minds' of the Ottawas and the Hurons," 'who knew only of the devil . . .'" With Joliet, Marquette left the Lakes to explore the Mississippi River. He later returned to the Great Lakes area to die in 1674 on the eastern shore of Lake Michigan.

#### Cosmographers and Map Makers

By 1688 a map was published of New France by the famed cosmographer, P. Mro Coronelli, who was probably the first to include Grand Traverse Bay on a map. Coronelli, a Franciscan monk, recognized for the excellence of his scholarship, skillfully made his maps not on the site, but from men who had been at the place and by studying the writings and drawings of those men who had been on the scene of whatever area he was mapping.

Coronelli's map of New France has a highly interesting, but distorted, Lower Peninsula of Michigan with the Petite and Grande [sic] Traverse Bays shown with their names distinctly printed beside them on this map.<sup>2</sup> A further delving into the matter might bring to light clues that would lead to clearing up the mystery as to whether Father Marquette was ever on Grand Traverse Bay, or not. Coronelli's research materials may exist somewhere, and if so, are probably in France. It is known that part of his work in preparing the map of New France was based on a previous map which had been published in 1684.

#### Early Maps Stimulated Interest

Maps of the new world whetted the imaginations of many Europeans who dreamed of conquest and exploration. The writings of Louis Hennepin, a Franciscan Recollect friar, which record the New World and his conquests in it are works full of charm. However, some of his explorations and exploits have been disputed. It has been established that he took credit for much that was done by other members of his party. His writings and his maps were much sought after by explorers as well as by fireside dreamers.

Hennepin's Map of a Large Country Newly Discovered in the Northern America . . . published in 1698 included, but did not name, Grand Traverse Bay.<sup>3</sup>

A map made by Baron Louis Armand de Lahontan, published in 1703, indicates the Bay with somewhat recognizable features. Other early geographers such as the Englishman, John Senex, in 1710, and H. M. Moll, in 1720, made maps of New France. They were followed by a map with many changes made by Henry Popple in 1733, which delineated the British Empire in North America. All of these maps by Senex, Moll, and Popple, show the Grand Traverse Bay lying due east and west and not north and south as it is in reality.

The great Jesuit explorer and historian, Champlain, in his Journal d'un Voyage, published in 1744, which was about New France, included a map that indicated the Bay extending in the wrong direction, but plainly marked "Grande Traverse." Other maps showing the Bay followed soon after. Cadwalder Colden's map shows the "Grand Bay," in what was seemingly for the first time a northwest to a southeast position, indicating that more information was becoming available. The maps that followed in the next few years continued depicting the Bay, and when any nomenclature was shown, it was with variations of the name by which it is now known.

#### 1755 Map Printed in England

John Mitchell, a London geographer, printed a most interesting and beautiful map which included the Bay. The Mitchell map was issued in 1755, and has been compared with the David Burr map of 1831,<sup>4</sup> in which Burr adopted the slender, sloping Lake Michigan from the work of Aaron Arrowsmith (See: Map, No. 1 and 2).

The Ottawas came to the Bay in spite of French efforts to keep them from locating so far from the French agency at Mackinac. The elegant Charles de la Boische Beauharnois, Governor General of New France, made a speech to the y' Outaouacs [Ottawas] of Missilimackinac,<sup>5</sup> in hopes that he could persuade them to stay near, so desperately were they afraid of losing their control over these 'savages,' and would be very inconvenient in the matter of 'Trade.'

A few months after Beauharnois' speech, the problem was still acute. The Indians had been hungry for most of the previous winter and they were not in a passive mood.

#### French Concerns About Indians

The Commandant at Michilimackinac was handling the matter as well as he could, but in the late summer, he found it necessary to inform Beauharnois about the problem of dissuading the 'savages' from moving to the Grand Traverse area where they had already done some clearing. This region was twenty-five leagues distant from Mackinac. The matter was grave so Commandant Celeron decided that the only possibilities left open to him were in matters and types of assistance

which he could give these Indians, and he knew that action must be taken. Obviously Celeron expected that the handling of the matter was not going to meet with his superior's approval, as the letter had an obsequious tone.<sup>6</sup>

By 1815, the Ottawas at Cheboygan River, L'Arbee Croche, Beaver Island, and Grand Traverse had villages which were by then settled, and they had well developed agricultural practices. They were producing several thousand bushels of corn and Irish potatoes, as well as cabbages, turnips, pumpkins, and other vegetables. These, they 'disposed of' at the Fort and the Island of Mackinac, and to the North West fur trade. Some of the chiefs had requested that their 'father in Washington' should give them cattle and that he would send them a blacksmith to repair guns, and to teach them to build houses such as the white people lived in.<sup>7</sup> These requests would be granted eventually, but it would be several years before the government yielded to the pressures of the Indians for these particular things.

#### Chippewas in Bay Area

There is no evidence to prove when the Chippewas first came to the Bay area. The Ottawas are believed to be the first to settle there and their legends are so firmly fixed in peoples' minds that many residents believe that they were the only Indians who ever lived in the Bay's vicinity. Many of the descendants of the Ottawas and Chippewas still live in the Grand Traverse region. According to Aishkwagon-al-bee, the first Chippewa chief, there was an unusual reason for their having come to the Grand Traverse Bay. The Nadowas (Iroquois) lived at Point St. Ignace, and they were playing ball with the Ottawas and the Chippewas one day when a Chippewa was killed. The Ottawas and Chippewas joined together, drove the Nadowas out, and destroyed their village. The two allies then divided the land by natural boundaries, with the Grand Traverse Bay area falling to the Chippewas.<sup>8</sup>

#### Early Days in the Bay Region

The development of the Bay region was much slower than might have been expected due largely to the natural barriers existing at that time. Travel to the Bay area was difficult. There was not a single road in the entire district. There were a few trails, however, but these took one through such a complex mixture of heavy brush, woods, creeks, rivers, and lakes, that few cared to use them. Obviously, the water ways were the only practicable way to travel around the Bay.

Great Lakes' captains usually avoided the Bay as it was believed to be shallow and dangerous, and they refused to risk the lives of their passengers or their cargoes and schooners. Only the courageous or fool-hardy navigator would travel on these uncharted waters. It would be a long time before proper navigational charts could be produced, inasmuch as the surveys on which they would be based had yet to be made.

The Corps of Engineers, an official unit of the United States Army,<sup>9</sup> at that time, began its surveys of the Great Lakes in 1841. The vastness of these fresh



waters on the North American continent made it inevitable that it would be many years before the entire system could be completely surveyed and charted. In the third and fourth years of these surveys, the Corps obtained their first data relative to the Bay for topographical charts, and some twenty years later, the first hydrographic charts were made of this same section. Yet the Glitchi Weketong,<sup>10</sup> the Indian name for the Bay, continued to be almost the only means through which contact could be made between that locale and the outside world.

#### Cumbersome Boats Used

In the early pioneer days when the Bay was open, goods and people were usually moved in, or out, by canoes of various sizes or by mackinac boats which are cumbersome. The mackinac was a flat bottomed boat with which oars or sails could be used, and it had a square stern and pointed prow. These indigenous boats were highly practical and considered safe in a storm if the person who was bailing the boat did not get too tired. They were usually found on the Great Lakes, or on their tributaries.<sup>11</sup>

Settlers were choosing other lands rather than the northwest portion of Michigan's Lower Peninsula. Even if the area had been easier to reach, the matter was complicated by an early land survey of the then Michigan Territory. The surveyors had passed along the idea that only the southern half of the Peninsula had any real value, and that the other areas were generally composed of swampy, unproductive lands. Their report, although considered 'miserable work,'<sup>12</sup> proved to have damaging effects on the development of the region as there were no knowledgeable observers to refute the survey.

What were these lands? Their advantages? Their resources? Some of the answers should have come from the land survey made in 1839 for the newly organized state of Michigan. This survey was begun with the intention of opening up sections that were then without inhabitants, and of bringing in more settlers to those areas, and of adding settlers to other places which were sparsely settled. However, the data proved to be unreliable. Unfortunately, the erroneous information was not clarified for more than a decade, when another survey was made which proved significant. It took many years to clear away the false impressions created by the two previous land surveys.

#### Captains Misinformed Migrants

The Great Lakes' captains picked up little if any information about the Bay and had acquired misleading or incorrect information about the Grand Traverse hinterland. Because of this they often urged their passengers to go to Illinois or Wisconsin instead of the northwestern part of the Lower Peninsula. Perhaps the known existence of good harbors in those states swayed the captains' evaluations.

Many an early traveler or emigrant in the 1830's carried J. H. Young's Map of Michigan.<sup>13</sup> This map shows a thin, elongated Lake Michigan and a badly misshapen Lower Peninsula, with the Bay still in the same position that it was in the earlier Mitchell map.

### What Grand Traverse Bay Is Really Like

Grand Traverse Bay is not only a part of Lake Michigan, but is itself a close physical analog of the Lake. The Bay is a deep water Great Lakes' system which juts southward into northwest lower Michigan.<sup>14</sup> The impressive Lake Michigan is the sixth largest lake in the world, and as such is three hundred and seven miles long, has a breadth of one hundred and eighteen miles, and a maximum depth of nine hundred and twenty-three feet. As an arm of Lake Michigan, the Grand Traverse Bay is approximately thirty miles long, twelve miles wide, and has a maximum depth of about six hundred and twelve feet.

The geographic complexities of the Bay were compounded by the glacial age, of which George Lauff, a Great Lakes Research limnologist, writes:

The general physiography of the Grand Traverse Bay area is a consequence of the glacial history of the region. The relief results primarily from moraines left by the Valdres ice advance during the Wisconsin glacial age. The moraines are related to sublobes which extended from the major ice mass in the Lake Michigan basin into Grand Traverse Bay, Little Traverse Bay, and the Lakes along the northern part of the east coast of Lake Michigan.<sup>15</sup>

The Bay projects southward from the northern part of Lake Michigan into lower Michigan. It's irregular shoreline is complicated by a narrow peninsula which rises from the head of the Bay towards the north for about seventeen miles and neatly divides that part of the Bay into two fairly equal parts known as the East and West Arms or as the East and West Bays. Locally, these areas are often referred to as the 'two Bays.'

### Both Bays Are Deep

The bottom of the Bay lies at a depth of fifty fathoms, or more, even though there are some shallow places such as are found north of Old Mission Peninsula, and south of Lee's Point. However, the West Arm has a maximum depth of four hundred and two feet which is also off Lee's Point, and the West Arm's average depth is one hundred and sixty-seven feet. The East Arm is deeper than the West Arm, as one hundred and ninety-three feet is the East Bay's mean depth, while it reaches six hundred and twelve feet at its greatest depth.

There are two important inputs to the Bay. One is the Boardman River which flows into the West Bay, while the second is the chain of lakes which feeds into the East Bay at Elk Rapids, in the southwestern corner of Antrim County.

This chain of lakes consists of: Intermediate, Bellaire, Clam, Torch, and Elk lakes. Two of these, Torch and Elk, are of greater importance than the others. Torch Lake is the largest unit in the chain with more than 18,000 acres. It reaches a depth of about two hundred and ninety-three feet, which makes it the deepest lake in Michigan.

### Chain Lakes' Effluence

In this chain, Elk Lake is the second in size. It has less than half Torch Lake's acreage and is only two-thirds as deep, but it is still the second deepest lake to be found in Michigan. Effluent discharge reaching these lakes can eventually work its way through any of these waters to Elk Lake and then into the Bay.

According to the Sport Fishing Guide to Grand Traverse Bay, which was put out jointly by the Traverse City Chamber of Commerce and the Michigan Department of Conservation, ". . . the shoreline of the Grand Traverse Bay is rocky and irregular, though most bays have sandy beaches. This irregular shoreline contributes many linear miles of shoal water and also affords protection in case of wind." This undulating shore adds much to the beauty of the area, and must have pleased even those early inhabitants, the 'Mound Builders.'

Along the Bay's western shoreline, are Suttons and Northport Bays, which were sawmill centers developed soon after the Traverse City operations in lumbering began. On the west shore of the Old Peninsula, there is another small bay, Bowers Harbor, which is almost landlocked by the small island which lies across most of its entrance. These three harbors have had their share of economic importance in the development of the Bay region.

### The Territory's Earliest Known Inhabitants

The Mound Builders had disappeared long before Columbus and other explorers came to the New World. These were aborigines whose custom of heaping mounds of earth over graves of their dead, caused archaeologists to give them the name of Mound Builders. The evidences point to a governmental system which seems to have had a degree of sophistication, and control to a degree that seems quite advanced for their mode of living. There is also proof of their culture in the remnants of pottery, tools, weapons, and copper ornaments which have been found in various parts of the lands near the Bay, where they were known to have lived.

Several mounds and a burial ground were found in the Traverse City area and at the end of the Peninsula, where they had established a village.<sup>16</sup> Anthropologists believe that the climate was warmer at the time that the Mound Builders lived in the balmy atmosphere of the Bay region, and the premise is that the climatic change to colder weather caused them to move away. These ancient peoples left without a trace.

Centuries later, the voyageurs, adventurers, and priest-explorers came through the area. It is believed that the black-robed Jesuits set out the orchards that were still in evidence when the first settlers came. These apple orchards, long past their bearing stage, had great, thick trunks, evidencing that a great number of years had passed since they were planted.

Legend has it that Father Marquette had put up a cross on Old Mission, and that he had nailed up crosses on some of the highest points around the Bay, Regrettably,

this seems to be nothing more than a lovely legend, as there is nothing known at the present time which substantiates it.

### Developing Indian Villages

Father Badin spent some time in the area during the 1820's, and his Protestant counterpoint, William Montague Ferry, made periodic trips to the area somewhat later. Their interests lay in the developing Indian villages at the various places on the edge of the Bay. These lands had for some time been claimed by the Ottawa, but, the territory had become the sole domain of the Chippewas. They cultivated their gardens, hunted in the woods, and fished in the Bay and its tributaries.

The maturation of these villages was the cause of some concern to the Federal Government when they became cognizant of the matter. The decision was made that it was time for the Indian agent, the government's top official in the northern Michigan area, to look into the situation.

### Schoolcraft Is Indian Agent

The Grand Traverse region was a part of the large territory administered by Henry Schoolcraft, as the Indian agent. He was, in fact, the law of the territory. In addition, Schoolcraft was a national figure, recognized as an authority on Indians, a writer of note, and an explorer.

Schoolcraft's marriage, in 1823, to the captivating and brilliant Jane Johnston, daughter of the Irish gentleman, fur trader, John Johnston and his wife, Susan, and this was important because Susan Johnston was a full blooded Indian. Her tribal name was O-she-wush-ko-da-wa-qua, meaning Woman of the Green Valley, and she was the daughter of the powerful Chippewa chief, Waub Ojeeg.<sup>17</sup> The Chippewas benefited from the understanding that grew through the association of Schoolcraft and his wife's Indian relatives, and Schoolcraft was heavily in their debt. They helped him understand their culture. They passed on to him the stories and legends of their unrecorded history which enriched his books and magazine articles and served to make him a more competent and understanding official.

In his capacity as Indian agent, Schoolcraft made a trip to the Bay for the purpose of observing whatever problems or needs the Indians then had wherein he could be helpful. He decided that it would be in the best interests of the government if he sent a blacksmith, a carpenter, an Indian farmer (whose job was to teach the Indians to farm), and an interpreter. These four people were to assist these dependents of the Federal government, to aid them in assimilating more of the ways of the white man, and to help them to eventually become self-supporting. In the course of the agency's activities in that region, Schoolcraft found it expedient to appoint two of his brothers-in-law to positions at the Bay, a matter which resulted in some strong criticism.

Ferry, the missionary, back from one of his trips to the northwest portion of the Lower Peninsula, made it a point to tell the Indian agent that there was great need for a missionary to serve the Grand Traverse locality. This wish was further

accelerated by a Chippewa chief from the area who made a special trip to Mackinac so that he could personally request that Schoolcraft send a missionary to his village.

### Presbyterian Missionary Arrives

The appearance in Mackinac of the young Presbyterian minister, Peter Dougherty, came at a propitious moment. He was looking for a location to establish a mission for the American Board of Missions. Quite properly, Dougherty immediately called on the Johnston and the Schoolcraft families to pay his respects, for although Schoolcraft disavowed the existence of any society at Mackinac, these families were recognized as the establishment.

The minister informed the Indian agent of his quest for a mission among the Indians and asked for Schoolcraft's advice. This met with official approval and the agent suggested that Dougherty go to Grand Traverse Bay and look over the possibilities inherent in the Grand Traverse region,<sup>18</sup> where Schoolcraft felt there was a need for such a religious enterprise. The decision was reached that Dougherty would go to the Bay to look the situation over, and, if this seemed the right place for such an undertaking, choose a site for his headquarters. Schoolcraft also made the suggestion that if Dougherty were to found his mission under government sanction, it might have a better chance of success. Dougherty had no quarrel with this, he was fully aware of the autocratic authority of the Indian agents within their jurisdiction.

In 1838, on a sunny August day, Dougherty with an Indian guide set out for the Bay. They polled their canoe, keeping it always close to the shore, and it took them almost two days of traveling time to make the trip from Mackinac to what is now Elk Rapids in Antrim County.

### Mission Site Chosen

Dougherty, with what little understanding he had of the location and conditions, decided that this was the spot on which to found his mission. He and his guide then returned to Mackinac. All through the winter that followed, Dougherty seriously attempted to learn the language, which, from what is known about his use of their tongue, seems to have eluded him, much to the bemusement of the Indians.

Soon after the ice broke up in the spring, Dougherty, with John Fleming, another minister, along with the Federal employees: the Indian farmer, blacksmith, carpenter, and an interpreter, made their trip to the Bay in a mackinaw boat. The missionaries were taken to a point about a quarter of a mile south of what is presently Elk Rapids, where they were to set up their mission.

A couple of months later, Schoolcraft started on his official tour to appraise improvements carried out in various Indian villages according to the stipulations under the Indian treaty of 1836. While checking to see if the Indians were living up to their commitments involving improvements in their villages, he decided that it would be a good time to check out how well Dougherty and

Fleming were doing with the establishing of their mission.

Whatever Schoolcraft had expected, he was unprepared for the ineptitude with which the ministers were proceeding. He was furious when he found them, as he said ". . . located on the sands, near the bottom of the bay where a vessel could not unload, at a point so utterly destitute of advantages that it would not have been possible to select a worse site in the compass of the whole bay, which is large and abounds in ship harbors." So, Schoolcraft continued, "Condemned the site . . . and removed the site to Kosa's village on a bay near the end of the peninsula."<sup>19</sup>

#### Kosaville Harbor Named

The harbor referred to is shown on the Corps of Engineers first chart of that part of the Bay, and is called Kosaville Harbor.<sup>20</sup> This same chart (dated 1844) includes Kosa's village on the west side of the harbor, and indicates that there were twenty-three buildings, including the school.

Dougherty's story of why the mission was moved from the East Bay to the end of the Peninsula, is at odds with Schoolcraft's statement. Dougherty writes that the chief requested that the mission be moved to the Peninsula, a story which has been widely circulated with various elaborations and changes. It is probable that Schoolcraft's is essentially correct as Dougherty kept his diary somewhat as if he were a lone traveler. Fleming does not appear in Dougherty's account of the change of location for the mission. Soon after that, Fleming was called back to Mackinac, due to the death of his wife, and he never returned to the Bay. There were members of the Indian agency and other employees of the Board of Missions who did remain there at the Bay, and some of these people brought their families in and established homes there.

The mission Dougherty established was far more successful than might have been expected. The pious minister usually managed outwardly to control his impatience at the slowness with which his Indian charges accepted his religious teachings. The minister liked the place, and let it be known that he had come to stay. He started to plant fruit trees, and brought his wife and young daughter to the mission. Dougherty's general attitude helped to give the Red Men a feeling that he had faith and trust in the region as a home for himself and his growing family.

#### Other Settlers Come

Families of employees of the Indian and church agencies were accompanying the husbands and fathers. Occasionally, people other than those identified with governmental and spiritual agencies were coming into the area in spite of the problems inherent in travel to or from the region. Getting in needed supplies and large household or occupational tools posed an almost overwhelming problem. An example of such difficulties is found in a letter pertaining to some business of the Indian farmer, George Johnston. He requested, "a yoke

of well-broken, well matched and healthy oxen worth aboute [sic] fifty dollars in Chicago, of a red colour [sic] if possible."<sup>21</sup> The oxen were to have been shipped on Captain M. Markle's vessel. Markle informed Johnston's Chicago agent that he would not put in at the Bay, but would deliver the oxen to Mackinac, instead. Captains of other vessels usually reacted about the same way.

In spite of the problems within this region, the little community began to grow. By 1842, three white children were attending the mission school along with the many Indian pupils.

It is generally acknowledged that from 1847 on, the settlers were coming in. Most of them brought few goods, as was typical of pioneers. Actually, the point of change for the area was the arrival of young Horace Boardman with a few workmen who began lumbering operations for Horace's father, Henry Boardman, who was the enterprise's financial backer.

#### Lumbering Attracts Migrants

Settlement quickened with the exploitation of lumber resources. In 1847, the Boardmans located on Asylum Creek, which fed into the Grand Traverse River which is now the Boardman River. A small schooner, the Lady of the Lakes, was purchased by the senior Boardman to help facilitate the marketing process.

The Lady was a fast sailer and carried freight, workers, and often their families. Actually, rotting timbers made the Boardman craft unsafe in a storm which was proven when on a trip to Beaver Island for supplies, the Lady went to pieces at a wharf during a sudden winter storm.

The second year found the Boardmans' enterprise growing, as they had constructed a wharf and a sawmill, and they were shipping shingle bolts, lumber, and hemlock to the Chicago markets.

The following year, a transient named Freeman came to the Federal lands at the head of the Bay. He hired some Indians to help him and together they stripped the bark off hemlock trees, which he shipped to the tanneries. He neither owned, nor, had he acquired any rights to the timber or bark on these Federally owned lands. Freeman operated in a manner that people found shockingly wasteful, even for that era which was notorious for its profligate handling of forest resources. Yet no one seems to have objected. Of course, that may have been because no policing services would have been available due to there being so few people in the territory at that time.

#### 1839 Survey Inaccurate

Several small communities were developing around the Bay, such as those at Traverse City, Stevens (later named Elk Rapids), and Old Mission, at the head of the Peninsula. The land survey of 1839, if it had been an accurate one, should have brought in great numbers of settlers. However, that survey proved to be so completely untrustworthy that the comparatively new state of Michigan was eventually forced to have another study made.

In the spring of 1850, the men who were to survey the Grand Traverse region arrived from Detroit at the point of the Peninsula. They had had quite some difficulty in getting that far. In the letters which two of the men sent off to their boss, Lucius Lyon, one gets a picture of some of the problems at the Bay.

One surveyor, Robert F. Hunt wrote, "We have at last arrived at our point of destination, but with some troubles [sic] as the Captain was very much opposed to going down into the Bay any farther than the mission, where we left twenty-two barrels of provisions, with the Government Farmer, W. G. Fair."<sup>22</sup> This he sent to Lyon on the twenty-sixth of April and it arrived at Lyon's headquarters five days later.

A letter from S. S. Scranton, another one of the surveyors who wrote from "Grand Traverse Bay," reached Lyon a day later with the statement that the letter he was writing would be sent by a schooner that was at that time in the Bay loading shingle bolts. At the same time, he requested that Lyon, "Please bring four wool hats, saleratus and cream of tartar . . . & [sic] five yards crash for towels & [sic] knife and fork for yourself."<sup>23</sup>

#### No Nearby Trading Posts

The ship which had brought the men into the Bay would stay only long enough to unload, and then it left immediately. All supplies had to be brought in as there were no stores or trading posts nearer than Mackinac.

The surveyors, in their work, produced an effective document. Their survey was an effective agent in making the truth known about the important assets of the Grand Traverse lands.

#### The Boardman Enterprises

- Old Henry Boardman was an industrious Illinois farmer who seldom came to the Bay to check up on his business venture there. However, he believed that it was not very efficiently operated and that the return he was getting on his investment could not be considered adequate. Some Chicago men, who became interested in the Grand Traverse land possibilities for lumbering operations, approached old Henry Boardman and asked him if he wanted to sell his business in the Bay region.

Soon, on board the Venus, the interested buyers and Boardman were on their way from Chicago to the head of West Bay. The senior Boardman did not notify his son or employees of the trip, so his arrival was unexpected. It proved to be an advantageous time for the prospective buyers to have come with the owner, for he found that the men who should have been out in the pineries, were inside playing euchre. This was all the proof Captain Boardman needed of his son's lack of ability as a lumberman, and he became more determined to rid himself of his entire Grand Traverse holdings.



So, Perry Hannah, one of the entrepreneurs who had come up with Boardman, and his partner, Albert Tracy Lay, along with some other men, checked out the condition of part of the Boardman River and the extent of lumber on its shores. What they saw assured them that there was enough lumber on the banks of the river to warrant building a larger sawmill. On the strength of the survey, Hannah, along with Lay and another partner, William Morgan, decided to purchase the Boardman holdings, as their initial industrial action in the Grand Traverse area. These men were to become a major force in the development of the northwest part of the Lower Peninsula.

The partners of the Hannah, Lay Company, whose base was in Chicago, worked out an arrangement by which Hannah would spend the winter months in the woods on the Boardman River where he took charge of the 'lumbering off' of the pine, while his partner, Lay, attended to the selling end of their business in Chicago. They exchanged places in the summer, with Lay taking charge of the processes of turning the wood into lumber and of shipping the finished products off to market.

#### Lumbering Empire Grows

Hannah had started working in the woods at thirteen and was knowledgeable about every phase of the lumbering industry. Together the partners made a very able team with a midas touch for making money and progress.

Almost immediately after purchasing the Boardman interests, the Hannah, Lay Company built a tram-road by which to facilitate the moving of logs more quickly from the bend in the Boardman River to the mill. This cut down on the time it took to get the logs to the mill and on to the wharf as lumber ready for shipment to market. The first vessel which the company used for the shipping of lumber was the little Maria Hilliard.

One of the important differences between the Hannah, Lay Company and their usual competitors in the field, was their civic consciousness, as they were concerned about the welfare of their employees and of the men's families. The company was also deeply involved in the matter of the community's development and growth. They built a store and stocked it with goods which the company ships brought back from trips to Chicago to deliver the forest products.

#### River Cleanup Required

Another problem was the necessity of cleaning the Boardman River out so that logs could be floated on it. Several writers seemed to have had the impression that up until the advent of civilization, the Boardman River was free running and completely without any obstruction. Even the Grand Traverse region historian, M. L. Leach wrote, "there was no driftwood, or the unsightly obstruction of fallen trees [the Boardman] ran with a swift current through an open forest of pines, which occupied all the space between the lake and the bay."<sup>24</sup>

Later, however, Leach writes about the problems faced by the new company in the clearing of the Boardman River. He informs us: "The next task performed, which

proved to be one of no small magnitude, was the clearing of the river, so that logs could be floated down from the immense tracts of pine on the upper waters. It was not merely here and there a fallen tree that had to be removed. In some places the stream was so completely covered and hidden with a mass of fallen trees and the vegetation which had taken root and was flourishing on their trunks [sic] that no water could be seen. Ten long miles of the channel had to be cleared before the first pine was reached."<sup>25</sup> This conforms with various statements by Hannah and other people who had first hand information. The Boardman River's early pollution shows that nature itself can and does become a polluting agent.

Shortly after this, the company was involved in erecting a new and larger sawmill, the machinery for which, their schooner, the Maria Hilliard, had brought in. This vessel and the Telegraph, another of the Company's schooners, made regular trips between Chicago and the Bay communities.

#### Unique School Is Started

During that same year, the schooner, Madeleine, put in at what is now Bowers Harbor, with the intention of staying all winter. There were five young men aboard who wished to become educated, and they hired an even younger man, Steven Edwin Whittier Wait, who was in his late teens, as their teacher. Their education evidently proved successful as three of these men became Captains of their own ships within the next few years. The uniqueness of this school intrigued the settlers and their descendants, so there is now a plaque commemorating the "school of the inland seas" placed near where the vessel was moored.

A decade earlier, Schoolcraft had considered starting a school on the island which lies across part of the entrance to Bowers Harbor where the Madeleine was anchored. It was then called Eagle Island because of the fact that large numbers of eagles were found on it.

James Strang, the Mormon "king" of Beaver Island, also became interested in the beautiful little Eagle Island which he thought was big enough for settlement. This small island, with its proximity to Bowers Harbor, may have motivated Strang to send his Beaver Island Mormons to colonize it, but the truth of the matter is not known.

#### The Mormon King

The Harbor was named for the founder of the settlement, Mose Bower. It is known that both Bower and another settler there, named Turner, were at one time members of Strang's group on Beaver Island. Another story told about the founding of this place is that in effect these men brought their families there to escape Strang's authority. Whatever the reason may have been, the families lived there in peace with their neighbors.

Strang had eyed the entire Grand Traverse region as a fine addition to his 'kingdom,' and he had praise for what he termed, "the most beautiful Bay in Michigan." According to Strang, "Grand Traverse is getting a good emigration

by water. But a strong tide of emigration is now settling to the North from Grand Rapids which will soon fill Grand Traverse County with settlers. Steamboats begin to enter the Bay occasionally, and a very little addition to its business will call them in regularly. These facilities of communication will make settlement easy and desirable [sic]."<sup>26</sup> There was both truth and exaggeration in Strang's statements regarding the settling of the northern half of the Lower Peninsula.

Some of the Beaver Island Mormons were having trouble with the Gentiles (i.e., the people outside the Mormon's own faith) in the Grand Traverse region, and there was a bitter and sometimes violent struggle between these groups. The Mormons plundered and pirated goods from those they called Gentiles, and they caused some physical harm to a few people as well as general harrassment.

Strang wrote to vindicate the Mormons. They were, according to him, victims of a group of outlaws. He said that, "a gang of these villains" [he was referring to the non-Mormon people] were located just within the Bay, and that under the pretext of fishing, robbed the Mormons and then took off.<sup>27</sup> After which these "wily [sic] characters [the Gentiles] went and hid in uninhabited places," according to the Mormon "king."<sup>28</sup>

The settlers in the Bay region were deeply irritated by the continuing Mormon assaults, and news of the conflicts reached the outside and slowed down emigration into the area. These struggles did not end until Strang's death and the disbandment of his colony.

#### More Settlements on the Bay

The increase in water transportation and commercial shipping brought about the founding of both Northport and Suttons Bay, as they both thrived by supplying cordwood to ships. This was a profitable business. The one and only road in the entire northwest ran between Traverse City and the Old Mission at the end of the peninsula, but several docks were being constructed and the activity on the Bay was picking up momentum. In fact, Perry Hannah, when serving as a Representative in the State Legislature in 1856, found it necessary to take off for Lansing on snowshoes in order to attend legislative sessions. For more than half the way to the Capital at Lansing, Hannah said, "there was neither a road, nor a trail, to the settlements in the southern part of Michigan."<sup>29</sup>

Greillickville was another settlement developed from a sawmill operation run by Godfrey Greillick and his sons. They also added a brewery and a steam-mill to their operations. Later, when the brewery was sold, the elder Greillick moved to the upper part of the Leelanau Peninsula and started another sawmill.

#### A Newspaper -- An Important Change

Morgan Bates established the Grand Traverse Herald with its first issue coming out on November 3, 1858. He was both publisher and editor. Bates had previously published a number of other newspapers in places such as New York, Pennsylvania, and Detroit, and had gone to California during the gold rush and published

The Alta California, which he changed from a weekly to a daily. This daily was said to have been the first one published west of the Rockies. Upon Bates' return to Michigan, he worked in Lansing at the State Auditor General's office. Later he was to serve two terms as Lieutenant Governor of Michigan.

Bates' background and experience made the Grand Traverse Herald an unusual small town newspaper. The paper was sincere and hard-hitting. Moreover, it also avoided the slavish reprints of the big city newspaper gossip columns that usually appeared in small town papers of that era. The publisher, however, had a bias. Bates was an ardent, outspoken foe of slavery and his paper took every opportunity to emphasize this evil. Other papers referred to the Grand Traverse Herald as an abolitionist paper. Politically, it was strongly Republican.

#### Editor Envisioned Future

Bates regularly praised the Grand Traverse region and its beautiful Bay, and he enthusiastically envisioned the potential of the area. Goods, said Bates, could be transported by water to markets four hundred miles away. The mild climate was praised and such attributes of the region as the remarkably clear waters of the Bay were extolled. This brought the many advantages of the area to the attention of the 'outside world' and the reiteration of the fact that newcomers were welcome stimulated the arrival of more settlers.

Agriculturally the bountiful crops of the area were gratifying. The potatoes grown there were excellent and their yield was large. It was expected by some boosters of the Bay region that Grand Traverse would become the potato capitol of the world. A great help to the growing season was the mild climate which was affected by the tempering forces of winds, which were cooled in summer by Lake Michigan and the Bay, and by the relative warmth of these waters in the winter. Farmers were discovering that the combination of soil and climate were excellent for growing fruit, but they had yet to realize what an important asset this combination of climate and soil really was.

The effect of the relatively mild climate has also been important to the development of the tourist and recreation industry. The large cool bodies of water help to make the Bay area more comfortable in the heat of midsummer. The same nearby Bay tends to mellow the bitter cold winter weather experienced by other northwestern Michigan areas further removed from the shorelines.

#### Lumbering and Other Industries

The original forests in the northwest portion of the Lower Peninsula had both excellent hard and softwoods. In the early days, soft wood was lumbered, simply because it was easier to handle. Cutting the trees took place in the winter and in the spring when it was easier to move the logs to the rivers where they could be driven to the mills. Lumbering was a highly colorful and dangerous occupation and the lumbermen were rough, tough, and blatant. Many people, including those in the Bay area, thought that the forests were a

limitless resource. It was unfortunate that they did not readjust their wasteful and thoughtless techniques as the need for and the uses of wood grew to gigantic proportions.

Hannah, Lay and Company was the first firm to establish a growing lumber business on a solid foundation in the Grand Traverse area. There were some other businesses which were begun in those early days which might possibly have given real competition, but those lumber operations folded in a few years.

### First Dock at Northport

As early as 1853 Joseph Dame had started the construction of the first dock at Northport, but he sold this two years later before its completion. The first deliveries of cordwood were made on this dock, when it was still unfinished. More than sixty cords of wood had to be moved across a group of poles, which had yet to have a floor laid across them, in order to load a steamship which made regular runs from New Haven to Buffalo.

Another type of lumber which was loaded from this dock were the timbers used for building ships and for other heavy structural purposes. According to Edmund Littell:

This was all done by hand, the water and powered mills that first appeared being too small to cut the long timbers; so during these early years thousands of timbers eighty to ninety feet long and two feet square were smoothed into shape with broad axes and piled along the shore to await loading, into ships, some of which were equipped with hatchways in their sterns -- timbers could be pulled in head first and taken through the Welland canal to ports as far away as England and Scotland.<sup>30</sup>

This particular specialty of the Grand Traverse lumbering business has not been as widely known as are some of the industry's other aspects.

### Marine Propellers

At least three hundred and seventeen marine propellers are said to have come into the Northport docks annually in 1861 and 1862. The next year three hundred and forty ships came into the four Northport Harbor docks, and each of the visiting vessels took on from sixty to one hundred cords of wood with them on their return trip. Cordwood was then selling at four dollars per cord in the Great Lakes markets. A great deal of wood was being handled by manual labor only during this period.

No one could deny that the business of fuelling ships was a lucrative business in the Bay. Ships were often encouraged to dock at Northport because it is naturally protected from all but the southeasterly winds. Another fuelling station for ships was located a few miles south of Northport at Suttons Bay. This harbor is protected from all but the northeasterly winds.

The Hannah, Lay Company built a dock at the head of the Bay. Here at Traverse City the Company's expanding activity was reflected in the 'hustle and bustle' at the dockside. Ships from other ports on the Bay, the chain-of-lakes, and the Great Lakes put in at Traverse City for manufactured goods available from the Hannah, Lay Mercantile Company, a subsidiary of the Hannah, Lay Company.

#### Sturgeon Shipped

On the Peninsula, ships picked up cordwood and sturgeon, which was a popular and profitable export to big city restaurants. The lighthouse at Old Mission is on the forty-fifth parallel, exactly halfway between the North Pole and the Equator. The establishment of this beacon encouraged ships to enter the Bay after it was finished in 1870.

Several sawmills were kept in operation as the expanding western movement of the settlers called for more lumber, shingles, cordwood, and hemlock bark. By 1874 fifteen steam powered sawmills were operating in Grand Traverse county alone, and these mills were putting out twenty-five million board feet of lumber annually. There were also several grist mills and flour mills operating in the area, and these were all needed. The Hannah, Lay Company had purchased two portable grist mills which were water powered and they added two sawmills in 1857. The Company also owned a very busy and lucrative flour mill.

#### Elk Rapids and the Iron Industry

The early sawmill business in the Elk Rapids vicinity was in the hands of M. Crow and Wirt Dexter for some time. Later Henry H. Noble bought into the firm. This firm was dissolved when the Dexter and Noble Company was formed, and in time Edwin Noble was taken in as a partner. From these small beginnings, the company expanded. They built a flour mill which did a fifty thousand dollar business in its first year. They had previously built a larger sawmill which had a capacity of fifteen million board feet.

When they began to manufacture pig iron, the company changed its name to the Elk Rapids Iron Company. Under this association's direction, a charcoal blast furnace was constructed which was said to have a potential of producing an annual forty tons of pig iron. There are conflicting figures given as to the average actual yearly production, but it seems that 23,000 to 24,000 tons annually would be a fairly accurate figure.<sup>31</sup>

#### Charcoal Works

Three thousand cords of wood were said to have been constantly in process in the twenty-four kilns, in order to make the charcoal necessary to operate the charcoal blast furnace. Wood and logs for the furnace and the kilns were purchased wherever it was available around the thirteen lakes which constitute the chain-of-lakes. There were several lumber companies operating on one or another of these lakes, but usually only one company used a particular lake for its logs. The Iron Company had three tugs and thirty lighters, or scows,

bringing the wood to Elk Rapids, while logs were rafted from the lakes to the Iron Company site. There was also a tug used as a floating boarding house for the men who were in the group which was rafting the logs.<sup>32</sup> The 'charcoal blast furnaces' were essential to the production of pig iron which was shipped via the Bay to many Great Lakes ports as well as to buyers in Scotland and England.

The iron business, although most lucrative, folded because the whole operation depended on wood and on water transportation. Although the water was still available, the wood supply no longer existed in the quantity needed to produce the pig iron. Again, lack of foresight caught the company unprepared for the depletion of the area's natural timber resources which were needed for carrying on this specialized operation.

### Other Aspects of Lumbering

The Hannah, Lay Company added a sawmill which contained two muley saws and an old fashioned siding mill. This second mill had once contained two circular saws, one of which was removed a few years later and a pony gang added, and this Company also established another mill at Long Lake in 1868. They used teams of horses to bring the lumber from Long Lake to the Traverse City docks, where it could be shipped out.

Previous to this they had moved their lumberyards in Chicago to a location far enough away from the settlement that was then Chicago that they were a 'laughing stock.' At the time of the great Chicago fire, their lumber yards were still south of the burning city and thus escaped that disastrous fire. They were then in an advantageous position to supply much of the lumber needed for rebuilding the gutted city.

In 1865 twelve million feet of lumber, most of which belonged to the Hannah, Lay Company, was brought down the Boardman River. This Company continued to add to their holdings during the following years. Although there were a few other companies lumbering in the Boardman River area, their total volume was comparatively small when compared to the mammoth production of the Hannah, Lay Company.

### Logs are Branded

Logs floating in the Boardman River that were the property of companies other than the Hannah, Lay Company had to be branded. The big Company claimed all logs not having distinguishing log marks. Among the other companies, which were operating at one time or another on the Boardman, were: Marsh & Bingham, which used a plain 'M' for their log mark, while George Peabody used the letter 'P,' for his brand, the W. S. Johnson Company's logs were indicated with the 'Circle J,' and William McManus settled for a simple four pointed star to mark his logs.<sup>33</sup> By the use of such individual brands it was easy to sort the logs so that buyers could pay the rightful owners.

Before 1870 the Hannah, Lay & Company mills were at Traverse City and at Long Lake, and they soon extended their timber operations to the region around

Arbutus Lake. In order to operate efficiently in the locality they built a short-haul gravity railway from the lake to the river, a distance of less than a mile. There the logs were dumped directly into the river ready to be driven to the Company's Traverse City mills.

By 1883 they were cutting nineteen million feet of lumber annually. One of the trees cut that year was a record one hundred and sixty-four feet high. The top thirty-two feet shattered in its fall, and yet this enormous pine scaled 8,508 feet of lumber.<sup>34</sup>

A fleet of several boats in constant use by the Hannah, Lay Company helped to spread out and lower their cost of doing business. This naturally kept their smaller competitors operating at a distinct disadvantage. It was not until the railroads started competing with water transportation that the small lumber operators had a chance of making a reasonable profit.

#### Hardwood Shipped to the Chicago Market

White pine lumber was king for many years and it was the primary timber sent to market. When the lumbermen became aware that this popular lumber would run out if their present cutting practices were to continue, they looked for substitutes. So forward looking lumber barons, including those with Grand Traverse Bay interests, turned their attention to hardwood timber. The general varieties then available in the Bay area were elm, beech, ash, maple, and hemlock.

The Hannah, Lay Company introduced maple flooring to the Chicago markets and they put strong emphasis on the quality of this, and of the lovely effect that floors made out of this lumber had. This wood became very important and the most elegant buildings in Chicago at that time used maple flooring.

The Company sold their entire lumber industry in 1889, just as the great lumbering era was about to hit its peak. The firm had been operating in the Bay area for nearly forty years, and it has been estimated that one million feet of timber had been cut by them in those years. The lumbering acreages were sold to John Torrent of Muskegon. The Traverse City Lumber Company acquired the Hannah, Lay Company's mills and they continued to carry on a milling operation there until 1915 when they closed their mill down.

#### Wooden Items Manufactured

In 1892 the Oval Wood Dish Company was cutting and manufacturing over twenty-one million feet of lumber into butter dishes, bowls, woodenware, and other items. This was a large industry for the time and locality, as it employed three hundred and fifty people, who turned out a half million items a day.

The developing fruit industry needed containers for peach and grape crops and these were turned out by The Basket Factory in 1897. A reported eight and one-half million peach and other fruit baskets were manufactured by The Basket Factory in a period of eight months. This happened in the early stages of



the area's shift from lumber to a more agriculturally based economy, and to an economy in which the expanding influx of summer visitors had a marked effect.

The lumbering industry reached its zenith around 1893 in Michigan, and although much timber continued to be cut, the lumber barons were beginning to move out of Michigan. Some companies went to Minnesota or to the southern states, where wood, although not as fine as Michigan's was in plentiful supply and could be lumbered off in great quantities without trouble.

#### Farmers Move In

The lumbering off of great acreages of Bay area land by the various lumbering companies helped to facilitate the settling process of these lands for agricultural purposes. Farmers who had at first planted potatoes around the stumps of their so-called 'stumplands' had now removed these obstacles and had well-filled acreages.

Some of these farms with good soil had proven highly productive, while other nearby farms turned out to be exceedingly poor farming land. In addition, water was often plentiful on one farm and very scarce on a farm which may have been bordering it. This strong contrast of productive land types, often existing next to one another, is characteristic of this area in the northwestern part of Michigan's Lower Peninsula.

The Oval Dish Factory considered its situation in the Grand Traverse Region and its needs, and decided that there were more profitable places for its activities and left the Grand Traverse area. Some of its employees eventually went with the company to its location at Tupper Lake, New York, where it still exists, under a slight name change, as the Oval Wood Dish Corporation. Many of the company's employees preferred to stay near the wonderful water of the Grand Traverse Bay, and to take advantage of the area's other natural resources.

#### End of the Mill Era

The great sawmill era came to an end with only a few mills left to carry on the small lumbering business remaining in the area. The lumberjacks were gone from the land. Old men would speak of the days that had been, of the colorful lumbering crews which were often composed of several nationalities including the big Scandinavians, the small, wiry Frenchmen, and many others. They would speak of the legendary Paul Bunyan, and the tremendous feats which either Bunyan, or Babe, his Blue Ox, had performed.

The Bunyan legends would continue to grow. These and other tall tales would add to the nostalgia of the romantic days of the big timber. The hearty exploits of the loggers, the coming of the steam railroads, the challenge of the rivers, the magic and mystery of the Bay, the stories of the many types of ships, including those which had sailed the Bay and carried their own romantic memories, were the warp and woof of the legend of the lumbering era.

### Agriculture and the Grand Traverse Region

Among the important assets of the Grand Traverse area are its timber, salt, sand, gravel, limestone, and water, and the first record made about these resources was by the University of Michigan professor, Alexander Winchell. His report was published as The Grand Traverse Region, a Report on the Geological and Industrial Resources of the Counties of Antrim, Grand Traverse, Benzie, and Leelanaw [sic] . . .<sup>35</sup> For the next fifty years writers liberally quoted him, often appropriating his words as their own.

Winchell's work influenced an 1870 Atlantic Monthly article, "The Grand Traverse Region," by H. W. S. Cleveland, who gives due credit to the professor. The writings of these two men, helped dispel some of the earlier damages caused by a statement of Horace Greeley in his Herald Tribune in which he had held that this northern part of Michigan was unfit to live in.

Among the other advantages of the locality, Cleveland wrote: ". . . the region is covered with a magnificent growth of hardwood, of which the sugar-maple is the most abundant, the other varieties being the beech, elm, ash, oak, poplar, and yellow birch. Of evergreens, the hemlock, white cedar, balsam, fir, and larch or tamarack are more or less abundant; and the white-pine is occasionally found and [it] attains to a majestic size."<sup>36</sup> He believed that orchards should do especially well, and even indicated his belief that olive groves should grow and prosper in this place.

By 1890 it was obvious to many businessmen that the lumbering era was over. Some of these men were moving on while others stayed and diversified their interests. B. J. Morgan was one of the latter. He planted red tart cherry trees on some sand hills which he had purchased.<sup>37</sup> The circumstances proved to be propitious and many other orchards were planted. Until the cherry trees were producing profitable crops, however, most people in the region felt that both potatoes and apples would be the leading agricultural crops. But with the planting of new orchards, sales of the cherry growers were soon rivalling those of the apple growers.

The apple yield was approximately 5,000 bushels in 1875, but less than thirty years later, Traverse City and the Bay ports were shipping 25,000 bushels. In the early years of the new century, 100,000 bushels of apples were shipped through the Bay ports to outside markets.

Cherry growers in the early 1900's shipped out 30,000 crates a year. The production continued to increase and the cherry growers were soon receiving \$50,000 a year for their shipments. By 1907 the Traverse City Canning Company started to can cherries<sup>38</sup> which brought more money into the pockets of the Bay citizens. A few years later refrigerator cars began carrying fresh cherries to many parts of the land, adding yet another dimension to the cherry business.

One of the finest varieties of cherries was developed in the Northport region by a farmer who noticed that one of his cherry trees had exceptionally fine fruit.<sup>39</sup> One of the great factors in the bountiful production of cherries is the region's mild climate which is tempered by the waters of Lake Michigan and the Bay. This area also has the winter season needed to give the trees a rest,

which is the prelude to the vigorous growing period in the spring. Another factor making this a favorable region for cherry growing is that there is little rainfall during the summer months. Excessive rains would cause the fruit to grow too fast and the cherries would break open.

Proof of the region's enduring ability to produce fine cherries is shown in the production of the orchard, Cherry Home, north of the village of Northport, which was for many years the world's largest cherry orchard. The trees were set out by Frances Haserot of Cleveland, Ohio, and his partner, G. Marston Dame of Northport. Haserot and Dame also built a cannery close to the shoreline and maintained their own warehouse and dock. Later they built a large processing plant which, in 1950, froze and canned more than 4,000,000 pounds of cherries.

A major aid to the industry was the cherry pitter invented in 1917. This helped make possible the industry as we know it today.<sup>40</sup> The United States is reported to have an annual cherry crop of about 225,000 tons and is the world's leading single producer of cherries. The growers in Western Europe produce 600,000 tons annually.

About sixty percent of the Grand Traverse region's agricultural income is from the sale of fruit. There are several canning companies in the vicinity, and this industry has meant much to the economic stability of the area. Millions of pounds of cherries, apples, pears, plums, peaches, and apricots are shipped via rail, ship, truck, and plane to different parts of this nation and to the world. Fifteen plants in the region were geared to cherry processing.

There are around 1,367 commercial orchards in the Grand Traverse area, with an average production of about 75,000,000 pounds of tart cherries and about 35,000,000 pounds of sweet cherries annually. The cherry is honored in two local festivals. The first, held in May, is the Blessing of the Blossoms. The second, which attracts many visitors, occurs in July when the fruit is ripe and is known throughout the world as the National Cherry Festival.

The cherry industry expends much time and effort to keep their production and quality at a high level and to find new and interesting methods of packaging and manufacturing the finest of products. They have recently created a delightful raisin-like product made of cherries, but due to prohibitive production costs, this mouth-watering product is not on the market.

It is a sad fact though, that the cherry although produced only seasonally is a high producer of pollution. For two decades, the citizens of Traverse City and other Bay areas had been complaining of pollution. This menace was a growing problem related not only to water but to tourism. The odors of dead alewives and other pollution have caused much trouble to commercial tourism interests and to the citizens alike.

The cherry industry with various federal, state and local agencies, turned their attention to the solving of the problem attendant to attaining clean water. There were inter-woven problems here that made this a great anxiety filled conundrum.

During the cherry canning season, Traverse City's city manager, "Ance" Damoose, asked the Michigan Water Resources Commission for help, and a part of one of his letters gives a clear indication of the difficulties which he was facing. Damoose wrote:

The residents along West Bay Shore in our city, are complaining --in a gracious, kindly way -- about the extraneous materials in the water and its progressively worsening turbidity. These people are, by and large, natives of Traverse City, and have grown up around the Bay. They have swum and boated in it since childhood and have had such intimate contact with its waters as to appraise and evaluate its clarity and wholesomeness over a long period of time.

They are, sincerely, more concerned about the condition for the sake of our City and the tourists who look forward to water and to lakes in our north country that still have their pristine attributes. Where else can Michigan people go to get the enjoyment and pleasure of this rapidly vanishing, invaluable resource if not here in our northern area.<sup>41</sup>

This condition, as Damoose well knew, involved tourists from all over the Midwest, as evidenced from the license plates seen in the area throughout the summer season. Any problems which tend to curtail the tourist trade or the cherry economy are serious for the Grand Traverse region as well as the state of Michigan.

Dr. John Spencer, the acting director of the Health Department serving the Grand Traverse, Leelanau, and Benzie District, sent word of the problem to Ralph Purdy, the State's Sanitary Engineer. He told of some of the studies which had been carried out by the city and the regional health department concerning Traverse City's sewage and waste disposal needs, especially as it related to cherry plant effluence which includes sugar waters as well as fruit wastes. He reported:

It was agreed that group action and perhaps some group pressure would be needed to influence these cherry processing operations. It is apparent that current state laws at least are not adequate to handle this situation. It was felt that better education of the plant personnel might also be helpful. It was pointed out, that if we are to accomplish something this summer that a pre-seasonal check of the cherry plant operations in order to identify and correct this situation would be helpful. In this regard it was agreed that the facilities of the Water Resources Commission should be requested.<sup>42</sup>

Spencer went on to point out that it was felt that expert advice was essential to any control program.

A matter of special significance was brought out by Spencer, when he wrote:

. . . potentially West Bay and East Bay offer an excellent source of research material under the general heading of the Great Lakes and their water quality. It was felt that East Bay is relatively unused and perhaps in a natural state whereas West Bay serves as the recipient of and the source of all of the common uses of water. Mr. [Ance] Damoose suggested that he might be able to communicate with those in the Public Health Service with a view that perhaps some expert study could be carried out here on Grand Traverse Bay.<sup>43</sup>

Spencer's ideas were definitive and forward looking. He knew that public interest in the general problem was increasing and that a solution to it was necessary. He closed this long, highly specific letter with:

It is felt that since our economy is so dependent upon the recreational industry that we should not necessarily be satisfied with what the current law establishes as water quality standards. It was also agreed that we should have a community wide educational campaign to interest the local population as well as the transient population in maintaining water quality.<sup>44</sup>

These ideas which Spencer expressed were to lead to more action, but the bad situation which had taken so long to develop was not to be quickly changed. These matters would have been easier to solve if the Traverse City area had been the only area with such pollution problems and if the cherry industry had been the only polluter.

#### Studies Related to Cherry Processing and Pollution

The Water Resources Commission made a report on the biological inspection and survey (of May 15, June 26-27, August 12-13, 1963 and July 22, 1964) on the environmental effects of waste discharges on the Boardman River and their observations of such effluence on Grand Traverse Bay near Traverse City.<sup>45</sup>

For more than ten years citizens had complained of the water quality in the lower Boardman River and in the Grand Traverse Bay's West Arm, where the river entered its waters. So the findings of the Water Resources Commission biologists were to add to the mounting evidence of the pollution resulting from the cherry growing and processing industry.

Among the findings of the Water Resources biologists, from their field and lab work, was that cherry processing produced definite slime which sloughed off and was carried to areas where growths such as higher aquatic plants and filamentous algae were produced due to the viscous matter. These problems have been the subjects of many meetings and field studies and these discussions and

research are still continuing. It became obvious that any solutions to the problems would be both expensive and highly technical. It was decided that a consultant should be found who could effectively consider the bio-physical and the bio-chemical aspects in coming up with possible solutions. As it turned out, Dr. Jack Borchardt, of the University of Michigan's School of Civil Engineering, was already working in the Traverse City area on some problems in other concerns with the firm of consulting engineers, McNamee, Porter & Seeley.<sup>46</sup> Borchardt's knowledge of the nutrient problem of pollution was recognized as of prime importance to the study. The Commission decided to contact the group for help. The reports made by these men were eagerly sought by public officials, processors, and others with similar problems.

### Save Our Lake Study

The Chicago Tribune booklet, Save Our Lake, was a serious and significant effort on the part of Casey Bukro, the newspaper's environmental editor, to focus attention on the pollution problems of Lake Michigan. His writings on the Traverse area named the cherry as a "culprit" in the contamination of the Bay. "Waste waters from four canning plants carrying whole cherries or parts, pits, stems, and leaves," Bukro wrote, "have stained the waters of Grand Traverse bay a purple-black color every summer here for the last 50 years."<sup>47</sup>

Dr. Spencer informed Bukro that half of the waste water was going directly into the Boardman River or the Bay with no treatment. Inasmuch as the Bay is a part of Lake Michigan the contamination affected the larger body of water, too. The article pointed out that, of the four canning companies located at Traverse City, the Cherry Growers, Inc. had moved their plant to Grawn, that two companies had merged to become Morgan - McCool, Inc., and that they were expecting the city to purchase their Bay front property for part of a city renewal program. It also stated that a smaller plant, Traverse City Canning Company, dumped its wastes directly into the city sewage system and the Boardman River.<sup>48</sup>

Other areas around the Bay have similar problems. Suttons Bay, too, suffers from waste disposal from several cherry processing plants. This effluence, too, eventually enters the waters of the Bay. The sewage of Elk Rapids has a primary treatment, but no secondary treatment and the officials there have been cited by the State to correct this situation. The Elk Rapids Canning Factory has failed to treat their wastes properly. This is believed to be due in part to the fact that they employ mostly itinerant and untrained help, and that these temporary employees must be properly educated to handle such waste.<sup>49</sup>

### The Chicago Tribune Takes Another Look

The observant Bukro reported: "Traverse City, Mich. [sic] still has its strange brand of shaggy waters. Fruit sugars dumped into the Boardman River and Grand Traverse Bay during cherry and apple canning season fertilize a cottony fungus and algae growths that form fluttering and swaying underwater nightmares."<sup>50</sup> He found some improvement. The Morgan - McCool, Inc., cherry and apple canning factory, had installed screens to capture solid wastes, but it was still dumping into the Bay better than a half million gallons of other waste every day of the

canning season. So, too, was the Traverse City Canning Company. The Morgan - McCool Company plans to cease operations in 1972, and at that time, the Traverse City Canning Company plans to use the city's facilities in solving its waste problem.

The Traverse City officials and its citizens are involved in solving these problems with the aid of official researchers and scientists. Other communities around the Bay are faced with much the same ecological enigmas. Although in Traverse City there is often disagreement as to what methods should be employed to cure their environmental ills, there is never any disagreement that something must be done.

At present a pilot plant project on sewage is being carried on in Traverse City and an intense study is being made as to its effectiveness and its costs. Some day, the newspaper columnists, the Traverse City citizens, and the multitude of tourists, will discover clean water and unpolluted beaches once again, as plans made by concerned and cooperative people reach fruition.

#### Fish and Fishing on the Bay

The stories of fish and fishing on the Grand Traverse Bay have changed through the centuries. These tales reflect not only the history of the area, but also the ecological and environmental changes in the entire Great Lakes area. The early Mound Builders must have used many kinds of fish in their diets, but how they caught the fish is not recorded. Later the Indians, fur traders, explorers, and priests, fished from dug-outs, or from birch bark canoes. They often speared the individual fish, especially when the Bay was iced over. At other times they used nets to harvest the plentiful bounty of the Bay.

Each fall after the crops were in, some of the early white settlers fished for a few weeks in order to preserve many kinds to add to their winter food supplies. Thomas Lee, one of Suttons Bay's first settlers, took seven hundred and thirty-one whitefish from the Bay.<sup>51</sup> These he salted down in barrels to keep them from spoiling.

That particular winter proved to be an especially hard one for many of the settlers. They were not only reduced to stretching their meager winter provisions with the utmost care, but in some cases the people were forced to eat their seed potatoes and corn. Fortunately for Lee's brother, also a Suttons Bay pioneer, Thomas Lee was able to share part of his large cache of whitefish with his brother when the family was nearly out of food that March.

Another means of preserving fish for winter at that time was by drying them. This method had one excellent advantage over that of putting the fish in brine in that they could be used without waiting for the brine to be removed. Also, whenever such fish were not properly de-salted, the unfortunate consumer found himself with an unquenchable thirst, a never to be forgotten experience.

Indians often used either mud or moss to preserve the freshness of their fish. This was an excellent method, if the fish were to be kept for a relatively short

time before being consumed.

### Early Commercial Fishing

Winchell in his 1866 report had lauded the Bay and the surrounding areas. However, with his usual brilliant perception he wrote that: ". . . the usual lake species occur in the Bay, but not in such numbers to render fishing a business of much importance. The speckled trout (salmo fontinalis) occurs plentifully in all the streams of the region and in many of the small lakes."<sup>52</sup> These marvelous game fish were to lure ardent sportsmen into the area, and were to help build the tourist business.

Shipping fish to market became a recognized activity on the Bay, although the quantity of fish shipped could never be considered large. The small amounts of cash which the fishermen received from the sale of these catches added appreciably to their sparse way of life. Naturally this changed as agricultural activity grew, as sufficient fields were cleared, as larger farming ventures could be carried out and farmers grew enough for their own needs with enough surplus to provide a cash crop.

One hundred barrels of whitefish and forty barrels of trout were shipped from Grand Traverse Township in the year of 1870. These statistics indicate the relatively small amounts of fish which were shipped commercially from the Bay in those early days. Other Bay ports, such as Northport and Old Mission, regularly shipped small amounts of fish to market, too. The observations Winchell made have proven to be essentially correct, even though there was some commercial fishing on the Bay for many decades.

### The Mysterious Michigan Grayling

Sportsmen soon found out about the fighting game fish in the Bay, its tributaries, and in nearby small streams and ponds. They came to the area where they found keen sport and similarly interested cronies. Around the campfire and in their home town haunts, great stories were told of their piscatorial prowess. One of the fish that these sportsmen so eagerly sought was the famous grayling. This species was known to be native to the waters of the Bay as well as to various Michigan streams.

The grayling was noted for its beauty, gameness, and its comparative rareness. In the beginning the fish had seemed to be in plentiful supply, but in a relatively short time after the discovery of this fascinating fighter it became obvious that they might disappear from Michigan waters. Actually some of the practices used in taking these fish were questionable, while others were shamefully wasteful and repugnant. Men were known to have loaded barrels and wagons with grayling, without regard as to the way these fish were taken and without thought as to how they were to be used.

Some of the professional conservationists began to be interested in studying this fish in the 1870's, and like the sports fishermen, they began to worry about the depletion of this species. Several attempts were made by the State Board of Fish Commissioners and other fish conservationists to plant grayling.



However, although the count of roe for this fish was unusually high, in spite of the many attempts made to artificially propagate this species, these efforts were doomed to fail.<sup>53</sup>

According to the ichthyologists, Carl L. Hubbs and Karl F. Lagler, it is believed that there were three main causal factors for the extermination of the beautiful fish. Hubbs and Lagler have written:

Some say that it [the grayling] was caught off by anglers and by lumbermen using illegal methods of capture. Others claim that the running of logs during the spawning time of the fish in the spring gouged the eggs out of the gravel or crushed the fry. Still others hold that introduced trout were responsible as predators or competitors.<sup>54</sup>

It is the contention of these scientists, that all of these factors as well as others were probably involved in the disappearance of the grayling.

#### Protection of Other Species

At present the Great Lakes Fisheries, and the Michigan Department of Natural Resources take great care to insure that fishing practices shall not lead to the impoverishment of other species. They are also dedicated to using scientific methods to improve both commercial and professional fishing.

As early as the 1870's a campaign was started to induce sports fishermen to come to the area. Advertising brochures were distributed to entice the reader to visit the northern part of Michigan's Lower Peninsula, so that they might enjoy the Bay region with its remarkably pure, clean water, beautiful scenery, great fishing, relaxing atmosphere, and its 'fine, fattening foods.' Customs and propaganda lines have changed, so that now the mention of 'fattening foods' in today's resort folders could turn away many a dieting vacationer.

The accommodations that were available seemed to have been tolerable according to many reports. Fishermen and their families could find numerous types of lodging within view of the Bay. These facilities naturally differed widely in comfort and convenience. One happy fisherman in the 1880's found his billet in Traverse City, somewhat old fashioned, and very 'dry.'

Whereas, he found a place on the western shore of the Bay, near Northport to be a most delightful place, even though it was without carpets on the stairs and hallways and people could be heard walking on the boards all night. The location was also near a tavern which he found 'not unpleasant.' However, he was most unhappy with the sawmill behind the hotel which kept up a continuous growling, monotonous noise. He knew too, that the mill was continually polluting the fine stream below it.<sup>55</sup> He reflected that no trout could live in it.

The original Park Place Hotel in Traverse City was constructed in 1873 and immediately became a very popular place with the summer resort visitors. It was at

that time the finest hotel north of Grand Rapids, and was built by Henry Campbell, who operated it until the late 1870's when the Hannah, Lay Company bought it. This firm added an annex which increased the number of rooms from fifty to one hundred and twenty-five rooms.

### Development of Recreational Fishing

Good fishing camps with reliable proprietors were developed for sportsmen, many of whom came to the area by train. The popularity of the services offered by these early entrepreneurs in these recreational pursuits brought visitors from distant parts of the United States to the Bay. Trolling for trout was especially favored by these sportsmen.

Until the late 1930's, when fish became less abundant, the general practice had been to make no charge to those fishermen who had no luck for that day. It was said that until the late 1930's few fishermen ever spent a day fishing on the Bay without having caught fish.

The most important of these so-called 'deep sea' or trolling camps was a nationally known haven run by George Raff. This popular camp was about five miles north of Northport. Raff was considered knowledgeable about fish and fishing both by the professional conservationists who knew him and by the sportsmen who used his services. Raff was a concerned man. Through the years he became all too aware of the fact that fishing was changing, and not for the best. For him, the commercial fisherman, were the greatest problem for those who enjoyed sport fishing.

In 1936, there was an attempt to close the Bay to commercial fishing, but this was not an easy direction for the authorities to move. During those depression years, there were few jobs available and very little money in circulation. For that reason, any action that might seriously affect the cash income of the area was looked upon with disfavor by many.

There was, at that time, a commercial fishing operation at Northport in Leelanau county. At that time, according to a report which they offered to the Leelanau County Board in January, 1936, ninety-eight people were considered to be directly dependent on the industry.<sup>56</sup> They claimed a capital investment of \$98,000, and reported that 400,000 pounds of fish were annually shipped from the community. This was said to bring a return to the community of approximately \$45,000.

Although by present standards this may not appear to be a large sum, it was an important amount of money at a time when there were many men who earned less than twenty dollars per week and who were glad to have a job. At that time in the community's history, it could not have been easy for the county to have entertained any serious thoughts about excluding commercial fishing from the Bay. The only way that the Bay could have been closed to this industry and its employees was by an act of the Michigan Legislature.

There continued to be a burgeoning of ill feeling between the commercial and the recreational-minded fishermen. All concerned with this became well aware that

fish in the Bay were decreasing and that the situation was worsening. There were several causes for this, and part of the problem could be laid to the illegal practices of the commercial fishing operations.<sup>57</sup>

It was highly irritating to the sportsmen to observe that the commercial operators were spreading nets across the shallow reef which lay between Northport and the Peninsula right across the West Bay. This was prime trout area and supposedly closed to all commercial operations because of the comparative shallowness of the expanse. The commercial fishermen seemed to feel no need to hide the fact that they were spreading nets in that region, nor that they were spreading miles of gill nets in other spots.

Thoroughly alarmed, George Raff tried desperately to call the attention of the proper authorities to the many improper practices of the commercial interests. He said that he ran across miles of gill net with dead fish in them. This, Raff argued, would have been bad enough, but the commercial fishers added to that by taking far more fish than their quotas permitted and shipping them to markets.

Keenly aware of the inevitable results of such poor practices, Raff took the issues up with the Michigan Conservation Department. Fishing, Raff insisted, if it was to be good would be possible only if commercial fishing were controlled. At that time the Conservation experts did not check this out, probably in part because the Department was still comparatively new and its total responsibilities had still to be spelled out.

At the present time the Michigan Department of Natural Resources, the new name for the Conservation Department, would definitely look into the matter.<sup>58</sup> Through the years the Department has gained an insight into such problems, and laws have been passed which give the Department real authority. Unfortunately Raff did not live to see his dreams of effective fish management realized.

During World War II there was very little activity on the Bay, as might well have been expected, with wartime travel restrictions and the lure of big wages in more industrialized centers. However, after the War when things were expected to resume their normal pace, the revival of sport fishing did not materialize because the trout were no longer found in great numbers in the Bay or in Lake Michigan. The lamprey eel destroyed most of the trout, and the problem of coping with this predator seemed insurmountable. These intruders had ruined fishing in the Bay and the number of eels continued to grow at an alarming rate. The paucity of fish in the Bay brought about a completely demoralized state of fishing in the Great Lakes for both commercial and sports fishermen.

Another factor was the further upsetting of the ecological balance because the eel, in destroying the trout, caused the number of alewives to increase in overwhelming numbers. The few existing trout, which usually fed on alewives, failed to reduce the numbers of these herring like intruders in Great Lakes waters. The alewife, in turn, was to add yet another complexity to the conundrum facing the many interacting governmental agencies, scientists, conservationists (both public and private), and others who have been involved in developing a responsible fisheries program and in preserving Michigan's great vacation land.

Commercial fishermen were no longer taking a 'normal' catch from the Great Lakes. Walter Crowe spoke of this at the twelfth annual Michigan National Resources Conference. The normal commercial catch on the Great Lakes, Crowe said, amounts to about twenty-eight million pounds, valued at eighteen million dollars. "Until the coming of the sea lamprey and alewife, catch from different lakes was as follows: Huron -- 12 million pounds; Michigan -- 10 million; Superior -- 7 million; and Erie -- 1 million," said Crowe.<sup>59</sup>

Commercial fishing on the Grand Traverse Bay had long been limited to the area outside the Old Mission Peninsula (for figures relating to the commercial fish catch on the Grand Traverse Bay, see: Appendix, No. 3). The Bay has now been closed to commercial fishermen. Inasmuch as the commercial fish harvest on the Bay has never been high, the loss of this as a commercial fishing area is not as great a factor in the total picture. An exciting development, long sought by sportsmen and conservationists, is that the Bay region has now officially been designated as a recreational fishing zone.

### The Sea Lamprey Control Program

As part of the responsibility of the Great Lakes Fishery Commission, the Sea Lamprey Control Program was established in 1958. By 1962, this program was beginning to prove effective. According to the Great Lakes Basin Commission, the activities in Lake Michigan have been fairly well completed with the second and third cycles of treatment applied to some of the tributary streams.<sup>60</sup> The Great Lakes Basin Commission report of 1969 stated: "There is some reinfestation of Lakes Michigan and Superior from Lake Huron because of the lack of effective control; these lakes must be treated as a unit if effective control is to be achieved. The total rehabilitation program hinges on how effectively the sea lamprey is controlled in all the Lakes. The problem at the present time is lack of funds." The Commission went on record as urging that the Great Lakes Fishery Commission's budget should be fully granted, as the effective work of this agency should be continued if the lamprey eel is to be effectively controlled.

According to a report made in fall of 1969 by the State of Michigan to the Bureau of Sports Fisheries and Wildlife Department (of the Federal government's Fish and Wildlife Service), only about four percent of the trout checked were showing any signs of the lamprey's depredations. However, in the summer of 1970, some of the veteran fishermen and charter boat skippers were taking issue with this report.

The question that these Bay users were asking themselves was whether or not the lamprey eels were still on the increase. They took exception to the statement that only four percent of the trout were revealing evidence of the lamprey's existence. Among these was Carl Copeland, a veteran charter boat skipper operating from the East Bay Marina, who stated that seventy percent of the Lake trout which weighed over five and one-half pounds were scarred by lamprey. He added that he had caught one fourteen pounder that bore seven lamprey scars.<sup>61</sup>

Copeland said, "There are more scars on migratory fish, those fin-clipped at Milwaukee, Beaver Island, and Charlevoix being the worst scarred. Most of the bigger fish are heavily scarred, but it appears to me that the fish are fatter and lampreys can gorge on them and not kill them as easily and quickly as smaller trout."<sup>62</sup> Both the East and West Arms of Grand Traverse had trout much scarred by these lamprey, according to several of the local sportsmen.

One would have to know how the trout were scarred, according to Leo Erkkila, who has recently retired from the Sports and Wildlife Service (of the United States). If the trout were large, he said, then they would be expected to have acquired several scars through the years. If the scars were fresh, it would be quite a different matter. The same would be true if the trout were young, indicating recent eel damage. Erkkila feels that the program is working, and he is highly confident that the determined people working on the Sea Lamprey Control Program will be successful.

It must be pointed out, however, that Coho were not planted in the Grand Traverse area until 1967, when these salmon were planted in the Boardman River, in Mitchell Creek, and in Yuba Creek. It was not until late August, 1969, that there were mature spawners from these plantings.

#### The Alewives

Due to lack of predatory trout in these waters as a result of the lamprey, the population of alewives had grown out of all proportions to their former numbers in the Bay and in Lake Michigan. This resulted in the alewives piling up on the beaches and dying in massive numbers. Their rotting flesh with the foul odors drove the tourists, park visitors, and other vacationers out of the area in 1967. This unpleasant situation brought strong protests from the local citizens. The loss of tourism revenue in the Grand Traverse locality specifically and in other beach areas in Michigan generally was immediately apparent.

However, this economic loss was later balanced off as many fishermen headed toward northwestern Michigan in the fall, when the Coho fever brought fantastic numbers of fishermen into the area. This brought tourist and fishermen money to many businesses in the area, and helped through sales and other taxes to enrich the coffers of the State of Michigan.

The Coho have fed on the alewives as had been hoped, and the area residents as well as the official governmental agencies, and scientists working on the alewife problem, have happily noted that there was no alewife problem in the area this year. There are other problems in the Bay waters which are being checked out, too. Most of these in some way involve the fish population and some of these in turn relate to the birds, as well as to the fish and even to man himself.

### Birds and Pesticides

The Herring Gulls on Grand Traverse Bay have been the subject of several intensive studies, with the latest having special concern with the effects of modern insecticides on the waterfowl. A look at the Walter Hastings' Christmas bird count during the years from 1957 through 1969, gives some indication of the general species in the waterfowl population (see: Appendix, No. 2) to be found in the area.

A 1965 study of Herring Gulls at Bellow Island in Grand Traverse Bay and Pismire Island of the Beaver Island group was carried out by James P. Ludwig and Carl S. Tomoff.<sup>63</sup> This was made to ascertain the comparative nesting success with the insecticide residues to be found in the gulls' eggs. The five acre Bellow Island lies about three miles southeast of Northport, Michigan, near the mouth of Grand Traverse Bay. This island is a gravel rock moraine surrounded by deep water on all sides. It is said that no one has ever been able to live successfully on this island because the gulls seem to have been too much for human inhabitants to tolerate.

One of the reasons for choosing this island was that the counties of Grand Traverse, Antrim, and Leelanau, which border the Bay, have a high concentration of orchards. The amount of insecticides used on these orchards around the Bay would probably reach hundreds of tons every year.<sup>64</sup> Ludwig and Tomoff set out to ascertain the comparative nesting success and what effects, if any, this was having on the birds found on these islands. According to these researchers, Bellow Island had had the most successful gullery in Lake Michigan from 1944 to 1963.

They report that no chicks were found with any indication of "botulism, insecticide poisoning, or heavy burdens of helminthic parasites." They did notice that the adult gulls were exceptionally aggressive. The authors write: "Although there is no information on insecticide residues affecting Herring Gull behavior, Robert L. Rudd (1964) has summarized a number of papers which indicate that several species, including man, have suffered distinct changes of behavior when chronically poisoned with insecticides."<sup>65</sup> This raises questions for further research.

In a summary of the findings in their own study, Ludwig and Tomoff stated:

At Bellow Island the hatch of eggs was low (30%) owing to egg cracking and apparent abnormalities of behavior in the care of the eggs by adult birds. Gulls nesting at Bellow Island were exceptionally aggressive. The fledgling rate at Bellow was estimated at 0.42 chick per pair of adults. At Pismire Island where nesting appeared to be normal throughout the year, an estimated 80% of the eggs hatched and the fledgling rate was 1.22 chicks per pair of adults.

Insecticide residues in adult gulls averaged 22% greater at Bellow Island. Residues in eggs from both areas approximated 120 ppm. and probably cannot be blamed for the reduced hatchability of eggs at Bellow Island.<sup>66</sup>

Their research was to be continued inasmuch as they realized there is still much data and evidence which must be collected before realistic governmental control action can be undertaken.

### Herring Gulls on Manitou and Bellow Islands

For some time, William Scharf of Northwestern Michigan College and some of his students have been banding gulls on Manitou Island. This year (1970) they have also banded gulls on Bellow, or Gull Island. They are making a thorough study of the gulls on the two islands, which are only about twenty air miles apart, and are comparing and contrasting those birds. At the present time, they have banded about 2,500 gulls on Bellow Island.<sup>67</sup>

They find that there is a decline in the numbers of gulls as well as a rise in the mortality of their young. The loss of the young on the island is due primarily to human trespassing in the middle of the island. Normally the young would stay there until they could manage to survive without the benefits of this sheltered place. However, when human visitors invade the island's center the young gulls are driven out onto the Bay before they are old enough to adjust.<sup>68</sup> This is a problem in ecology for which the answer is educating the public to stay away from this sanctuary. This would help much to lower the young gull's mortality rate.

One of the important findings of Scharf's study is that the gulls on the Bay have more pesticides in their systems than do those on the Beaver Island. There is, says Scharf, a strong possibility that these gulls have a larger than lethal dose of DDT in their systems but are managing to adapt and survive in spite of this. Scharf feels that more research is needed to verify or to reject the premise that gulls may be adapting to DDT. However, Scharf says, Herring Gulls cannot stand more than two or three days without food, or they start using up the stored fat in their systems. This results in the activation of the DDT which has been stored in the fat and thus the pesticide kills the birds.

Another uncompleted aspect of the Scharf study is the question of where the gulls winter. Although it is yet to be confirmed or disproved, Scharf and his co-workers believe that the gulls winter at Bellow's Island and in other areas of the Grand Traverse region. They hope to gain more accurate evidence of the Herring Gulls wintering habits in the near future.

### Eagles

Marion Island is soon to be used as a public park because of the generous gift of the Rennie Oil Company. This Bay Island was called Eagle Island for many years because of the large number of eagles which nested there. More recently, for a number of years, only one old pair of eagles survived. The male of this couple was fierce, domineering, and was by all accounts a disagreeable bird. Now even this pair is gone. Educated guesses seem to give some credence to the idea that these birds may have gone inland to avoid a diet of fish which contained so much insecticide in their systems.

### Swans

The lovely rare muted swan is found on the Bay and on the Boardman River. These picturesque birds captivate the attention of photographers, bird lovers, tourists, and others. Unhappily, these swans are heavy polluters, and for that reason are not very popular with some of the Traverse area residents.

Another reason why they are in disfavor is that they drive geese and ducks away from their nests, which creates a real problem. This is becoming an issue which must be resolved between the concerned local parties, i.e., those interested in the swans for their beauty, uniqueness, and as a tourist attraction, and those others who are interested primarily in ecology and in the conservation of all waterfowl. One puzzling factor associated with these swans, is that, although they are known to be loaded with DDT, they are not killed by this insecticide. However, fishermen often leave lead sinkers lying around, and the swans, attracted to these, eat them, and these get into their crops and the sinkers kill them.<sup>69</sup>

### Of Ships and Shipping

In the heart of this natural and lovely playground the tourist and resort industry plays a major role in the economy of the region. Local estimates show that the vacationers who visit the area represent a business of better than forty million dollars annually in the five county region. This recreation based economy is built on the health and enjoyment of both the sportsmen and the more casual vacationer.

The vessels on the Grand Traverse Bay have always been of major importance as a means of transportation and as a practical avenue of communication with the outside world for years after the settlement of this area began. Watercraft directly or indirectly affected most of the residents' livelihoods before the coming of the railroads, automobiles, and airplanes changed this pattern of life.

The type of vessel first found on the Bay was the awkward but functional dugout. Canoes are known to have played a major part in the Bay's history from pre-recorded days on, and they were the workhorses of that time. Often large canoes were used to carry groups of people and supplies into the Bay from Mackinac and the Beaver Islands. The Indians usually took about two weeks to build one of their larger canoes. The craft of building canoes of various sizes was one of considerable importance to the Indians, and this was carefully passed on down through the generations in the Indian tribes as an important part of their life style and culture.

Mackinac boats, too, were much used and although they were cumbersome, they were found to be excellent for moving the heavy loads from Mackinac to the Bay. They were of great importance to the early settlers for getting in their goods and supplies. Lumber hookers were the vessels which were used extensively in the lumbering days. They drew only about eight feet of water, and carried enormous loads of lumber.



### Ships Built on the Bay

One interesting maritime manufacturing feat was the rebuilding of the Arrow, a forty-eight foot schooner which was brought into the Boardman River in the winter of 1850-51 and then cut in two and lengthened to sixty feet.<sup>70</sup>

At about the same time, the Pishaba Indians, then living on the Peninsula a few miles north of Traverse City, built a fore-and-aft schooner sixty feet in length, with a cabin and a deck.<sup>71</sup> This was certainly an ambitious undertaking for this tribe, with their limited technical education and tools. The Indians named their boat, Maguzee. According to the existing accounts it was somewhat poorly built, but in spite of this sailed the Bay for several years. It should be noted that the attitude of most settlers' towards the Indians was often negative and their opinion of the Indians' boat was probably most uncomplimentary.

Another schooner was built, with local timber at the head of the Bay. This was the Robert B. Campbell, constructed for the merchants Cowles and Campbell at Old Mission. The Campbell was launched on October 4, 1853 and was put into service between Chicago and Old Mission. Most of the other boats which were built in the area are generally believed to have been smaller than the Maguzee or the Campbell.

### Waterborne Commerce

The first commercial traffic on the Bay was that of fur traders seeking beaver pelts for the European trade. This quest took them through the Northwest territory, a historical fact about the area that is mostly unrecorded. The fur buyers were followed by the Indians who found it profitable to bring their agricultural products from their gardens near the Bay to Fort Michilimackinac for trading. Their corn was usually picked up by the North West Company's fur traders. However, the first truly commercial navigation on Grand Traverse Bay was actually the lumber trade.

The first lumber was shipped from the Boardman enterprise from what was then known as the Grand Traverse River (renamed the Boardman River by Hannah in 1851), and was freighted to the Chicago markets. In these very early days, lumber from Elk Rapids was shipped to Racine, Wisconsin.

The settlers often had to arrive at the Bay by any means possible. Casimere Boischer and his very young bride, who had purchased the first official deed to land in Leelanau county, for example, had difficulty finding transportation for their meager household goods. They felt lucky to be able to hire a fishing boat to take them from Mackinac to their new home. They found their land in a primeval state, and long afterward they recounted that the forests were then unbroken, and "everywhere no axe had marred their beauty, and no sawmill refuse was in the Bay."

Later Boischer became a boat captain on the Bay, and he eventually bought his own boat with which he made his trips between the Bay and the chain-of-lakes.

### Some Other Ships on the Bay

In the early days all lumber was moved by sailcraft. Among these vessels the Boardmen schooner, Lady of the Lakes, was one of the first of the schooners to make regular trips between Chicago and the Bay. However, the craft was already in a decayed condition when purchased and she broke up within a few months.

The first ship to be employed by the Hannah Lay Company was the Maria Hilliard. In fact this sturdy little vessel brought in the boilers for the Company's first mill, and she continued for many years to make runs between the Bay and the Chicago dock of the Company.

The Hannah, Lay Company soon purchased the J. Young Scammon, a brigantine, which they put into service on the Bay, but she was wrecked on the Manitowish during her first year of service.<sup>72</sup> The Telegraph was another of the Company's schooners which made regular trips every two weeks between their two bases of operation, and she brought in all the goods<sup>73</sup> for the company.

The Hannah, Lay Company owned all the ships which carried their lumber products to their boardyards in Chicago. They carried on a brisk passenger service for tourists as well as providing transportation for the Company's employees and other people. The Company stocked their large department store with goods especially purchased to keep the summer visitors satisfied to stay in the area, and not feel that they were too far from the comforts of home.

### Ships as News Couriers

At the time the Hannah, Lay Company added the Alleghany to their shipping roster, she was the second steamer on the Bay. The Grand Traverse Herald hailed the advent of this ship to the Company's line. It was hoped that she would make the round trip from the Bay to Chicago in, what was then, record time. Although everyone expected that the news would reach Traverse City faster,<sup>74</sup> it did not always happen that way. The newspaper often bewailed the fact that although they had held up the papers' publication for a day or so, in hopes that a ship would come in with some late news, that because of a storm or some other delays no ship arrived to bring in fresh news from the outside world. It is startling to note that the stories picked up on the ship's arrival might come via a newspaper or simply be gleaned from the passengers or crew. Such reporting must at times have caused the local press accounts to be less than reliable.

During the Civil War, such ships as the Alleghany, the Waverly, Eclipse, Pacific, Michigan, Prairie State, the Empire, Perry Hannah, and others were eagerly awaited for whatever intelligence might be available as to the battles and other news of the tides of the War. It was a primitive system of dissemination and often the news was so outdated that those people living in the region were invariably out of touch with the national scene.

The Sunnyside was a propellor built for the Hannah, Lay firm for the Bay trade. Like the Alleghany, the Perry Hannah, the City of Traverse, the Clara Belle (the latter was spelled many ways in the various newspaper items related to this ship, but it was named for Hannah's daughter) the City of Grand Rapids and the T. S. Faxton, and others, were all part of the Hannah, Lay Company holdings. Another Hannah ship, the City of Traverse, built in 1871, had a gross tonnage of 1,153. This ship became very important to summer resort traffic. This was a long, elegant vessel with twenty-one staterooms. It also carried freight. The local Traverse City newspaper seldom mentioned ships belonging to agencies other than those owned by their biggest advertiser, the Hannah, Lay Company, who were not only the leading lumber barons of the town, but were also the banking and mercantile magnates as well. There was little doubt that this Company was the most influential force in the northwestern part of the Lower Peninsula.

#### Commercial Shipping Colorful

The commercial shipping plying the Bay was varied and colorful. The Queen of the Lakes, one of the Elk River Iron Company's ships, was a side-wheeler, which traveled the chain-of-lakes ports and put in at Traverse City. She was later sold and spent most of her last few years as a gambling ship anchored off Chicago.

Many docks were established at various locations around the Bay as fueling centers for steamers. The typical dock had a store connected with it, and almost all of the goods available at these stores had to be shipped into the area from other Great Lakes ports. Merchants had to plan to put in enough extra goods and supplies to last through the period of the year when the Bay would be iced over and no ships could come in or out of the area (see Appendix no. 1). The lumbering trade produced a high annual volume of total tonnage. However, sturgeon, cordwood, and agricultural products picked up at various ports around the Bay also added considerably to the volume of freight moved.

Summer visitors were quite often left with all of their baggage at Northport by the big boats to be picked up later by other vessels and taken to one or another of the other Bay or Lakes ports. One facet of Captain Joe Boischer's service was meeting the Northern Michigan Line of boats which put in at Northport. Here Captain Joe picked up settlers and their provisions and took them to other ports on what he referred to as 'the Grand Twabese Bay,' or to one of the many ports on the chain-of-lakes. This colorful Bay Captain was always careful to make for the nearest port in case of any storm.

The majority of the resorters were dropped off at Traverse City, however, and this City developed as the focal point for the whole Grand Traverse region. Behind much of this effort to make Traverse City the center for the area was the fact that the Hannah, Lay Company was anxious to improve and enlarge the community which housed their enterprises.

From this thriving center men and supplies were taken by boat to the various ports and up the streams to the lumbering operations. Fishing and excursion boats were in demand and many were chartered for picnics. There were also several boats which made the rounds of Bay ports and took the people for shopping trips, usually to Traverse City.

At one time during the Elk River Iron Company's affluent period, Elk River had had a well stocked department store, which like the one in Traverse City held far more goods and equipment than one would have expected in this northern outpost. Rumor had it that even the Marshall Field store in Chicago did not rival this Elk Rapids emporium. During the years pig iron was manufactured in Elk River, three tugs and twenty barges were needed to deliver the wood necessary to keep the blast furnace operating. Also in service was a company steamboat, the Leland, captained by Boissher.<sup>75</sup> Steamers had taken over the carrying trade which had long been held by the schooners.

Even though the best known company offering freight and passenger service on the Bay was the Hannah, Lay Company other shipping companies offered excellent service there. The Northern Michigan Transportation Company had two of the largest and best ships on the lakes. They stopped twice a week at Traverse City. The Traverse Bay Company had three fine ships operating on a Bay to Mackinac circuit. The services that these boats offered were extremely important to the development of the resorts in the Bay Area.

#### Shipping Costs Rise

Costs of shipping lumber to market became so prohibitive that small operators were having a difficult time trying to make a profit. John Boughton was one of these small lumber operators. In the summer of 1880 he wrote to his parents that there were some young orchards which were being set in Traverse City and that he enjoyed the region. Boughton went on to tell them that the rise in freight costs was eating up profits. He could get thirteen dollars per thousand foot for rock elm, which was "measured and merchantable in Chicago," but it cost twelve dollars to ship the same amount of lumber to Chicago. Eighteen to twenty dollars could be realized for flooring, which cost almost that much to produce, and so he had shipped only 122,000 feet of lumber so far that year.<sup>76</sup>

Two years later when Boughton found it necessary to move out of the region he re-established himself and his family in West Bay City, Bay County, Michigan. He believed that he could feed and clothe his wife and children properly there. Boughton was only one of several small operators who were forced out of the lumbering business by the rising costs of freight.

### Railroads and Agricultural Growth

Soon after this the railroads began giving the shipping interest some spirited competition, and for the time transportation prices became more reasonable. The lumber trade was still brisk and dominant when the railroads came in, at a time when cultural products were of minor importance to the shipping trade. This soon changed when the volume of agricultural shipments from the Bay grew as the lumber traffic waned.

In 1902, 300 carloads of freight were shipped into Traverse City, and 275 carloads were shipped out. This included agricultural products, lumber, and other freight. From Traverse City and the Bay ports 350,000 bushels of potatoes, 25,000 barrels of apples, and 10,000 packages (sizes unknown) of small fruits<sup>77</sup> were shipped to market. In 1903, the volume grew as 400 carloads of freight were shipped in and 375 carloads were shipped out. The agricultural shipments from Traverse City included 400,000 bushels of potatoes, 100,000 bushels of apples and approximately 30,000 crates of small fruits. Of those shipped to market were close to \$50,000 worth of cherries.<sup>78</sup>

### Publicity and Luxury Ships

The promotional brochures of the area puffed the small port into a mighty harbor that far exceeded its proper importance. It was true, however, that some of the finest passenger ships on the Great Lakes stopped at Traverse City and they made direct connections with the larger ports, namely Chicago, Milwaukee, Buffalo, Detroit and Cleveland. Two of the ships which regularly made this port were owned by the Northern Michigan Transportation Company. In 1880 this line began business on the Bay with two steamships, the Lawrence and the Champlain. Early in the Twentieth Century they were operating the Illinois and the City of Charlevoix. The magnificently appointed Illinois was palatial in comparison with the earlier boats which had been plying the Bay. She was two hundred and forty feet long, had a forty foot beam, and could carry two hundred and fifty passengers besides 1,500 tons of freight. The Northern Transportation Company had spent a considerable sum on their Traverse City dock, passenger depot, and on a new warehouse with every modern convenience. The healthy growth of traffic at this port was very important to the continued prosperity and growth of the company.

By 1903 a car-ferry service had been established between Northport and Manistique. However, this innovation had to be abandoned three years later because of the heavy ice which caused boats to get stuck, sometimes for a month. The freight service had been highly lucrative for the ship owners, but after the railroads and the water transporters started competing for cargo, it kept prices down. The small producers in the area were quick to take advantage of this situation. Elk Rapids had a dock which was sizeable enough to accommodate ships as large as the Missouri. However, one winter the dock was destroyed by the ice which sheared off the piles. It was never rebuilt.

At the beginning of the century there were four railroads which came near the head of the Bay, and there were two spurs built to the Bay. Neither of these spurs had adequate equipment for transferring goods and freight from the shore to the ships. Although there were six piers at the head of the Bay only three were being used. These belonged to the Hannah & Lay, Mercantile Company, the Oval Dish Company, and the Northern Michigan Transportation Company.

Inasmuch as the ports' revenue was not large enough to have a local customs official, the United States did not maintain an office of deputy collector of customs at Traverse City. The only figures relative to waterborne commerce at the port for the years 1907-1908 were obtained from the Bureau of Statistics and augmented by information from the townsfolk.

Accordingly, the figures from these inadequate sources, which were available for the 1907 shipping season, show that 6,080 tons for freight were received and 23,397 tons were shipped out. The following year 5,695 tons were brought in and 11,142 tons were dispatched out. The estimated value of the lake commerce for 1908 was \$1,370,000.<sup>79</sup>

#### U. S. Engineers Studied Area

In 1909 Traverse City had a population of 13,000 and was one of the larger cities in the northern part of the Lower Peninsula. A governmental report of that year included information about the Boardman Lake which was about a mile and a quarter in length with a mean width of fourteen hundred feet. The lake emptied into the south end of the West of the Bay by way of the Boardman River. The River itself has a length of approximately twenty-three miles long and its two main branches add another thirty-five and a half miles,<sup>80</sup> and at that time the River traveled a circuitous 9,000 foot route through the city.<sup>81</sup>

A power dam had been built in 1868 at a point a half a mile above the lake on the river. This was said to have had a head of water between eight and nine feet. The Boardman Lake and part of the river above the dam were still being used for the storing of logs, although to a lesser extent than was true a few years earlier.

About eight hundred feet at the mouth of the river had been improved by sheet piling the banks and turning basin which established a small harbor for row-boats, motor boats and small sailing craft. This had been done by private interests. Later other changes were made in this River when the highway was put through.

The Hannah, Lay Company's wharf was being rebuilt in 1909 and it was expected to have modern transfer facilities. This wharf was to extend about three hundred feet beyond the shoreline, and was to be one hundred and forty-seven feet wide.<sup>82</sup>

In general this was the way things stood at the Traverse City port. The Corps of Engineers in following up on the request for a breakwater at the port reported that they believed that the only people actually interested in the facility were the members of the Traverse City Board of Trade who had apparently made the original request.

A breakwater would have protected ships, ying in the harbor, from northerly storms but the Engineers decided upon their examination of the situation that there was no real need for this. They pointed out that in the case of a severe storm from the north, these boats could be moved quickly to Bowers Harbor, where they would find adequate protection. Based on this study, the plea for Federal improvements was turned down. Grand Traverse Bay near Traverse City, the report concluded, was in fact an excellent harbor where business, it was said, which was "subject to extremely slight delays arising from natural causes."<sup>83</sup>

The importance of water transportation was waning, partially due to drastically declining lumber shipments, but primarily because water carriers could not compete with the faster, and sometimes less expensive, rail transportation. The trains made many more trips each week than did the ships serving the Bay area and were able to pick up and drop off passengers and freight along the way.

Often a combination of rail and water transportation was used. For example, some shipments of cherries were made on the Manistee and Northeastern Railroad from Traverse City to Manistee, where they were picked up by the Northern Michigan Transportation Company boats and delivered to Chicago.

Although this train-ship method was actually more expensive than shipping by boat alone, the fact that the rail cars were refrigerated, and, that the delivery time was shortened by twelve hours, the cherries arrived at their destination in a fresher condition and there was less spoilage. The extra hours that it took to ship fruit by water, the lack of shipboard refrigeration, and the fact that there were only two direct boat trips each week from Traverse City to Chicago, made the rail-boat system more and more attractive to the growers.

In other ways, as years passed by, ships were becoming less and less important to the economy. The region was becoming less isolated because there were better roads and year around train service. Even so, well into the 1900's, water transportation was still highly advertised. A brochure in 1911 informed its readers that, "There are seventeen regular loading points for the Grand Traverse producer for the large lake boats, besides many docks at which small craft can take on cargo." Excursion boats also offered many services to people in the area until the 1920's, a decade when the roads and auto travel were so improved that the people preferred to travel on wheels and to have their autos with them for their vacation or for business travel into northwestern Michigan counties.

A five acre municipal yacht harbor, protected by a breakwater and piers, was built along the central part of the Traverse City water front in the 1930's. This Works Progress Administration project was exposed to the full force of storms from the north which brought on its speedy deterioration and disuse.<sup>84</sup>

The years 1937 through 1946 saw the waterborne commerce at Traverse City ports averaging 59,390 tons annually.<sup>85</sup> Coal, petroleum and fish were the major products shipped out at that time. Commercial terminals belonged to the Hannah, Lay Mercantile Company, the Rennie Oil Company, and the Sears Dock and Dredging Corporation. There was also a harbor for private pleasure craft.

The need for a municipal facility continued to be felt. New proposals outlining these needs were drawn up and sent to the Federal authorities. Such investigations could be authorized, as this one was, by the River and Harbor Act of August 26, 1937. A greater emphasis was added to this proposal when it was also requested by a resolution of the U. S. House of Representatives Committee on Rivers and Harbors. The matter was looked into by the Army's Board of Engineers.

The district engineer who recommended that the harbor be provided if the local interests would give satisfactory assurances that they would:

- (a) furnish easements for spoil-disposal areas along shore and construct a low earth dike to retain the dredged materials;
- (b) donate lands and easements for the shoreward end of the breakwater and right of access thereto;
- (c) construct and maintain a suitable public wharf;
- (d) establish a body empowered to regulate the development and use of all the harbor facilities in the best interests of the public;
- and (e) release the United States from all claims for damages attributable to the dredging and construction operations.<sup>86</sup>

Plans were made and this small craft harbor was constructed in 1951 and it has since been maintained by the Federal Government. The harbor was expected to accommodate recreational boating and commercial fishing boats. It was built so that heavy northerly winds would not directly affect the marina as had been the case of the one built with WPA funds.

The harbor was to have 1,280 linear feet of sheet pile breakwater, extending from the west shore of the Bay, from a point about a mile and a quarter north of what were then the city limits, and it was to continue southeasterly across the shoal area and would shelter a basin 600 feet wide and 1,000 feet long shoreward of the breakwater, one-half of the area was to have a depth of fourteen feet and the remainder was to be at a depth of ten feet. It was decided that the dredge spoil would be deposited in the shoal water northeast of the breakwater and the remainder shoreward of the basin area where a dike would be provided to retain the fill.<sup>87</sup>

It had been expected that the first cost would have been \$334,000 but the surprising fact was that the total cost when the work was completed was only \$239,557. Annual costs for harbor improvements were expected to run around



\$17,400, which would include \$3,500 for Federal up-keep of the breakwater and basin, but for the ten years following its construction this harbour was maintained for around \$2,500.<sup>88</sup> There has been very little commerce handled at the harbor, and instead it has been carried on at the commercial docks.

Gas pipe lines have now reached Grand Traverse Bay and have reduced the freighter traffic for coal. However, power plants in the area have been expanding and this creates a need for coal.<sup>89</sup> Ship building companies are constructing even larger freighters, and some of the Traverse City officials today believe that evidence now signifies that waterborne commerce on the Bay is at present in a transitional period. They believe that greater tonnages of waterborne commerce will be a part of the area's future.

The comparative figures for mid-Twentieth Century shipping on Grand Traverse Bay are given here for selected years:

WATERBORNE COMMERCE ON GRAND TRAVERSE BAY	
Year	Tonnage
1946	67,296
1955	140,199
1956	147,204
1957	163,346
1958	228,719
1959	180,831
1960	175,423
1961	150,605
1962	173,309
1963	174,718
1964	199,190
1965	229,300
1966	180,100
1967	160,025
1968	198,840
1969	*288,325

\*This figure is from the Corps of Engineers. The products which were shipped in 1969 were: coal, limestone, non-metallic gasoline, kerosene, fuel oil and slag. Other figures are from the U. S. Waterborne Commerce Annual Reports.

### The G. Marston Dame Marina and Memorial Park

A harbor was built at Northport in 1959 with accommodations for twenty-nine boats. In 1970 additions and improvements were added through \$258,500 in grants from the Economic Development Agency of the State of Michigan, from the Michigan Waterways Commission, and \$50,000 in revenue bonds which were bought by some of the six hundred inhabitants of Northport.<sup>90</sup> The G. Marston Dame Marina and Memorial Park were dedicated in August, 1970. This construction brought the number of berthing facilities at that marina to eighty boats. Its completion made five harbors available on Grand Traverse Bay by 1970. (See: Appendix, no. 4, for general information regarding these harbors).

The present annual recreational traffic on the Bay exceeds all early predictions and it continues to increase every year. The multiplicity of harbor facilities on the Bay, and the protection these afford as shelters from the storms have helped to make the ports in this area popular with Great Lakes boaters.

As one looks back into the history of the Bay one recognizes that the dire forebodings of the early Lakes' captains concerning treacherous waters of the Bay, before it was charted, were exaggerated. There have, in fact, been few shipwrecks on the Bay.

Of the wrecks recorded in the area, some were caused by storms, by ice jams, by fire, and numerous other causes. In Michigan, and in other Great Lakes states, shipwrecks have a special fascination. This interest has picked up momentum as divers develop more sophisticated equipment with which to make explorations, areas believed to harbor wrecks. They now have the capability to locate and bring to the surface many objects which throughout the years remained undiscovered. There are amateur divers who find the combination of diving and exploring an exhilarating sport.

Some people are interested in the wrecks as a source of income. Usually these are persons whose interests in sunken ships relate to the salvaging of ships and supplies as a part of their business. There is great demand for materials from the ships which can be converted into high-priced furniture, or which can be reconstructed, or restored. Such artifacts, mementos, tools, or furniture are eagerly sought by interior decorators, antique dealers, historians, museum directors, and collectors.

There are countless recorded stories of storms on the Bay. Many settlers recounted their adventures as they sailed into the Bay. As the Bay sheltered the ships from a raging storm, the people were thankful for its peaceful sanctuary. However, this was not always the case.

In a severe storm in November of 1853, several would-be settlers were on board the Arrow entering the Bay. The fierceness of the tempest had made even the sailors ill and they lay in a stupor on the deck too sick to move. It seemed

impossible to save the ship without their help, and in great desperation the Captain lashed the sailors with a rope, but even this failed to arouse them. The Captain and one of his passengers, William F. Langworthy, were the only people on board who were not seasick. The Captain said: "Well, Langworthy, we'll all be in hell in ten minutes."

"No we won't," said Langworthy, "My family's on board! You tell me what to do, even if I am a landlubber, and we'll pull her through!" And, they did, much to the surprise of the inhabitants of Old Mission who were all down at the shore expecting the boat to go down.<sup>91</sup>

The three masted schooner, Energy, seems to be the first ship which was known to have been wrecked on Grand Traverse Bay. She went down on the east side of the Bay near Old Mission in 1855 with a load of household goods belonging to the settlers.

Another ship, which was a familiar sight at some of the Bay ports, was the eight hundred ten propeller, Westmoreland, which was sunk off South Manitou in Lake Michigan in 1854.<sup>92</sup> In this tragedy seventeen lives were lost as the three hundred foot vessel with its cargo of three hundred and fifty barrels of wines and liquors went down. The first mate survived, and eventually became a Great Lakes captain. Numerous divers have been eager to locate the Westmoreland's cargo, but according to reports, all of them have failed so far.

The steamer, Leander Choat, with a miscellaneous cargo burned at Northport in 1888. The three hundred and sixty ton schooner, John Thursby, had a cargo of fine china aboard when it was lost in deep water in the West Bay off Ne-ah-ta-wan-ta Point back in 1867. The Fanny Hazleton vanished near Grand Traverse Point in 1880 with a load of telephone poles as her cargo.

In 1886 the two hundred and thirty-four ton Metropolis with its load of pig iron sunk off Old Mission Point, and the Pamlico and its load of shingles went down east of Northport on the Eastport side. The schooner Brick had a load of machinery when she was lost in the Bay in 1891. The tug, Onward, belonging to the Hannah, Lay Company was sunk in 1892 just north of what is now Clinch Park. This Company lost two other tugs in the Bay.

Ada, a schooner with a cargo of iron, was lost in 1894 in the deep water north of Acme in East Bay, and in 1898 another schooner, the A. J. Rogers and its cargo of iron was wrecked in the shallow water near Old Mission Point.<sup>93</sup> Other ships lost in the Bay were the Galena and the Ketchum.

A great storm in September of 1906 was responsible for the loss of many ships throughout the Great Lakes. That year the little forty-seven ton schooner, Three Sisters, piled up on the shore at Elk Rapids and spewed her cargo out on the beach.<sup>94</sup>

### Early Rumrunners on the Bay

The exploits of "High Roberts," who was the leader of a gang of rum-runners, is worth noting. Roberts was also famous as the operator of an Elk Rapids saloon and was a remarkable character who would have gone down in local history even if he hadn't run rum. He is said to have had a bellowing, foghorn voice and a magnificent set of handle bar mustaches.

Stewart Holbrook, that fine story teller of lumberjack tales, writes of him, "The damned revenooers never got old High. They closed in on him once in 1865 when he was heading up Lake Michigan with a cargo of rum for his Elk Rapids joint. His boat was so arranged, the story has it that when hard pressed he could pull a plug from the bottom and sink her. It seems that the revenuers were getting rather close to him on one of his trips. He pulled the plug out and immediately swam for the shore. He struck out alone through the forest, and did not emerge from that cover until he came to the Saginaw River."<sup>95</sup>

The colorful and exciting activities on the Bay during the lumbering era vanished with the end of that period, as the ships carried the agricultural products of the region to market instead of logs and lumber products. Passenger service helped strengthen the need for more ships on regular schedules. This of course changed again with the coming of better roads and reliable automobiles. Summer visitors, traveling salesmen, as well as local residents and businessmen, found that their life styles required owning and using the cars which were rolling off of production lines in other parts of the state.

Fishing nearly disappeared after World War II and waterborne commerce almost ceased. Times and the needs of the population had changed vastly. Recreational boating was beginning to grow as a more affluent society emerged in the 1950's.

Americans had won more leisure time along with their increased income, and tourism and travel patterns changed rapidly. People were going to scenic and recreational areas in increasing numbers and they were staying for longer periods of time. Better cottages were being built which included many of the amenities unknown in the cabins and shacks of pioneering vacationers and fishermen. Elaborate summer homes were constructed and many of these are showpieces of comfort and elegance.

### All seasons Recreation, Tourism and Convention Center

People of the '70's have more leisure and an affluence which affects their more mobile life styles. Because of this, recreation has grown to become one of the most important and expanding industries throughout the land. More time and money is spent every year by tourists. Vacationers and sportsmen,

by using improved highways, airways, or waterways can reach Michigan's loaf-and-fun areas quickly from many high population centers in the Great Lakes basin.

Until the late 1950's the major avalanche of the tourist trade came during a ten week summer season which usually paralleled the school vacation period. This is no longer true. With autumn color tours, coho fishing, hunting seasons, snowmobiling, skiing, and other winter sports, recreation is a year 'round enterprise which continues to grow.

Also, with the growth of the Interstate freeway and state highway systems, more than half of the population of North America is within a two day drive of this Michigan resort area. The Bay area's attractiveness as a convention site has lead further to the growth of large hotels and motels with large meeting rooms and dining facilities.

### Early Recreational Development

Throughout Michigan European immigrant groups tended to settle in areas reminiscent of their homelands. Good examples are the Finns who sought out the pine forested lake areas of the Upper Peninsula and the Dutch who settled in the muck areas around Holland. In a similar manner Bohemians, French, Germans, Irish and others, who had an inbred appreciation of the Bay areas forests, streams, hills, lakes and fruitful farms, settled in northwestern Michigan and similar areas. They discovered that Nature had here provided an opportunity to make a living in its generous fields and forests and to provide a chance for re-creation as they hunted in the woods, fished in its streams, or went boating on its lakes and Bay waters.

Naturally the Indians had discovered the many splendored largess of the great Spirit long before these pioneering days. These aborigines were a picturesque and colorful part of those early colonizing days. For the most part these Indians were industrious and honest, and were of great help to the white settlers. However, they were often unable to comprehend the life-style of the white people, and conversely few white people understood the ways of the Indians.

Early settlers and writers were intrigued by these Chippewas and Ottawas. Although the government tried to move all of the Indians out of the area by 1845, many remained in spite of the official edict. Some descendants of the Indians still live in Peshabestown, which was founded by Father Mrak. This priest had a great influence with these indigenous people and had a great compassion for them. Peshabestown and its picturesque cemetery are now visited by many tourists. Baskets made by local Indians are for sale in several gift shops and boutiques.

A century ago the Hannah, Lay Company of Traverse City and the Elk Rapids Iron Company did much to encourage the summer resort trade of that period.

These companies' passenger ships made transportation fairly easy between Chicago and the Bay. The continually sought to better the accommodations on their respective shipping lines. The Traverse City Company's T. S. Faxton which was put in service in 1875, was one of the last passenger ships purchased by that company. It continued to ply the water long after the lumbering era waned. At that time there were also a considerable number of regularly scheduled passenger trips around the Bay and the chain-of-lakes. This was exceptionally important to visitors and residents alike as water travel was still the only convenient way to journey for much of the Bay area.

By 1880 numerous hotels and boarding houses as well as cottages and summer homes were housing visitors from many populous parts of the middle West. The largest hotel north of Grand Rapids was Traverse City's Park Place. Its one hundred and twenty-five rooms were more luxuriously appointed than were most of the other places in the locality at that time.

### Fishing as a Sport and Recreation

There seems to be little question that the first vacationers were men in quest of good fishing. Soon after the lumbering era started the sports fishermen came to the Bay. The famous and beautiful grayling (now vanished from Michigan's waters) challenged the skill of the anglers. There were other fighting fish to be found in the Bay, in the unspoiled brooks, and in the fast moving streams.

Skippers were ready with fishing boats for hire. Some of these captains could offer the sport of "deep sea trolling," which became nationally famous and brought renewed attention to the Bay. The press and word of mouth publicity brought sportsmen to the region from great distances.

Although some people claimed that fishing was not as good in the 1870's as it had been earlier, the fishing was excellent until the late 1930's. A case in point was that the skippers for many decades made it a rule that any day a person on their boat did not catch any fish he did not have to pay for the trip or the service.

Summer visitors often saw other evidence of excellent fishing. As they strolled out for a pleasant early morning walk they would often meet small boys trudging along with makeshift poles and line along with a mess of fish caught in one of the numerous ditches in the area.<sup>96</sup> Such fish might be as long as a foot.

After the sea lamprey invaded the upper Great Lakes it began to destroy the lake trout. As these popular game fish disappeared it harmed the economy of the Grand Traverse region. Moreover, the lamprey and the decline of the big trout, upset the ecological balance and affected many other species of marine life. For example, through the loss of the predator trout there was an alarming increase in the alewife population, which caused further ecological and economic complications. By the 1950's both the commercial and sport fishing

had reached a low ebb and many felt that this activity would for all practical and economic purposes disappear.

Through the combined efforts of the Michigan Department of Natural Resources and the Great Lakes Fishery Commission a program was developed for control of the alewife and the lamprey. Lake trout and other game fish can once again be found in the Lake and the Bay. The coho, which were planted to keep the alewife population down, have attracted not only Michigan sport fishermen but others from coast to coast. The "miracle" has received a good press around the world and "coho fever" not only brought tens of thousands of new travellers into northwestern Michigan but has stimulated land sales, tourist attractions, and has otherwise stimulated the economy of this eleven county area. An increase over the 1964-66 norm in retail sales of over 26 million dollars was observed in the fall of 1968 as compared to the approximately 12 million dollars increase in 1967.<sup>97</sup> Local authorities give most of the credit for this increase to the traffic brought into the area by the coho fishermen and their families.

On the negative side, the influx of these additional users of the lakes and lands, both transient and permanent, affects the human ecology and often harms the environment as they contribute to the normal and abnormal deterioration of the region. The added sewage and water use on one hand, and the evidences of "civilization," such as beer cans on the bottom of once crystal clear lakes, are of great concern to all who wish to preserve this recreational paradise. The University of Michigan Sea Grant Program and other concerned research, conservation, and community action groups are gathering scientific evidence to preserve and improve Great Lakes areas such as Grand Traverse Bay and its watersheds. Much of the data collected by scientists, public officials, and environmental action agencies will be used as background evidence for local, State and Federal legislation. As research is completed it will be made available too, to the press, radio, television and other media and to educators on all levels from kindergarten through university graduate schools.

### Boating Traffic

Many affluent vacationers still travel to this recreational paradise by yacht, as they did in the past. Some of the men who lived in Traverse City as youngsters remember when boaters from Elk Rapids, Charlevoix, Northport and other resort areas used their craft to take them to Traverse City. There they could anchor at the old passenger dock and do their shopping in town. Some of the young lads discovered that it could be quite profitable to hang around the old passenger dock to put on a demonstration of their aquatic skills. When the wealthy yacht owners tossed coins into the water, the boys would dive for them. As a special stunt, for a quarter, some of these venturesome lads would ride an old bicycle off of the old passenger dock into the thirty-eight foot deep water below.<sup>98</sup>

Clinch Park and the Foster Museum in Traverse City are favorite tourist stops. They house collections which have survived from the pioneer and lumbering days of northern Michigan. There is a miniature model of Traverse City and a small zoo containing many specimens of Michigan wildlife.

Numerous parks are scattered throughout the eleven counties which comprise this northwestern part of the Lower Peninsula. These vary from pleasant roadside parks to State parks such as the D. H. Day and Traverse City units with many facilities for tourists and nature lovers.

The Traverse City Park came into being when the Grand Traverse Resort Association opened up sixteen acres along U. S. 31 at the head of East Bay to provide for visitors who wanted to camp, fish and picnic near the Bay.<sup>99</sup> This proved to be so popular that, in 1921, the Association found it expedient to deed this land to the Michigan Conservation Department which further developed it as the Traverse City State Park. They improved existing facilities and planted about three hundred and fifty maple and elm trees which at that time were about two to three inches in diameter. These trees have thrived and, because an imaginative landscape crew had scattered the plantings in a natural pattern, most people assume that they were a part of the native growth.

The 880 foot beach at this park was originally made up of miniature dunes which the State removed as they obstructed the paths and filled in around the buildings used as bath houses. Retainers were added at certain specific areas along the shore, and the park beach consists of fine white sand.

In the late 1930's this park was modernized and twenty-two acres of land were added under The Works Progress Administration, the Federal agency which was set up to provide employment and useful projects during the great depression. The attendance records at this park continue to increase. More than a million people came to the Traverse City facility between 1961 and 1967, and the yearly average for that period was 151,720.

The Traverse City Park is smaller than the other state-operated facilities in the Grand Traverse Region. It is the most densely developed unit in the Grand Traverse area with 330 camp sites on its thirty-nine acres.

Probably the most popular recreational unit in Michigan is the Interlochen State Park, believed by many to be the oldest park administered by the Michigan Department of Natural Resources. Interlochen village and the State Park are in Grand Traverse County, as is the world famous National Music Camp. These cultured and recreational facilities complement each other and each helps the others growth and utilization. The Interlochen State Park has well developed, modern facilities with 550 camp sites on its 187 acres. The park and the Music Camp are located in large virgin pine areas. In addition the Park has some beach frontage on Wabekness (the Indian word for Green) and Wabekanetta (the Indian word for Duck) lakes.

Northport State Park in Leelanau County is at present undeveloped<sup>100</sup> and has only a few somewhat primitive accommodations. At present it consists of about



360 acres on Cathead Bay. There is some frontage on the little inland body of water which has the unpleasant name of Mud Lake, as do some 200 or more other bodies of water in Michigan. There are some trails and small hunting cabins in the park. The frontage on Cathead on the Bay consists of some rocky areas as well as of some fine beach. The areas of forest in this unit is mostly composed of prime hardwoods. This park is different from many other State units inasmuch as the people who come here have camping as their goal. It is remote and at the end of the peninsula. It is unlike parks in many other Michigan areas where campers stop briefly before continuing on to their next stop further along the highway.

#### Sleeping Bear to Absorb State Parks

The D. H. Day State Park in Leelanau County has 130 camp sites on its 2,050 acres and the Benzie State Park in Benzie County has 200 camp sites on approximately 2,255 acres. The D. H. Day, with its magnificent sand dunes, and Benzie are being turned over to the United States government as a part of the Sleeping Bear Dunes National Lake Shore.<sup>101</sup>

Grand Traverse County's Lighthouse Park at the tip of Old Mission Peninsula (known as Pickaugonin by the Indians before it was renamed by the settlers) consists of 137 acres, much of which is said to be native hardwood forest. The fact that there are no exceptionally large trees on this land causes some dispute in this matter.

The Old Mission Lighthouse on this Peninsula, which was built in 1870, was replaced by an automatic light in 1934. This historic structure is on the forty-fifth parallel, exactly half way between the Equator and the North Pole.

There are numerous other parks in Traverse City and other communities which are available for picnickers and campers, and for those seeking quiet spots to enjoy nature and relaxed recreation.

#### Accommodations

Although "summer people" had been coming to the Bay for many years it was around the late 1870's that the area's many resorts really started to expand. Numerous places offered wide varieties of hospitality and services for cationers and travellers. Such places as the Cottage Hotel, the Hughes House, the Harsha Brothers' American Hotel and the Lake View Hotel at Elk Rapids, were friendly places and excellent meals were served. Popular and different was Yalomstein's three story "Sky Scraper" where the top floor was reserved for dances and shows. In the same tradition, today's Park Place has a bar and restaurant on its top floor.

The Chemical Plant, which Dr. Pierce moved north from Bangor, Michigan, helped to improve the environment which had been harmed by processes previously used by more careless iron foundry methods. To the delight of the vacationer and

the townfolk alike, this plant used a new process for turning the waste gas and smoke from the charcoal kilns into wood alcohol and the smoke and a by-product of wood tar was miraculously transformed into acetate of lime. Previous to this, this effluent had been running off into the swamp east of the Iron Company's factory. Some people believe that there are tons of this tar by-product yet there in the swamp.<sup>102</sup>

The old Mission Resort was out on the Peninsula along with hotels run by George Hadden, W. H. Rushmore, and W. R. Stone. A local brass band played at picnics, holidays, met boats and added an unpah-umpah sound to many other festivities in the area. They also were in hearty competition with the bands of other communities around the Bay.

### Church Group Camps

Ne-Ah-Ta-Wanta, on Bowers Harbor was the home of the Michigan Universalists' state retreat, "Placid Waters." There was a fine hotel and a number of new cottages there in the early 1890's. The Baptists and the Methodists also had summer church camps on the Bay.

The popularity and accessibility of these facilities grew as the travel time to and from Chicago was greatly reduced. By 1891, one could expect to make the trip to Chicago by boat in twenty-one hours or by rail in eleven. This brought increased numbers of church families and other summer people to the region.

One of the smaller villages which usually attracted more visitors than the town had residents was Omena, which was then known locally as Almira. These tourists and vacationers could stay at the Clover, the Omena Inn or the Leelanaw Hotel which was located 150 feet above the level of the Bay. The Leelanaw was built by some Cincinnati business men who had bought and reconverted Dougherty's old schoolhouse. They added to the original structure and made it a quality hotel of that day. The Leelanaw Hotel was in existence for about thirty years when it went out of business due to lessening demand in that area. Several years later the premises were used for a time as a girl's camp, then that too closed. Abel T. Page's summer resort, Che-min-wah-be, was on Omena Bay.

### Peshabestown Indian Settlement

Northport was one of the favorite resorts. In the early 1880's one well-traveled writer found this area picturesque and confusing and the Indians fascinating. He was especially interested in the little Indian village near the Bay, now known as Peshabestown. The Indian trails which criss-crossed in such a way that the uninitiated easily get lost, were no problem to the native children. Indian boys and girls, even those as young as three or four years of age, wandered several miles away from their homes and returned to them without any problem.

The freshness of the air and the pungent scent of resin from freshly cut pine trees which wafted through the Grand Traverse area were recorded by writers of that day. The sparkling waters of the Bay under the bright sunlit skies enhanced the region's attractiveness. The landscapes were entrancing. However, it was noted that artists had not yet found the region, much to the surprise of various travelers.

A month's stay at Northport's Traverse Bay Hotel in 1881 cost less than \$25.00 for room and board. In addition to the food and lodging the guests were also permitted extensive use of the hotel proprietor's boat. Although money was urged upon the inn keeper for this extra amenity he refused to accept anything for this service which he maintained was free for the use of his guests. This was somewhat typical of the friendly welcome travelers received throughout the region. This should not be construed as meaning that there were no "sharp" operators, as there were, but they were in the minority.

#### Bands were Popular

Northport proudly added a "coronet band" to its attractions. One could often hear the band practicing if one had rooms at the Waukazoo Hotel. Actually it was almost impossible to escape the sound of the band, once it had started to play.

The Northport Point summer resort, three miles from Northport, was also a popular place. Farther south, on the west shore of West Bay towards Traverse City at Sutton's Bay, visitors could "put up" at the Union Hotel and the Bay House.

Probably the first hotel in the Bay area was the Gunton House built in 1860 in Traverse City. The Campbell House in Traverse City was the most popular hotel in the entire region. The other hotels in the city, the Boardman River House, the Front Street House and the Lewis House, were well patronized by both summer and commercial travelers.

In 1879 the Campbell House was sold. The new owners put on a large addition and changed the name to the Park Place Hotel. The Park Place has continued to update its services and accommodations throughout the years and its popularity has been continuous. In addition to tourists and business clientele this large hostelry now attracts many conventions at all seasons. Not too far from the Park Place was the Bay House, where one could stay for a dollar a night. This hotel advertised the fact that it was on the Bay near the steamboat landing, and that there was good hunting and fishing in nearby woods and waters.

#### Livery Stables Important

At the same time the Occidental Hotel offered what it was felt were the finest barns and stables in Traverse City. Livery stables were a matter of great concern to early drummers and vacationers, who almost without exception arrived in the area by boat and needed transportation to get around the area. In addition to the hotels listed, there were many other smaller facilities available. Many of these inns and boarding

houses came and went throughout the years. Rooming houses were relatively few, since the lack of restaurants in town made it possible and profitable for small entrepreneurs to feed their patrons as well as bed them and their horses.

Wherever the summer people stayed they found that hearty and delicious food was readily available. Each year as the season for raspberries came around, the resorters might be lucky enough to be served wild raspberries in thick, rich cream. These delicacies were picked by Indian women and children from the wild bushes which grew thick in the woods near Traverse City. In quantity, these berries were sold for as little as eight cents a gallon. Other foods which were much prized were whitefish, trout, and other fresh fish and the local home-made breads and freshly churned butter.

The Grand Traverse region prided itself over the growing markets for its superb apples and peaches. There was ample proof of this superiority. The residents and summer visitors were well aware that the Grand Traverse region's apples and peaches had taken first prize at Philadelphia in 1877 at the United States Centennial Exhibition.

Often forgotten, as one reviews the more strenuous recreational pastimes enjoyed by summer vacationists is the fact that many visitors enjoyed sitting on hotel verandas, in their rocking chairs and gliders, exchanging small talk with other guests or observing the passing scene. Others enjoyed hilltop vistas of the Bay, or relaxed on the beaches, as they watched fluffy white clouds floating across the blue sky or observing the gulls as they circled around the boats. Sights such as large eagles swooping through the air to pounce on some unseen prey were absorbing to observe. Belted kingfishers and plovers could be seen flitting from stone to stone on the reefs.

#### Private Clubs Organized

A number of private clubs and associations organized, bought waterfront land, and developed summer accommodations of their own. Possibly the most affluent was the Wequetong Club at Traverse City. The members had their own club house, tennis courts, dock, boat house, and a private bridge over the Boardman River.

Most of the hotels, boarding houses, and resorts as well as tourist oriented shops closed after the traditional ten-week summer season. With the coming of action programs in all four seasons, most facilities now stay open all year round. Today's Traverse area offers a wide variety of motels, trailer parks, hotels, and other accommodations for tourist and mercantile travelers. Retirees, too, can find trailer courts where they can settle down in their comfortable trailer homes around a central club-like facility.

Others, like the much publicized and innovative Timber Shores Resort up the Peninsula near Northport, offer a sub-community service with a club house, store, restaurant,

swimming pools, laundry facilities, and other services for the tourist or summer resident who tows his home with him wherever he goes.

Among the many attractions which bring visitors to the area throughout the year are autumn color tours, coho, visits to the fish hatchery, hunting, skiing, snowmobiling, and scores of other recreational, conventioning, or cultural activities.

### Traverse Winter Carnival

In 1969 more than 20,000 people attended the Traverse Winter Carnival. This annual event now winds up with a snowmobile race which is ranked as one of the top ten in the nation. It is a 250 mile race held on a three quarter mile track located south of Traverse City on U.S. 31. First prize is \$5,000, with extra amounts added for each lap finished ahead of the competitors.

In the summer young and old visitors enjoy camping, exploring old areas, climbing the dunes, horseback riding, fishing, boating, sailing, swimming, scuba diving, snorkeling, water skiing, sight seeing, and browsing in the antique and craft shops which are found in the villages and on the highways.

Nature lovers appreciate the wide varieties of wild flowers, such as hepatica, violets, trilliums, bloodroot, spring beauties, Dutchman's breeches, and the rich, pungent arbutus found in the woods of this area.

Audubon society members and other bird watchers delight in the many varieties of birds to be seen and heard throughout the region. The famous mute swans at Greilickville also attract many photographers who come to record the natural photogenic sights in color slides and film. Both the nearby Glen Lake and Torch Lake, are considered outstandingly beautiful bodies of water whose beauties are worth recording on film in all seasons of the year.

The blossom filled cherry orchards bring an enchantment to the hills every spring. In the summer the migrant workers who come to pick the sweet and sour cherries add much to the picturesqueness of the region. This is a changing factor as mechanical pickers are gradually taking over the work formerly performed only by hand.

### Cherry Festival

The cherries importance to the region's economy is annually celebrated in two events. The first one which comes in May, a little early for the tourists, is the beautiful ceremony of the Blessing of the Blossoms. In July, as the black and red cherries ripen, the National Cherry Festival attracts visitors from all parts of the nation and overseas. A cherry queen and her court are chosen and the entire region celebrates. Ever since it started in 1926 it is almost mandatory that the Governor of Michigan and other celebrities appear. The present Governor, William Grawn Milliken, is a native of Traverse City, whose family has been in the mercantile business there for several generations.

The Cherry Festival has grown to be an event-packed attraction with open houses, receptions, parades, concerts, races, and other scheduled activities. A dramatic display of fireworks is held over the Bay and the festivities close with sailing races on the Bay. Inasmuch as the nearly 100 million pounds of tart red cherries, which are annually produced in the Grand Traverse region, constitute one third of all cherries grown throughout the earth, it seems quite appropriate that the people of Traverse City refer to their city as the "Cherry Capitol of the World." Plans are currently in progress for the 50th anniversary celebration of the Cherry Festival in 1976. This coincides with the 200th anniversary of the American Revolution. This celebration, its sponsors believe, will bring back to this region many thousands of people who have lived in the Bay area in the past, along with avalanches of tourists and sportsmen, who love the beauty and gaiety found in this cherry area every July. Many parents bring their children to this vacation wonderland each year at this time, and the habit lasts for years afterward.

From the time in the spring when a drive along the miles of roads leads through orchards where more than 22,600 cherry trees are in blossom in every square mile, this region becomes a mecca for camera enthusiasts, sightseers and others who find the region photographic, invigorating, and delightful. The rolling hills, the blue lakes, the little streams, and the great Bay, present a changing panorama to the visitors. Actually the Bay is on view for so many miles, and from so many vantage points, that its sparkling waters with its colorful craft contend with the cherry orchards and other scenery for top photographic and romantic interest.

Marine enthusiasts present an increasingly important part of present day recreational economy. Helping to stimulate the flow of water lovers to the area are the readily accessible boat launching ramps on both East and West Bays, as well as the active harbors on the Bay (See: Appendix, no. 4). Many boats are manufactured and serviced in the region.

More than half a century ago the Traverse City Motor Car Company had high hopes that their Napoleon touring cars<sup>103</sup> would grab the interest of the sporty motor enthusiasts of that day. The three models which they offered in 1918 were advertised as being without fads, frills, and silly special parts that could not be readily obtained elsewhere. However, the Napoleon four passenger, four cylinder, with its wire wheels, and the five passenger, six cylinder deluxe model were not destined to become a threat to automotive giants producing vehicles elsewhere in Michigan. Today, the Traverse City Motor Car Company's creations of those years are rare collectors' items.

The Bay area has numerous annual national events which bring people back to the area year after year. Shuffleboard courts near Grand Traverse Bay in Traverse City bring contestants to state and national championship matches each summer.

This part of Michigan provides a salubrious environment for those who suffer from hay fever. In fact, many years ago a group of hay fever sufferers who

found a healthy refuge in northwestern Michigan from the pollens found further south, banded together and formed the Sneezers Club, to formalize their common appreciation for the cleaner air found around the Bay. The Tin Can Tourists, a club formed by mobile homes owners, have each year converged on Traverse City for several decades. Quality trailer courts have been developed in the cities along the Bay. The availability of such sites has led to an intensive campaign to tell the world of the Bay's advantages as a retirement center.

Visitors to the area can find a wide range of accommodations from simple summer cottages, luxurious homes, motels, hotels, cabins to tourist courts. The plain cooking found in the eating houses a few decades ago has changed, and although a traveller can get simple meals, hamburgers, pizza, and hotdogs along the way, he can also dine sumptuously in elegant restaurants and night clubs. It must be said that restaurant fare runs the gamut and one can find native American and foreign foods as well as fish and chips or the gourmet sea food creations of internationally trained chefs. Delicacies native to this region are the much prized smoked chubs and whitefish which are sold at the unique fishing village in Leland. This, the serendipitous epicure will attest, is succulent fare.

Tobogganing, skiing, dancing, ice fishing, ice skating, snowmobiling, hunting, dune climbing and boating serve to make the region one of year-round recreational interest. So the restaurants, motels, hotels, tourist courts, markets, party stores, art and craft shops, and service oriented facilities which used to close "come Labor Day" usually find it profitable to continue to stay open to serve the increasing trade with customers who visit the area in all seasons of the year. The growing importance of recreational development in this vacation area is underscored when one considers that the general population projections for the state of Michigan indicate that a population rise to ten million is expected by the year 1980. It is anticipated that this will further zoom to thirteen million people by the year 2000. Such growth, experts point out, would increase by sixty percent the state's present recreational requirements.

#### Culture Too Comes to the Bay

The cultural life of the Bay area has not been neglected. Dougherty's mission school established on the old Peninsula in 1839 was the first in the Bay area. This school originally opened with a few Indian children in attendance. In 1842 it branched out to include two white children as well as Lewis Miller, a young white man, who joined the Indian youngsters in their recitations. From that time on both Indians and whites attended this "integrated" school and learned their first lessons "from a pious little primer."<sup>104</sup>

A "School of the Inland Seas," held in 1851 on board the vessel, Madeleine, was both unusual and successful. It existed for that year only and had only young adults as scholars. Even though three of them could neither

read nor write they all learned their "four R's" during that winter. When the Madeline sailed in the spring, it took with it one of the most unique schools Michigan ever had. The state of Michigan has commemorated this unusual educational endeavor with a historical marker placed on the shore at Bowers Harbor.

Other schools were started around the Bay soon after the floating school departed. They seem to have been well attended. By 1865 there was a great deal of controversy over a proposal, then in the State Legislature, to establish a branch of the Agricultural College<sup>105</sup> at Grand Traverse. The bill failed, and although it was brought up in several succeeding sessions of the Legislature, it never passed. However, the Grand Traverse College, established to train teachers, opened its doors in Benzonia in 1868.

A Ladies Library Association was organized the same year in Traverse City. This proved to be a most vigorous community enterprise. The ladies soon had a library of some 600 books and this collection and the sponsoring organization continued to grow and develop. Lectures and concerts were also sponsored by this association. These were held each winter and were well attended. The Grand Traverse Herald often printed in full the text of an evening's lecture for the benefit of its readers.

During the summer extensive Chautauqua programs were offered. These were popular and provided the stimulation and the factual input for fall and winter discussions. People from all parts of the Bay area converged on Traverse City to take in as many of these cultural events as possible during the seasons when travel was easy.

In 1917, the tiny community of Suttons Bay brought the great Chautauqua of the day, the great Redpath Deluxe Seven Day Circuit, to their village. This was a fantastic undertaking for a town of only 400 people, but they were equal to the challenge. As Harry P. Harrison and Karl Detzer tell it in their book, Culture Under Canvas, the people came to Suttons Bay in Maxwells, Reos, and Model T's, and by boat, wagon, and train. Naturally the little village had no means to accomodate such an influx of humanity, so for that week many of the visitors from neighboring Bay communities, could be found camped along the shore of the Bay, where they set up their tents and cooked their meals.<sup>106</sup>

This was the smallest community in which the Redpath show ever played. The audience, Detzer and Harrison tell us, was composed of a mixture of lumbermen, fishermen, farmers, storekeepers, teachers, big families with wide-awake babies, moon-eyed couples, gay young blades, old folks, grinning high-school kids; Norwegians and Swedes, Bohemians, "a few Frenchies and Chippeway Indians."

Whatever the audience expected, they were not disappointed. There was an orchestra, dancers, singers, instrumental soloists, and lecturers. The week-long event was a huge success. There was much too much to assimilate in one week. It took time to think through. That winter the events which made up the Chautauqua were discussed and marveled at, again and again,



in the parlors of the region.

The Ladies Library Association had acquired enough books from 1868 on that they could turn over 19,000 volumes in 1919 to the budding Traverse City Public Library. In 1911 the Needham Business College started in Traverse City, and about the same time Benzonia had an Academy, and Antrim County had a teachers' normal school.

In the 1920's the world-famous National Music Camp at Interlochen was founded by the late Joseph E. Maddy on a beautiful site about fifteen miles southwest of Traverse City. For almost half a century he continued as its director and he saw it grow into an enterprise recognized for its emphasis on a high standard of musicianship and for the inspiration and stimulation it gave youngsters to carry a fresh cultural impetus back to their home communities. These young students come from all parts of the United States. They are privileged to study under master teachers, to hear great artists, and to hold informal gab-fests with these performers. The students attend classes, go to rehearsals, and are involved in some 350 musical, ballet, and other cultural performances during the summer season. Students at the camp in the summer of 1970 came from forty-four states and twelve of the young people came from beyond the borders of the United States. Dance, theater, opera, orchestras, bands, and instrumentalists as soloists, or in groups, perform here. Other cultural attractions, such as art exhibitions, are also held.

The health and physical welfare of the Interlochen youth is not overlooked. The recreational facilities are extensive and varied. There are two lakes in the virgin forest camp areas and the nearby Interlochen State Park facilities are available for the enjoyment of students and the 850 faculty and staff members who now comprise the National Music Camp. Parents and friends are urged to come and enjoy the concerts, to see the young performers, and take pride in the work done by these talented students.

Established almost as long as the camp at Interlochen is the Cherry County Playhouse, a theatre in the round, which offers its performances in a unique circular structure with a dome-like roof. The Playhouse is directly connected to the Park Place Motor Hotel, which owns the auditorium and uses it throughout most of the year for large conventions and conferences. The Playhouse offers fine plays with top television and film stars playing lead roles. These name performers consider their appearances here carry enough import that they boast about their bookings here in their television, radio or newspaper interviews.

The Grand Traverse region is proud of Northwestern Michigan College. This is often referred to as "the college which bake sales built," because a considerable sum of money was raised for it that way during its first four years of existence. Somewhat in the same tradition, an annual money raising College Barbecue has been held in the fifteen years since the college officially became Michigan's first community college. Through the barbecue almost \$120,000 has been raised from 1955 to 1970, an indication of the

strong community interest in this pleasantly situated institution, which is the official two year college and adult education center for Grand Traverse County.<sup>107</sup>

Northwestern offers many different educational opportunities to its 1,711 enrolled students. A preparatory liberal arts program of two years is easily transferred to four year institutions, and it has strong vocational and marine programs in its curriculum. The facilities on the main campus near Grand Traverse Bay in Traverse City include: the Administration Building, which also serves as a classroom facility, the Mark Osterlin Library, the Science Building, the Nick Rajkovich Physical Education Center, the Student Center and two residence halls. Other buildings and facilities are under construction.

The Northwestern College Great Lakes Marine Academy offers a thirty-three month academic program with actual shipboard experience leading to graduation as licensed officer. The graduate then is eligible to become a Master or Chief Engineer on any ship on the Great Lakes. According to Marine Academy and Northwestern College officials, the opportunities for career promotions are great on registered United States vessels on the Great Lakes fleet which now totals some 230 ships. The use of commercial vessels on the Great Lakes is expected to grow, and if methods of keeping the Seaway open all year around which are now being researched by Canada and the United States, prove feasible, even more trade and maritime activity is anticipated.

In 1969 the Traverse City citizens had raised \$21,000 to bring the World War II sea going tug, the Allegheny, to Grand Traverse Bay to serve as a floating classroom for the Maritime students. The Hudson, an ocean-going tug, was also the latest vessel acquired by the College. This tug has a fully loaded capacity of 840 tons.

The College also has the tugs, Captain George and Anchor Bay. There is a self-propelled barge, the Dragon, with crane. Two sand barges and several life-boats complete the Maritime Academy's training vessels.

Among the courses offered to future officers are those concerning maritime disciplines, navigation communication, steam engineering, diesel engineering, laboratory work, nautical rules, labor relations, history of the Great Lakes, shipboard medical practices, and maritime law. The Traverse Bay, as it was in the winter of 1851, is once again home to floating classrooms. This opportunity for young people to train for service on the "fourth seacoast" which is shared by Canada and the United States, is attracting great interest among Federal agencies and state and provincial governments in the fresh water heartland of North America.

#### The Law and the Bay

Grand Traverse Bay is subject to all Federal and Michigan laws relating to the Great Lakes. It is also affected by many county, township, and municipal ordinances and new legislation relating to ecology, water resources, and the

conservation of natural resources that are being discussed and enacted frequently.

Local government units concerned about environmental deterioration, have been studying protective zoning of their lands and shores. However, many local citizens who know that some form of zoning regulation is needed, turn down proposals at the polls which they fear may inhibit their personal freedom of action. Because of this local resistance to purposeful change, which is common to pioneering communities as they become engulfed by an ever-increasing number of new citizens and industries, it seems more and more certain that environmental protection will be effectuated by state laws instead of by local ordinances. One example of this is the Shorelands Protection Act which went into effect on December 30, 1970 which permits the State to move into areas which the Water Resources Commission will then have identified as high risk zones, and if local governments fail to provide for the zoning necessary for the protection of these areas then the State can, and will, under the direction of this law take such action as to make the needed zoning an imperative action of that local government.

Among the first law breakers on the Bay were the rumrunners and those on shore who engaged in the unlawful practice of selling liquor to the Indians. In 1853 the schooner, Active, put in near Old Mission and some of the people aboard the vessel began selling "fire-water" to the Indians. Old Mission's constable and two of its local residents boarded the vessel with the intention of arresting her captain for trafficking in "likker." However, these local citizens were taken off-guard as the captain quickly put his schooner into motion and sailed off with them still aboard. Their Peninsula neighbors had no knowledge of their fellow villagers whereabouts until one of the local lumbermen sent one of his ships off to Racine, Wisconsin, the Active's home port. While the ship's captain was doing business at Racine he discovered that the men from the Old Peninsula were there. The constable and his companions were allowed to return to the Peninsula, but they were now well aware that they had no authority to arrest persons on shipboard.

Rumrunning on the Great Lakes became so lucrative that the Federal government found it necessary to pursue and apprehend these lawbreakers. The government greatly increased its crackdown on rumrunners, especially during the Civil War years, and there are records of frequent exciting chases on the Bay and the Lakes.

Tougher Federal regulatory laws governing the Great Lakes came about with an 1899 act which gave the Corps of Engineers enough authority to act decisively within the framework of existing Federal legislation. Traditionally, the Corps of Engineers and the Coast Guard have the responsibility of policing the Great Lakes. There are some local, county, and major state agencies which have specific responsibilities for some regulatory controls throughout the Bay and its watershed areas.

### The Man-Altered Resources

In the early days there were no laws relating to land or water use and men made use of these natural facilities as they pleased. The man-made alterations which have directly affected the Bay, and/or the inland waters which form the watershed of the Bay, have been so numerous that to list all of the mills, wharves, dams, marinas, lake-fills, and other "improvements" would be impractical for this history. However, some changes helped the environment while others deteriorated it. But men used land and waters, often foolishly, to further their immediate goals with no thought of the long range harm to their communities.

The Boardman River basin of 223 square miles and the 495 square mile Elk River basin both drain into Grand Traverse Bay. Thus any pollution in any part of these two sizeable watersheds usually affects the waters of the Bay.

The first major man-made change in any of the area streams was the building of a dam for the Boardman's lumbering enterprise. This structure was thrown across Mill Creek (now known as Asylum Creek), and a mill was then erected. This small stream fed into the Boardman River. In the following years there were other dams and mills built on the Boardman, its tributaries, and on the Boardman Lake, as the requirements of the lumbering enterprises in the northwestern Michigan zone of the Lower Peninsula grew.

More recently dams have been erected for the purposes of supplying electricity and water. At the present time the Boardman River has two dams, one of which is the Consumer Power hydro dam. The Boardman Lake also has a dam. The Boardman has also been "changed" to meet the needs of man and the Traverse City community. Its entrance to the Bay was "improved" and the affluent Wequetong Club built its own docks there. They had by 1909 "improved" the river for a distance of some 800 feet from its mouth by sheet piling the banks and creating a turning basin, thus affording a small harbor for rowboats, gasoline launches and small crafts."<sup>108</sup>

During the lumbering era a number of dams were built on the chain-of-lakes and their connecting streams. A dam erected at Elk Rapids for the operation of a power plant is no longer used for this purpose, but has been retained as a control for the water level. Wharfs, docks and marinas have also been added to the string of small lakes.

During its early history the Elk Rapids Iron Company found it to their interests to make a considerable change in the Elk River. They altered its meanderings so that it entered the Bay approximately a quarter of a mile south of its original natural entrance.<sup>109</sup> Edward Noble "improved" a sand bar in the Bay near Elk Rapids by adding enough fill so that he could build a fine house on the man-made island. After the home was constructed, loads of black dirt were brought in to prepare a rich base for proper landscaping of the grounds. The distance between Noble's new islet and the mainland

was small and a bridge was built to span it.<sup>110</sup>

The nationally famous trout stream, Mitchell Creek, now has an agricultural development on it. This does not seem to have changed the fishing as the sportsmen speak glowingly of the trout which are still caught there. Unfortunately, Bellinger Pond on Bellinger Creek has been modified in such a way that fish can no longer return up it.<sup>111</sup> On the other hand, Northport Creek, which has a man-made pond as well as a dam on it, is another fine fishing area.

Wharfs, docks and marinas have been added through the years to improve the Bay. A number of years ago, when the highway was built near its waters, quite a bit of dredging took place in the Bay. The sand dredged was used in the construction of the highway. Unfortunately, the scars caused by these diggings are still quite visible especially to those who fly over the Bay.<sup>112</sup> It is this kind of defilement of the environment which proper legislation should help prevent.

The changes in the Bay and its tributaries which are mentioned here are only a fraction of those which have been made in these areas. Many of these have caused serious problems which have become worse as the years pass and the environment suffers.

#### The Corps of Engineers

Through the years many agencies have been set up which are involved with keeping records and making soundings of Grand Traverse Bay and other Great Lake areas. The earliest of these was the Corps of Engineers. Their surveys of Grand Traverse Bay helped to allay the concerns of lake captains who often feared to take their ships into the Bay. Adequate charts and more ships helped bring in the flow of settlers who established the communities in the area.

In the beginning, the Corps of Engineers' lake charting activity was under the Department of the Army. It continued its operations as a part of the military organization until October 3, 1970 when the Lake Survey Unit was transferred as the Lake Survey Center under the newly established National Oceanic and Atmospheric Administration under the Department of Commerce. Under NOAA it will be under civilian control and will work with sister agencies concerned with environmental problems. It will continue to act as a regulatory agency.

#### The Coast Guard and Its Special Importance

An official United States Coast Guard base was established at Traverse City in 1945. This operational center was a former Navy installation which had been constructed during the Second World War to carry on secret and experimental research. This Coast Guard base has a complement of twenty officers (most of

them pilots) and the ninety enlisted men. They carry on a twenty-four hour watch over the Ninth District, which constitutes their portion of the 2,270 miles of the Great Lakes shoreline which the Coast Guard patrols.

Among their duties are the observance flights which they make to ascertain the conditions of the waters and areas under their jurisdiction. The Coast Guard also maintain ice patrols, keep records as to when the Bay becomes iced over, when it becomes free of ice, and of the conditions of that ice (See: Appendix, no. 1). On other flights they are constantly searching for evidences of oil pollution. They render many other services to governmental agencies and to boaters and other citizens. To carry out their rescue missions, patrols, and other duties the Coast Guard has three HU16E Grumman Albatross aircraft and three large HH52A Sikorsky amphibious helicopters.<sup>113</sup>

The Michigan Department of Natural Resources is responsible for enforcing certain laws and regulations which safeguard the environment or promote the wise use of waters, lands, woods, and wildlife, protect the land and water resources, and maintain such resources for the public benefit.

To carry out their responsibilities in the field there are 170 conservation officers and twenty supervising officers who are faced with ever-expanding duties. The Department's Boat and Water Safety Section has, among its many other duties, the responsibility of administering a \$500,000 state fund earmarked for marine safety programs, which it carries out in cooperation with the county sheriffs. An annual training school is carried on for sheriffs' marine duties and others who patrol local waters.<sup>114</sup> Local sheriffs' departments also carry out a boating safety training program in its schools.

#### The Michigan State Police at Traverse City

The State Police formerly had broader responsibilities for policing the Bay. Their former duties are carried out by the county sheriffs' marine divisions who now offer rescue and recovery services. The State Police at Traverse City once kept a patrol boat in the Bay. Now, in case of trouble, they immediately notify either the Coast Guard or one of the sheriffs' departments of the problem. However, whenever there is a criminal involved or a reckless or drunken boat operator, the State Police seek out and apprehend such persons; as in many other areas of the State Police work, their maritime duties primarily involve protection and public service.<sup>115</sup>

#### Grand Traverse County's Sheriff's Department

The present sheriff of Grand Traverse County, Richard Weiler, has been very active in promoting water safety programs. In 1950 the Marine Division of the Grand Traverse County Sheriff's Department was organized in a limited

way. At that time there was no specific officer assigned to marine duty, and the marine officer chore fell to whichever man could get away for that particular day.

By law the sheriff's department is responsible for the recovering of drowned bodies. Weiler and his men turned their responsibilities toward the living and put their energies into saving lives. This department began their work in 1950 with a fourteen foot Wagemaker with a five horsepower motor.

Weiler speaks of those early days, "So we tried to make a rescue service and some of the early rescues, with some of the equipment we had, was borderline fantastic. I wonder sometimes, when I think of those days, why some of us are even here, considering our makeshift equipment. Eventually, state legislation was passed which officially placed the responsibility for marine enforcement in the hands of the sheriff's department."<sup>116</sup>

Grand Traverse County's present marine equipment is much improved. They now own two inland lakes boats powered by 55-horsepower motors and they have two rough water boats with 85-horsepower motors with which to participate in research, in searching for overdue boaters, or assisting boaters in distress on the Bay.<sup>117</sup>

During 1969 there were no deaths by drowning in the Bay. The 1970 summer season's record was marred by two drownings and a third person was declared missing and presumed dead. Calls for marine assistance and investigation, which once averaged around 100 calls per weekend, now average out to approximately five in a weekend and to around 90 calls in a month.<sup>118</sup> This great improvement has come about despite the ever-increasing number of boats and water sports enthusiasts in that area.

#### Important Bay-Related Laws

Property owners whose lands adjoined the Bay had for years been irritated because their shoreline properties were not as effectively protected by the law as they felt that they should have been. The public lands and waters too were in danger from misuse by individuals or industries, which went beyond their legal rights, or, who through lack of knowledge were harming the shores, the streams, and the lakes. Through the years, land use, boating safety, water hazards, disposal of waste, water usage, and many other factors have all come under a protective umbrella of environmental legislation which help safeguard the Great Lakes, its watersheds, and the Bay.

The Michigan Legislature and the many authorities concerned with natural resources, environment, ecology, recreation, and economy were aware of many of the existing problems involving water resources. These leaders have worked hard to obtain meaningful and workable legislation. Among the important laws enacted, of special value to the Bay area, was the Great Lakes Submerged Lands Act (Michigan, Act 247, Public Acts of 1955). This has been amended several times during the past fifteen years. It now details the use to which

submerged lands may be put, or reserved, and gives the Department of Natural Resources the responsibility of maintaining, for public trust, state unpatented lands in the Great Lakes and its bays and harbors. In addition, the submerged lands law gives the Department of Natural Resources needed regulating authority with the power to provide penalties for violations of the act.<sup>119</sup>

The original Inland Lakes and Streams Act (Michigan, Act 291, Public Acts of 1965) has been amended and strengthened with rules and regulations controlling dredging, filling, and the placement of structures on inland and Great Lakes waters.

This law prescribes certain powers and duties of the Michigan Department of Natural Resources and provides for cooperation with other state and local agencies in order to protect and conserve the land and water resources for present and future needs. This legislation "authorizes the Water Resources Commission to take action against pollutant sources that (1) inhibit recreational use of water, and (2) damage riparian landowners along the water course."<sup>120</sup>

The Michigan Legislature recently passed another pertinent law which should help to preserve the Bay. This is the Michigan Shorelands Protection and Management Act of 1970 intended to inhibit the erosion of Michigan's Great Lakes' shores and to develop effective planning and zoning controls designed to prevent erosion and to protect the natural wildlife environmental areas of these shorelands.

Environmentalists will be watching with great concern the plans Michigan's Water Resources Commission will evolve for the management of the shorelines. The guidelines which they establish will have many long-range and far-reaching effects on the public and private use of Michigan's water heritage.

There are many old and new laws on the books to help save Michigan's water, its wildlife, its shorelines, and its environment. In order to work effectively in a world in which regional growth and life-style patterns are changing, old boundaries of government are often meaningless and new forms of cooperation are needed between adjacent governmental units to solve modern problems.

The Traverse City Record-Eagle in an editorial (December 8, 1970) pointed out that expansion and modernization of the airport has been carried out cooperatively by a new authority involving three Bay area counties and Traverse City. The Cherry Capital Airport will be operated under this authority. The editor further points out that the Grand Traverse County Department of Public Works financed a \$3.5 million addition to the city sewage plan with a subsequent \$20 million regional sewage collection to serve this regional area. With the cooperation of several townships, which turned over part of their authority to the Grand Traverse County Department of Public Works, the county unit now has the overall bonding authority and can presumably get needed funds at a lower interest rate. The editor writes about these vanishing boundaries:

It was not too long ago that city authorities felt that annexation to the city must take place before a sharing



of sewage and water facilities should be extended to the urbanized areas just outside the city limits. But a realization by all parties concerned that water pollution and other area problems can only be met on an area basis has tended to wipe out the old political barriers.

We expect to see more of this kind of thinking prevail as other matters of mutual interest are examined. It is an "eye-on-the-ball" approach to be highly commended.

The sewage plant is scheduled to be in operation by 1972. For sometime now, Traverse City has operated a \$100,000 sewage plant to study the treatment of domestic and canning wastes. Through this study and other considerations it is now hoped that the projected Traverse City sewage plant will remove 85% of the phosphorous and 90% of the wastes. 121

Elk Rapids tourists and civic leaders have become all too aware of the heavy algal bloom in the Bay, in some of the chain-of-lakes, and in the streams of the area which flow into the Bay via Elk River. Antrim County has several community and regional associations which are especially concerned with pollution and which are developing action programs to protect the environment. Four such associations are: Elk River Drainage Basin Council, Three Lakes Association, Upper Intermediate Lakes Association, and the Elk-Skøkemog Association. These groups are dedicated toward cleaning up and otherwise improving the Bay, the lakes, and the streams in this beautiful county. State and local laws and regulations involving the operation of boats are proliferating as the local and tourist marine colonies increase yearly. Besides the Michigan and national laws involving pollution and marine safety, Traverse City has ordinances and harbor regulations concerning anchoring, obstructing passage, mooring, speed, noise, forbidden cargo, dock lines, and other marine problems.

The State Health Department has the authority to indicate where wells, septic tanks, drains for fields, and other such facilities are located and to judge which types of these health-related units are installed. Some status quo people believe that the present laws cover every contingency and that further zoning or health laws are not needed. There are others who feel that the proper protection of health and property demands more careful analysis, and legislative action. They believe that planning done through proper zoning ordinances and control will bring about orderly, ecologically sound, and socially purposeful growth. None-the-less, despite the concern and action of knowledgeable community leaders, much needed zoning is still being turned down by the voters in some villages and townships.

A most important local law is Traverse City Ordinance, No. 11.08, related to the discharges of wastes in the harbor or river. It states: "No person shall discharge or permit to be discharged into the harbor or into any watercourse within the corporate limits any industrial waste, garbage, untreated sewage, refuse, ashes, cherries, cherry pits, oil, fruits, fruit juices, animal substance, mineral substance, vegetable substance, shavings, sawdust, or other waste material.

This section shall not prohibit the discharge into the Boardman River of the effluent of the Traverse City sewage disposal plant." New State and Federal laws have neutralized any advantage city officials once had in passing this uneven ordinance.

For better than twenty years the matter of pollution in relation to shorelines has been of growing concern to the local, state, and federal law agencies responsible for the welfare of the region. The condition of Michigan's shorelines is receiving more attention than ever before and some of the best research brains and legislative activists are digging diligently to analyze and solve these problems.

The erosion of shorelines, the legal and social problems related to submerged lands, and related matters have been brought into focus by Michigan's new Shorelands Protection and Management Act of 1970. This legislation calls for effective controls such as planning and zoning to prevent erosion and to protect the environment of natural wildlife habitats. The major responsibility for this protection is given to the Michigan Department of Natural Resources and the Water Resources Commission. The Water Resources Commission is specifically charged with making, or having made, a proper engineering study of the shorelands, as prescribed by this law, and to identify those areas where there is a great risk of erosion and to develop adequate plans for these areas for the public good. An extensive study of the platted areas which have buildings or other structures on them which need to be protected from being eroded will be part of the Commission's study.<sup>122</sup>

The Shorelands Protection and Management Act also provides for proper zoning to be enacted by local governments. Where shore communities or other local authorities fail to act on such matters, the Water Resources can demand that needed action be taken. This should be of great help to conservation leaders and concerned local authorities who would like to protect their shores, but who have difficulty in convincing the local electorate that they should take the purposeful action needed at the polling place.

Environmentalists will be watching with concern and making their voices heard as the Michigan Water Resources Commission evolves its plans and formulas for the management of the shorelines. The guidelines which they establish will have long-range and far-reaching effects on the public and private use of Michigan's fresh water shoreline heritage.

#### Science and the Bay

It is impossible to list all of the studies that have been made which concern the Bay or its tributaries. Some of these have been fragmentary, while others have been far more complete, useful, and important. The Corps of Engineers has been adding to the known information about the Bay since 1843 and has produced many worthwhile charts and surveys. In addition, other scientific inquiries have been made which help bring the full picture of the Bay region into focus. These have been produced by other agencies of the Federal government, the State, the local research groups, and/or, by organizations

funded by various foundations and governmental units, many times in conjunction with colleges and universities. Their findings have worked to extend the usefulness of the Bay and to preserve its natural resources for the maximization of its facilities through increasingly effective management practices.

Alexander Winchell, an outstanding University of Michigan professor, researcher, author, and lecturer, interrupted his duties as a pedagogue to serve as Director of Geology from 1859-1861 for the state of Michigan. During the Civil War, and afterward, there were no monies funded for the Geological Department. When, in 1869, it was reorganized, Winchell again served as its Director until 1871 when he resigned to return to his University post at Ann Arbor on a full time basis. In 1866 Winchell's trustworthy work, Grand Traverse Region, A Report on the Geological and Industrial Resources of the Counties . . ., was published. It contained so much reliable information about the area that it served for many years as a guide to, and an authority on, the region's assets and environmental conditions.

Dr. Clifford Humphreys, a professor at Michigan State University, and his students have done much in the decade of the 1960's to collect information and conduct research relating to this area. In many cases Humphreys' students fell under the spell of the Bay and have become active boosters of the region.

#### The University of Michigan's Sea Grant Program

The University of Michigan's Sea Grant Program is a cooperative venture of the University and the National Oceanic and Atmospheric Administration, a new agency which pulled together many existing bureaus and services and placed them under the umbrella of the United States Department of Commerce in 1970.

Now approaching its third year of operation, the Michigan Sea Grant Program is successfully pursuing the objectives established in the early days of the program, namely "to utilize the established academic and research competence at the University of Michigan in developing a cohesive program of applied research, education, and public service that will provide a regional capability in Great Lakes resource problem solving and to apply this interdisciplinary research capability to the specific development of a comprehensive predictive modeling methodology for the Great Lakes resource planning and management."<sup>23</sup>

Dr. James T. McFadden, the project's first director (now the Dean of the University's School of Natural Resources), with his Program Committee made the decision to focus the attention of the research program (then funded by the National Science Foundation) on the Bay. Dr. John M. Armstrong, a civil engineer in the College of Engineering, now heads the project. Dr. Armstrong points out that the area, divided by a long peninsula into an essentially agriculturally related eastern arm and a more industrialized western arm, makes the research on pollution and other studies especially meaningful.

Armstrong and McFadden prepared a paper for the Thirteenth Conference on Great Lakes Research, held April 2, 1970 in Buffalo, New York. In this they stated:

Grand Traverse Bay has been selected as the focus of pilot studies to develop a complete model of a small part of the Great Lakes ecosystem. Consonant with the goals of Sea Grant and with the objectives of the University's program, Grand Traverse Bay best provides a microcosm of the problems and possibilities encountered in Lake Michigan and ultimately in all the Great Lakes. Its general characteristics, such as morphometry, shoreline, water quality, and land use, are similar to those of the other upper Great Lakes. The Bay provides an especially close physical analog of Lake Michigan: bordered by a populated area at its inland extremity, it is an aquatic cul-de-sac fed only by streams and precipitation, not by up-stream parts of the Great Lakes like, for example, Lake Huron. It is not yet dangerously polluted, though it is no longer pristine, and the region anticipates considerable industrial development over the next two decades. The pollution issue is even more interesting in the Bay insofar as its two parallel arms are distinctly separated and suffering from different degrees and rates of eutrophication.

Traverse Bay can be considered a limnological subsystem of Lake Michigan, consisting of the water mass and basin, plus dissolved and suspended solids and living organisms. Sources of inputs to the subsystem are currents from Lake Michigan proper, precipitation and ground water, tributary streams and direct influents from industries, municipalities, etc. Materials leave the subsystem via water currents, gas exchange with the atmosphere, emigration of living organisms, and removal of minerals or living organisms by man.<sup>124</sup>

This paper associates the scientific aspects with the impacts of technological and environmental changes with foreseeable effects on the complete ecosystem and projects the modeling and field research possibilities of providing a predictive model of the society-marine resource system of the Bay region. This research program is especially cognizant of the problems which arise from the interactions of human society with environmental resources.

Approximately 120 University of Michigan professors and students representing a majority of the University's schools and colleges, along with some other institutions and state agencies, are working to develop sub-models dealing with such concerns as: (1) biological production, (2) geochemical cycles, (3) institutional reactions, (4) meteorological phenomena, (5) regional economic processes, (6) shoreline processes, (7) water budget, and (8) water circulation.<sup>125</sup> Model plans are being developed and as fresh information related to the area is assembled it is widely disseminated through an advisory service unit. Technical reports are made available to other researchers, libraries, legislators, governmental bureaus, citizen environmental action organizations, and other societal, cultural, and ecological groups who can purposefully utilize the information.

The professors, graduate students and other researchers are appreciative of the interest and cooperation they have received from local governmental agencies, libraries, elected officials, civic leaders, environmental groups and many citizens. Northwestern Michigan College has cooperated and helped the Sea Grant in many ways, and the research field office is housed with the College's Great Lakes Maritime Academy. The Project's research boat, Sea Grant I, which was acquired in the fall of 1970, uses the Northwestern docks. This sturdy little "work boat" is used by the University of Michigan researchers in their scientific testing of the Bay.

An Annotated Bibliography of Scientific Information on Grand Traverse Bay was compiled for the Sea Grant Program by Frank T. Rose, a graduate student. This bibliography brings together a wide range of works by various researchers, organizations, and agencies. The specific location where the books, maps, and records can be found, or obtained, are listed with each item.

A remote sensing map has been made of the Grand Traverse Bay and the adjacent land areas through the cooperation of the University's Willow Run Infrared and Optics laboratories and the School of Natural Resources staff. Dr. Charles E. Olson, Jr., who was analyzing the data, explains the map as being a mosaic assembled from three photographs on special color film and taken by NASA in an Air Force aircraft flying at 60,000 feet. The film used for this, Olson said, has three layers, namely a green sensitive, a red sensitive, and an infra-red sensitive (but not a heat sensitive) layer. This extraordinary film records accurate information about land use, vegetation, pollution, and other physical factors. An overall reddish cast of the land area on this map signifies live, healthy, green vegetation. Lighter pink material indicates herbaceous and scrubby growth. Other topographical features such as water areas and emergent reeds and sedge along the stream channels, are closely discernible by practical technicians as they study the many nuances of tones and shades visible on the map. The airport and downtown areas can be seen as bluish in cast and these areas contrast with trees and residential areas which show a high infrared reflectance.<sup>126</sup> The aerial photographs and the resulting map give a highly graphic picture of differing land uses, developmental growth, and environmental changes in the Bay area.

### In Retrospect

By the end of the Seventeenth Century, Grand Traverse Bay was already shown on some of the maps of the New World. This evidence of early cognizance of this area now under study by Sea Grant researchers is especially interesting since these early charts show few areas in what is now Michigan as having been located and named. Even early aborigines left evidence of their having discovered and lived by this beautiful and bountiful Bay. Several burial mounds, tools, and ornaments have been found along these useful waters and there are indications that aborigine villages once existed on the Old Peninsula.

Woodland Indians found that they could relax here from their more arduous nomadic wanderings. They enjoyed leisurely hunting and fishing. These Amerinds

and other travellers on the Bay found it convenient and pleasant to live along the shores of the Bay.

Against the wishes of the French commanders of the Michilimackinac post the Ottawas decided to winter on lands around the Bay. Those Indians gardened during the summer and found a ready market at the post for their fresh produce and for the fish which they caught. They found it profitable to barter their garden produce for products imported by the white men.

As the area shifted from French to British dominance, the Bay region's Indian tribes changed too. Sometime during the late Eighteenth Century the Chippewas and the Ottawas agreed to divide certain territories and the Chippewas drew the Grand Traverse region as their particular area under the compact. When the United States, then a new country, gained control of Mackinac and the Bay area they established an Indian agency at Mackinac. When the Indian agency was put into the hands of Henry Rowe Schoolcraft, he turned his attention to the Indians' needs. He sent a small group of Federal Indian Agency employees namely, an Indian farmer, a carpenter, a blacksmith, and an interpreter, to the area to help the people adjust to the white men's ways, and to increase the Indians' standard of living.

By 1842 a few venturesome souls began entering the region as settlers. By 1848 the area's first industry began as the lumbering entrepreneurs pushed this way into the area. But it was not until 1851, when Hannah, Lay, and Morgan came into the area and started a sizeable lumbering operation that there was any real indication of high productivity and profit in the forest industry. From that time on for a half century heavily loaded lumber hookers and sailboats moved on the Bay in ever increasing numbers as the lumbering business grew to magnificent proportions.

Many settlers came in to the area to work in the forest camps, or to engage in agriculture, so that they could sell their farm produce to the lumbering people. But the lumber barons and the settlers were soon urging friends, relatives, and business acquaintances to come to the Bay. There was a soothing influence about the winds, which were cooled in the hot summer months and which were less bitter in the winter as they blew across the Bay or Lake Michigan. This tempting effect of the waters gave a natural advantage to native or man-planted fruit growth. The fine fishing available in the area brought many sportsmen in to try their luck. The piscatorial pleasures and pursuits brought the lucrative business of sport fishing camps and boating interests into the area. Gradually, agricultural products were shipped southward along with lumber to the city markets. Ships, which had initially been purchased for the Bay traffic, now accommodated travellers who were demanding luxury and service. A varied agricultural growth occurred and Grand Traverse potatoes, among other produce, were considered prime table fare. Small fruit crops were gaining considerable attention for the area. Eventually, the heavy production of sweet and tart sour cherries and the subsequent growth of the processing and selling of this bright and cheerful-looking fruit brought world fame to this locality.

As the fruit industry grew the railroads prospered and this helped to bring about a more diversified economy. The railroads and shipping interests had waged a freight price cutting battle and the Grand Traverse region benefitted from this price war.

The swift and dependable service of the railroads made it possible to deliver produce to urban centers expeditiously and created new agricultural markets for Traverse area growers. This was of prime importance to fruit grove owners whose highly perishable commodities, such as cherries, depended upon quick and efficient delivery systems.

Recreational interests continued to develop. Wealthy summer vacationers from lower Michigan and Illinois built grand villas in the vicinity of the Bay or along the quiet chain-of-lakes. Often they arrived at Bay ports in their own sleek and beautiful yachts. Others, somewhat less affluent, found ready service from commercial boats on which passage could be booked from Chicago and other urban area ports to the vacation wonderland in the northwest corner of the Lower Peninsula.

Now, in the 1970's, the Chamber of Commerce estimates that more than 250,000 visitors tarry during the ten week summer period. These are only a portion of the area's annual visitors since recreation has expanded into a year-round series of activities. Conservationists, environmentalists, scientists, city planners, recreational planners, and others are interested in the needs of, and the habit patterns of these residents and tourists as they chart the area's potentials and problems. They are also interested in the growth of the Bay as a cultural, industrial, and agricultural area. All of these growth factors must be considered to insure adequate recreational facilities for all who will wend their way to the Grand Traverse Bay area in the promised leisure-rich decades ahead.

It is for these reasons that residents and visitors look to the Sea Grant scientists and others engaged in Grand Traverse Bay research for the facts they will need to help guide their orderly and purposeful growth in the years ahead. Through scientific methods and proper management of this part of the Great Lakes, the clues and techniques may be found to help preserve the rest of the fresh water heartland of North America. The Grand Traverse Bay area, aided by University of Michigan researchers and active local leaders, may once again, as it has in its rich and colorful past, lead the way in making life richer and more recreational for men, women, and children on both sides of our international Great Lakes basin.

Notes

<sup>1</sup>Harlan Henthorne Hatcher. The Great Lakes (New York: The University of Michigan, 1944), p. 104.

<sup>2</sup>P. Mro Coronelli. Partie Occidentale du Canada ou de la Nouvelle France ou sont les Nations (1688). See: Map, no. 1, which is a copy of the section of the part of this map which dealt with Grand Traverse Bay and the Illinois Nations. This reproduction was made from the original Coronelli map in the William L. Clements Collection Library, Ann Arbor.

<sup>3</sup>Louis Hennepin. A New Discovery of a Vast Country in America Extending Above Four Thousand Miles, Between New France and New Mexico, With a Description of the Great Lakes, Cataracts, Rivers, Plants, and Animals. Also the Manners, Customs, and Languages of the Several Native Indians; and the Advantage of Commerce with Those Different Nations . . . (London: Printed for M. Bentley, J. Tonson, H. Bonwick, T. Goodwin and S. Manship, 1688). Father Hennepin's work is important but in many respects unreliable as his gift for story telling overcame the veracity of the work at many points.

<sup>4</sup>David H. Burr. A Map Exhibiting the Relative Positions of Lake Erie & [Lake] Michigan According to Mitchell's Map, Published in the year 1755. Engraved by J. N. Throop. The original John Mitchell map was published in London in 1783. Mitchell's map places the tip of Lake Michigan more than forty minutes too far north, which caused later boundary disputes. The Burr maps were made and printed at the request of the United States government, who used these maps as exhibits in some of the later boundary discussions. These maps give some indication of the geographical knowledge about Grand Traverse Bay at that time.

<sup>5</sup>Reuben G. Thwaites, ed., "Speech of Monsieur the Marquis de Beauharnois, Governor of New France to the Outaouacs [Ottawas] of Missilimackinac, on July 8, 1741." Wisconsin Historical Collections, XVII (1906), p. 351.

<sup>6</sup>Reuben G. Thwaites, ed., "1741: Ottawa Refuse to Remove, Copy of the Letter of the Sieur de Celeron, Commandant of Missilimackinac, Written to Monsieur, the Marquis de Beauharnois on the Indians of 1741." Ibid., XVII (1906), p. 360.

<sup>7</sup>Reuben G. Thwaites, ed., "William H. Puthuff, Indian Agent, Mackinac to His Excellency, Lewis Cass, Governor of Michigan from Michillimackinac Agency, 14 May 1816." Ibid. XIX (1910), pp. 412-413.

<sup>8</sup>Henry Rowe Schoolcraft. "Personal Memoirs of a Residence of Thirty Years with the Indians on the American Frontiers" (Philadelphia: Lippincott, Grambo and Co., 1851), p. 479.



- <sup>9</sup>"Government Survey and Charting of the Great Lakes from the Beginning of the Work in 1841 to the Present," Michigan History Magazine, 1, no. 2 (October, 1917), p. [54].
- <sup>10</sup>William L. Jenks, "History and Meanings of the County Names of Michigan," Michigan Pioneer and Historical Collections, XII (1888), p. 622.
- <sup>11</sup>Webster's International. Unabridged. 2nd ed. (1960), p. 1475.
- <sup>12</sup>Letter, Joseph Wampler, Steubenville, New York to Samuel Williams, 6 February 1827, William L. Clements Library, Samuel Williams Papers. Wampler's reference was to the work of the territorial surveyors, Benjamin Hough, Alexander Holmes and Joseph Fletcher. The errors in the work of those early surveys not only gave erroneous impressions of the Michigan Territory, but caused grievous problems in land contracts. These early surveys affected a fairly recent court case in which the State of Michigan has been involved.
- <sup>13</sup>J. H. Young. The Tourist's Pocket Map of Michigan Exhibiting Its Internal Improvements, Roads, Distances, &c. (Philadelphia: S. Augustus Mitchell, 1835).
- <sup>14</sup>"Bay to be Lake Model," in Ann Arbor News, 22 July 1970.
- <sup>15</sup>George H. Lauff. Some Aspects of Physical Limnology of Grand Traverse Bay. Great Lakes Research Institute/ Publication Number 2 (Ann Arbor, Michigan: The University of Michigan, 1957), p. 2.
- <sup>16</sup>Wilbert H. Hinsdale. Archaeological Atlas of Michigan. Michigan Handbook Series, No. 4 (Ann Arbor, Michigan: The University of Michigan, 1931), pp. 20-21.
- <sup>17</sup>Henry Rowe Schoolcraft. "Personal Memoirs of a Residence of Thirty Years with the Indian Tribes on the American Frontiers, With Brief Notices of Passing Events, Facts, and Opinions, A.D. 1812 to A.D. 1842" (Philadelphia: Lippincott, Grambo and Co., 1851). p. 431.
- <sup>18</sup>Diary of Peter Dougherty, Entry of 25 July 1838. Michigan Historical Collections, MSS Peter Dougherty Diaries in 3 volumes.
- <sup>19</sup>Schoolcraft, Personal Memoirs, p. 650.
- <sup>20</sup>J. N. Macomb and R. W. Burgess. "Map of the Eastern Branch and N W [sic] Bay of GRAND TRAVERSE BAY. Surveyed under the direction of Captain W. G. Williams, T. E. by 1st Lieut. J. N. Macomb, USTE, R. W. Burgess, Asst: 1844." Corps of Engineers, Archives, Detroit, MSS Lake Charts.

- <sup>21</sup> Letter, William Norman MacLeod, Chicago, to George Johnston, Grand Traverse, Omena County, Michigan, 4 July 1842. The Burton Collection, Detroit. George Johnston Papers, 1838-1842.
- <sup>22</sup> Letter, Robert F. Hunt, Grand Traverse, Michigan, to Lucius Lyon, Detroit. William L. Clements Library, Ann Arbor. Lucius Lyon Collection, 1810-1852.
- <sup>23</sup> Letter, S. S. Scranton, Grand Traverse Bay, to Lucius Lyon. William Clements Library, Ann Arbor. *Ibid.*
- <sup>24</sup> M. L. Leach. A History of Grand Traverse Bay (Traverse City, Michigan: Grand Traverse Herald, 1883, Facsimile Reprint. Mount Pleasant, Michigan: Clarke Historical Library, Central Michigan University: University Press, 1969), p. 39.
- <sup>25</sup> Ibid., p. 49.
- <sup>26</sup> James Jesse Strang. Ancient and Modern Micilimackinac Including an Account of Controversy Between Mackinac and the Mormons. Ed. by George S. May (Mackinac Island, Michigan: W. Stewart Woodfill, 1959). p. 37.
- <sup>27</sup> Ibid., p. 36.
- <sup>28</sup> Ibid.
- <sup>29</sup> Letter, Perry Hannah, Traverse City, Michigan [to the compiler of the work, Michigan Biographies] 1886. Michigan State Library, Lansing, Michigan, The Jenison Collection, Letters, II, no. 107.
- <sup>30</sup> Edmund M. Littell. 100 Years In Leelanau (Leland, Michigan: The Print Shop, 1965), pp. 6-7.
- <sup>31</sup> Portrait and Biographical Record of Northern Michigan (Chicago: Record Publishing Company, 1912), p. 372.
- <sup>32</sup> Ibid.
- <sup>33</sup> Michigan. WPA. Writers Program. Michigan. Michigan Log Marks, Their Function and Use During the Great Michigan Pine Harvest (East Lansing, Michigan Agricultural Station, 1941), p. 24.
- <sup>34</sup> Portrait and Biographical Record of Northern Michigan, p. 372.
- <sup>35</sup> Alexander Winchell. The Grand Traverse Region, Report on the Geological and Industrial Resources . . . (Ann Arbor: Dr. Chase's Steam Printing House, 1866).

- <sup>36</sup> H. W. S. Cleveland. "The Grand Traverse Region of Michigan," Atlantic Monthly, XXVI, no. 154 (August, 1970), p. 194.
- <sup>37</sup> United States. Writers Program. Michigan. Michigan, a Guide to the Wolverine State (New York: Oxford University Press, 1971) p. 522.
- <sup>38</sup> Julia Terry Dickinson. The Story of Leelanau (Omena, Michigan: Solle's Bookshop, 1951), p. 27.
- <sup>39</sup> Ibid.
- <sup>40</sup> George McMannus, The Grand Traverse County Agricultural Agent, Traverse City, Interview, September 2, 1970.
- <sup>41</sup> Letter, N. G. [Ance] Damoose, Traverse City, to Loring F. Oeming, Lansing. Michigan Water Resources Commission, Files.
- <sup>42</sup> Letter, John G. Spencer, Acting Director of Grand Traverse--Leelanau--Benzie District Health Department, to Ralph Purdy, Lansing, Michigan. Water Resources Commission. Files.
- <sup>43</sup> Ibid.
- <sup>44</sup> Ibid.
- <sup>45</sup> Carlos Fetterolf and Robert F. Carr. Environmental Effects of Waste Discharges on the Boardman River with Observations on Grand Traverse Bay, Vicinity of Traverse City; 26-27, August 12-13, 1963 and July 22, 1964. Lansing, Michigan. Water Resources Commission, 1965.
- <sup>46</sup> The report which came out of this work was: John C. Seeley and James E. Curtis. Report on Algal Nutrients in the Boardman River (Traverse City, Michigan: McNamee, Porter, and Seeley, 1968).
- <sup>47</sup> Casey Bukro. Save Our Lakes (Chicago: Chicago Tribune, c1967), p. 9.
- <sup>48</sup> Ibid.
- <sup>49</sup> Ted Miller, Elk Rapids, interview, September 3, 1970.
- <sup>50</sup> Casey Bukro, "Traverse City Shaggy Water," Chicago Tribune. October 26, 1970.
- <sup>51</sup> Thomas Lee, Suttons Bay, Michigan. Diary, 1 December 1858, MSS in

possession of Mark Garbarini, Lansing, Michigan. Thomas Lee, his brother Robert, and their families were early settlers in Leelanau County. In 1861 Thomas left Suttons Bay to return to Leesville, Wayne County, to take care of his aging parents. His diaries show that the barrels of fish which he put away for the winters, which he spent at the Bay, were an asset to help extend his family's diet during the long winter months.

<sup>52</sup>Winchell, The Grand Traverse Region, p. 35. The American Fisheries Society's work to standardize both common and technical names of fish has termed the speckled trout, salvelinus fontinalis and not salmo fontinalis as it was in Winchell's day.

<sup>53</sup>Harold Hinsdill Smedley. Trout of Michigan (Muskegon, Michigan, 1938), pp. 3-14, 16. This is an interesting non-technical story about the Michigan Grayling.

<sup>54</sup>Carl L. Hubbs and Karl F. Lagler. Fishes of the Great Lakes Region. With a New Preface (Ann Arbor: The University of Michigan Press, 1947, 1967), p. 56.

<sup>55</sup>Maurice Thompson, "Grand Traverse Bay," Lippincott's Magazine, XXVIII (October, 1881), p. 325.

<sup>56</sup>Grand Traverse Bay (Closed to Commercial Fishing). Michigan. State Archives, Lansing, Michigan. Michigan Department of Natural Resources. Records 60 - 12 - A B 18 F 16.

<sup>57</sup>Even as early as the 1870's both commercial fishermen and sports fishermen were aware that there was a change taking place in the fish population. According to an interview with Richard Weiler, 2 September, 1970 and an interview with Stan Lievense, 18 September, 1970, there was no one more aware of the changes that continued to occur in fishing in the Bay than was George Raff, of Traverse City, who operated a fishing camp near Northport.

<sup>58</sup>Grand Traverse Bay is now designated as part of a sports fishing zone and is at present completely closed to commercial fishing.

<sup>59</sup>Walter Crowe, "Commercial Fishing Potential of the Great Lakes," in Jack D. Bails, ed., Michigan's Fishery Potential. Twelfth Annual Conference (Lansing, Michigan: Michigan Natural Resources Council, 1967), p. 14.

<sup>60</sup>Great Lakes Basin Commission. Annual Report, 1969. 2d. (Ann Arbor, Michigan: 1969), p. 19.

<sup>61</sup>"Local Fishermen Voice Concern Over Lamprey Levels in G. T. Bay," in Traverse City Record-Eagle, July 18, 1970.

<sup>62</sup>ibid.

<sup>63</sup>James Pinson Ludwig and Carl S. Tomoff, "Reproductive Success and Insecticide Residues in Lake Michigan Herring Gulls," in Jack-Pine Warbler, XLIV, no. 2 (June, 1966), p. 77.

<sup>64</sup>ibid.

<sup>65</sup>See: Robert L. Rudd. Pesticides and the Living Landscape. A Conservation Foundation Study (Madison, University of Wisconsin Press, 1964).

<sup>66</sup>Ludwig and Tomoff, "Herring Gulls," p. 84.

<sup>67</sup>William Scharff, Traverse City, interview with him, 1 September 1970. He and his students at Northwestern Michigan College, who are working with him, are deeply concerned with ecology.

<sup>68</sup>ibid.

<sup>69</sup>ibid.

<sup>70</sup>Perry F. Powers and H. G. Cutter. A History of Northern Michigan and Its People. 3 vols. (Chicago: The Lewis Publishing Co., 1912) vol. 1, pp. 252-253.

<sup>71</sup>ibid.

<sup>72</sup>George W. Hotchkiss. History of the Lumber and Forest Industry of the Northwest (Chicago: George W. Hotchkiss & Co., 1898), p. 290.

<sup>73</sup>Harry Alonso Barnes. Vinegar Pie and Other Tales (Detroit: Wayne State University, 1959), p. 152. Barnes says that this ship served very well for three or four years prior to 1849.

<sup>74</sup>Ships were often delayed by storms or by being "laid up" for needed repairs which had come about through collisions, or because of natural causes. Newspapers of the 1860's often found the fact that a ship had arrived on time a newsworthy item..

<sup>75</sup>Anonymous, "Captain Joe: Story of the Grand Traverse," Michigan History, XXVII (October - December, 1943), p. 623.

<sup>76</sup>Letter, John C. Boughton, Traverse City, to his parents, 11 July 1880, Michigan Historical Collections, Boughton Collection.

<sup>77</sup>"Transportation Facilities on the Lake and Bay," The Evening Record, Holiday Number, Traverse City, Michigan, 1902.

<sup>78</sup>Michigan Scenes (Traverse City, Michigan: The Grand Traverse Herald, c1904). Archives.

<sup>79</sup>United States. Congress, 61st, 2d Session, House Documents. Examinations of Rivers and Harbors. Document, No. 312 (Washington: United States. Government Printing Office, 1909), p. 3.

<sup>80</sup>William Colburn, Parks Division, Department of Natural Resources, information via telephone, January 11, 1971.

<sup>81</sup>United States. Congress, 80th. Examinations of Rivers and Harbors. Document, No. 312, p. 2.

<sup>82</sup>ibid., p. 3.

<sup>83</sup>ibid.

<sup>84</sup>United States. Congress, 80th, House Documents. Examinations of Rivers and Harbors. Document, No. 546 (Washington: United States. Government Printing Office, 1948), p. 2.

<sup>85</sup>ibid., p. 4.

<sup>86</sup>ibid., p. 5.

<sup>87</sup>ibid.

<sup>88</sup>United States. Army Engineering Division. Water Resources Development (Chicago: United States. Army, Corps of Engineers, 1962), p. 9.

<sup>89</sup>According to Weiler the freighter traffic at the Traverse City port is expanding. Larger freighters are being built, in the expectation, that they will move those commodities for which the duration of time involved in transport is not an important element.

<sup>90</sup>Traverse City Record-Eagle, 18 July 1970.

<sup>91</sup>Jennie Arnold, Traverse City, in an interview, August 31, 1970.

<sup>92</sup>There are numerous stories told about the wrecking of the Westmoreland, and although they all differ in a number of respects, the facts presented here seem to be generally accepted.

<sup>93</sup>H. Al Barnes, "Lake Michigan -- Graveyard of Ships, Untold Wealth in Lost Cargo: Lies Beneath Its Waters, Frankfort Man Had Pinpointed Locations," Grand Rapids Herald, 15 September 1957.

- <sup>94</sup>Dwight Boyer. Ghost Ships in the Great Lakes (New York: Dodd, Mead & Co., 1968), p. 9.
- <sup>95</sup>Stephen H. Holbrook. Holy Old Mackinaw, a Natural History of the American Lumberjack (New York: The MacMillan Company, 1938), pp. 126-127.
- <sup>96</sup>Genevieve Gillette, in a telephone interview, October 27, 1970.
- <sup>97</sup>David Borgeson, ed. Coho Salmon Status Report, 1967-1968. Fish Management Report (Lansing, Michigan: Michigan. Department of Natural Resources, 1970), p. 17.
- <sup>98</sup>Weiler, in interview, September 2, 1970.
- <sup>99</sup>Richard Briley, ed. Traverse City State Park. Compiled by Works Progress Administration. Michigan. Writers Program (Lansing, Michigan: Michigan. Department of Conservation, Parks Division, 1941), p. 2.
- <sup>100</sup>George Hosek, Parks Division, Michigan Department of Natural Resources, telephone interview.
- <sup>101</sup>*Ibid.*
- <sup>102</sup>Percy Noble, in Elk Rapids Progress, Nov. 6, 13, 1947.
- <sup>103</sup>Robert Lusk, Automobile Manufacturers Association, Detroit, Michigan, information via telephone. See, also, Motor World, 16 January 1918, pp. 220b for pictures and advertisements of the Napoleon.
- <sup>104</sup>Amelia Langworthy, when seven years old, attended Dougherty's school. Her primer still exists and is in the book collection of Jennie Arnold, Amelia's daughter-in-law.
- <sup>105</sup>The college was greatly needed, but it seemed to lack the necessary support in the Legislature. See: Grand Traverse Herald, 10 February 1865.
- <sup>106</sup>Harry P. Harrison. Culture Under Canvas; The Story of Tent Chautauqua, as Told to Karl Detzer, (New York: Hastings House [c1958]), p. 6
- <sup>107</sup>Arthur E. Moenkhaus, Northwestern Michigan College, Traverse City, information via telephone.
- <sup>108</sup>United States. House Documents. Examination of Rivers and Harbors. Document no. 312, pp. 1-3.

- <sup>109</sup> Natalie (Noble-Coy) Kohler, Elk Rapids, interview September 2, 1970.
- <sup>110</sup> ibid.
- <sup>111</sup> Lievense, interview.
- <sup>112</sup> "Peter" Williams, telephone interview, September 2, 1970.
- <sup>113</sup> Traverse City. (St. Louis: Windsor Association, 1967), p. 36.
- <sup>114</sup> Working for You (Lansing, Michigan: Michigan Department of Natural Resources, [1970]), p. 47.
- <sup>115</sup> Corporal Alfred Torrey, Michigan State Police Post, Traverse City, information via telephone interview, October 5, 1970.
- <sup>116</sup> Weiler worked hard to help get this legislation passed.
- <sup>117</sup> W. Gardner Weber, "Cooperative Marine Program by Local Agencies Results in Impressive Water Safety Record," Traverse City Record-Eagle, 1 September 1970.
- <sup>118</sup> ibid.
- <sup>119</sup> George Taack said that this law gives much needed control over Michigan's vanishing shorelines.
- <sup>120</sup> Resume of Water Pollution Meeting April 11, 1966. (Lansing, Michigan: Michigan Water Resources Commission, 1966). Available from the Department.
- <sup>121</sup> Paul Jones, City Engineer, Traverse City, in an interview September 3, 1970, gave much information about this plant.
- <sup>123</sup> John M. Armstrong and Wilbur K. Pierpont, ed. Proposal to National Oceanic and Atmospheric Administration; Continued Participation in the Sea Grant Institutional Support Program, 1971-1972. Vol. I (Ann Arbor: Sea Grant Program, The University of Michigan, 1971), p. 1.
- <sup>124</sup> ibid., p. 2, 3.



<sup>125</sup>James T. McFadden and John M. Armstrong. A Multidisciplinary University Program in Marine Sciences and Engineering for the Great Lakes. Prepared for Thirteenth Conference on Great Lakes Research, April 2, 1970, Buffalo, New York (Ann Arbor, Michigan, 1970), pp. 21-22.

<sup>126</sup>Dr. Charles E. Olson has been working with the remote sensing program. His explanation of the map is of great help, as the program under which this was developed is highly sophisticated. This type of mapping is expected to have greatly expanded usage in the coming years.

INFORMATION ON FREEZING DATA OF GRAND TRAVERSE BAY

YEAR	DATE FROZEN	DATE FREE OF ICE	TOTAL DAYS FROZEN
1852	Mar. 10	Mar. 10	1
1853	Mar. 1	Apr. 6	37
1854	Jan. 25	Apr. 11	45
*1856	Jan. 10	Apr. 26	76
1857	Jan. 10	Apr. 30	80
1858	Mar. 4	Mar. 20	16
*1860	Feb. 17	Mar. 3	15
1861	Jan. 22	Mar. 20	57
1862	Feb. 15	Apr. 4	58
*1864	Feb. 16	Apr. 25	69
1865	Jan. 17	Apr. 5	79
1866	Jan. 25	Apr. 6	71
1867	Jan. 26	Apr. 14	78
1868	Feb. 9	Mar. 17	37
1869	Feb. 20	Apr. 13	62
1870	Feb. 2	Apr. 24	81
1871	Feb. 10	Mar. 10	28
1872	Jan. 27	Apr. 25	89
1873	Jan. 13	May 4	111
1874	Jan. 13	May 8	115
1875	Jan. 16	Apr. 29	103
1876	Feb. 23	Apr. 20	57
1877	Jan. 13	Apr. 23	100
*1879	Feb. 14	Apr. 23	68
*1881	Jan. 17	May 1	104
*1883	Feb. 3	Apr. 15	71
1884	Jan. 15	Apr. 26	102
1885	Jan. 27	Apr. 29	92
1886	Feb. 1	Apr. 22	80
1887	Jan. 31	Apr. 22	81
1888	Jan. 21	May 4	104
1889	Feb. 18	Mar. 30	40
1890	Mar. 7	Apr. 8	32
1891	Mar. 1	Apr. 10	40
1892	Mar. 16	Apr. 1	16
1893	Jan. 28	Apr. 7	69
1894	Feb. 14	Mar. 4	18
1895	Feb. 2	Apr. 16	73
1896	Mar. 4	Apr. 10	37
1897	Mar. 3	Apr. 3	31
1898	Feb. 27	Mar. 10	11
1899	Feb. 1	Apr. 14	72
1900	Feb. 17	Apr. 17	59

## (FREEZING DATA CONTINUED)

YEAR	DATE FROZEN	DATE FREE OF ICE	TOTAL DAYS FROZEN
1901	Feb. 14	Apr. 14	59
1902	Feb. 13	Mar. 14	29
*1904	Jan. 25	Apr. 25	91
1905	Feb. 1	Mar. 30	57
1906	Mar. 17	Apr. 17	31
1907	Feb. 5	Mar. 27	40
1908	Feb. 28	Apr. 10	38
1909	Mar. 13	Apr. 5	23
1910	Feb. 17	Mar. 20	31
*1912	Jan. 25	Apr. 15	80
1913	Feb. 16	Mar. 26	38
1914	Feb. 21	Apr. 14	52
*1916	Mar. 1	Apr. 10	40
1917	Feb. 5	Apr. 20	74
*1922	Feb. 19	Apr. 7	49
1923	Feb. 5	Apr. 28	82
1924	Feb. 10	Apr. 13	63
1925	Jan. 28	Mar. 24	55
1926	Feb. 9	Apr. 29	79
1927	Jan. 26	Mar. 17	50
1928	Feb. 20	Mar. 23	32
1929	Feb. 1	Mar. 26	53
1930	Jan. 31	Apr. 5	64
*1933	Mar. 23	Apr. 7	15
1934	Feb. 6	Apr. 19	72
1935	Feb. 22	Apr. 17	54
1936	Jan. 31	Apr. 10	69
1937	Feb. 21	Apr. 12	50
1938	Feb. 12	Mar. 20	36
1939	Feb. 26	Apr. 18	51
*1941	Feb. 28	Mar. 31	31
1942	Feb. 6	Mar. 21	43
1943	Feb. 16	Apr. 12	55
1944	Mar. 19(Past Penin.)	Mar. 24	5
1945	Feb. 4	Mar. 17	31
1946	Feb. 27	Mar. 14	15
1947	Feb. 10	Apr. 6	55
1948	Jan. 31	Apr. 4	64
*1950	Mar. 9	Apr. 18	40
1951	Feb. 1	Mar. 30	58
1952	Feb. 16	Apr. 1	45
*1956	Feb. 28	Mar. 3	5
1957	Mar. 4	Mar. 16	13
1958	Feb. 11	Apr. 4	53
1959	Feb. 1	Apr. 15	73
1960	Feb. 29	Apr. 11	42

## (FREEZING DATA CONTINUED)

YEAR	DATE FROZEN	DATE FREE OF ICE	TOTAL DAYS FROZEN
1961	Feb. 1	Mar. 27	54
1962	Feb. 9	Apr. 6	56
1963	Jan. 27	Apr. 3	66
*1966	Feb. 19	Mar. 16	15
1967	Feb. 7	Mar. 31	52
1968	Feb. 12	Mar. 28	45
1969	Feb. 15	Apr. 7	51
1970	Feb. 14	Apr. 8	54

\*There was no ice in the bay during the following years: 1851, 1855, 1863, 1878, 1880, 1882, 1911, 1915, 1919, 1931, 1932, 1940, 1943 (froze only three miles out), 1949 (the bay had only a skim of ice), 1953-55. In 1956, the bay had been frozen for five days and free of ice March 3, however, the bay froze nine-tenths of the way out on the peninsula on March 16.

Information is either missing or incomplete for these years: 1859, 1918, 1920, 1921, 1964, and 1965.

The Ice and Snow Branch of Lake Survey (formerly a part of the Army Engineers, but now under NOAA) has facts regarding the bay which add to this information. By observation flights over the area at periods of time when there is no cloud coverage, snow squalls, or other interference, they obtain ice and snow coverage intelligence. These winter observation flights and findings are listed here:

1962-63. Feb. 23 - Ice coverage was complete. Apr. 6 - Bay still ice covered.

1963-64. Dec. 27 - About 500 feet of fast ice in the extreme south end of the East and West Arms of the Bay. Jan. 21 - Only shore ice reported. Apr. 10 - No ice reported.

1964-65. Jan. 14 - No ice. Feb. 9 - Strings of brash. Feb. 11 - About 20 feet of brash ice all along the shore. Mar. 7 - Entire Bay reported with ice cover which had been formed a week or so before the flight. Mar. 15 - Solid ice cover with light drifted snow. Mar. 27 - Still completely covered with ice, but cracks were beginning to show. Mar. 30 - Still ice covered. Apr. 3 - Observed that a ship had put into the Bay and created a track from north through to the oil terminal on the west side of the West Arm of the Bay, which caused large shifted cracks in the ice cover. Apr. 8 - Had large ice cover, but there was a water opening near Mission Point. Apr. 17 - From Mission Point north, Bay was clear except for shore ice. On the West Arm, ice was concentrated along the west side of the peninsula, whereas the east side still had heavy ice cover except in the southwest portion and there was open water there.

1965-66. Jan. 18 - No ice. Feb. 1 - Ice in extreme south end of the bay for about two miles and had an ice edge on the eastern shore. Feb. 11 - No ice except for shore fringes. Feb. 24 - East Arm was completely ice covered out to Mission Point, West Arm frozen about half-way to Mission Point, also, a wide ice fringe extended from Charlevoix all the way down to Elk Rapids. Mar. 6 and 7 - Ice was only at the extreme south end of both arms of the bay. Some ice was concentrated on the eastern shore again. Mar. 17 - No ice.

1966-67. Jan. 18 - No ice. Jan. 31 - No ice. Mar. 1 - Entire bay ice covered. Mar. 27 - East and West Arms and northern part of the bay solidly covered. Mission Point had about nine-tenths coverage of ice. Apr. 3 - Only areas covered were in the immediate vicinity of Mission Point. It was about six-tenths concentration of brash and cake. Apr. 10 - No ice.

1967-68. Jan. 30 - No ice. Feb. 8 - Extreme south end ice-covered. North to Mission Point was drifting brash and cake at about three-tenths (very light) concentration. Feb. 13 - East and West Arms were solidly ice covered about half way up to Mission Point. Remainder of the bay was covered with ice ranging from five to seven-tenths concentration of ice. Feb. 29 - The Bay was reported to be completely ice covered and also covered with light snow. Mar. 12 - Completely ice covered. Mar. 18 - Completely ice covered, but snow cover was beginning to melt. Mar. 28 - Extreme south ends were free of ice. The ice was concentrated from Mission Point on the northeastern part of the bay. Entire western shoreline contained open water.

1968-69. Feb. 13 - Ice on extreme southern end, mainly solid brash along the eastern shore from Charlevoix to Elk Rapids. Mar. 4 - West Arm was ice covered all the way out to Mission Point and East Arm halfway to Mission Point. Ice had a light snow cover. Mar. 27 - The only ice was in the extreme southern end and about one-fourth of the way up to Mission Point.

1969-70. Feb. 6 - No ice observed. Feb. 25 - East and West Arms were solidly ice covered up to Mission Point and from Mission Point north had a nine-tenths concentration of brash cake and small flows. The extreme western shoreline along Leelanau Peninsula down to Mission Point had open water along the shore. Mar. 17 - Bay was entirely covered and light snow topped it. Mar. 31 - Bay still entirely ice covered and had light snow covering. Apr. 3 - Still ice covered, but light snow cover had melted and refrozen and gave it a light crust.

## CHRISTMAS WATERFOWL COUNT IN THE TRAVERSE BAY AREA 1957-1969

1

	'57	'58	'59	'60	'61	'62	'63	'64	'65	'66	'67	'68	'69	TOTAL
Loons and Grebes	-	9	4	3	6	-	1	-	-	4	-	-	-	5
	-	1	3	-	-	8	-	3	4	7	12	3	74	133
	-	-	3	-	-	-	-	-	-	-	-	-	-	4
Geese and Swans	51	74	100	108	147	156	129	176	163	192	243	73	255	1867
	-	-	-	-	-	-	-	-	-	-	-	-	5	5
	4	-	1	-	5	1	-	-	-	-	-	-	1	12
Ducks	5	4	-	-	10	25	40	88	47	72	96	38	167	592
	5	18	3	32	23	96	122	96	123	73	98	67	132	888
	-	-	-	-	-	3	-	-	-	-	-	-	-	3
	-	-	-	-	-	-	-	-	1	-	-	-	-	1
	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	3	-	-	-	-	-	-	-	-	-	1	-	2	2
	-	-	-	-	-	-	-	-	-	1	1	-	2	7
	-	-	-	-	-	-	-	-	-	1	-	-	-	1
	169	436	-	-	-	2	-	-	-	-	-	-	-	2
	94	334	21	125	147	246	166	206	104	168	191	15	198	1899
	42	86	13	58	47	187	232	302	148	212	230	62	186	2280
	2	-	-	-	87	87	83	74	59	113	74	35	97	868
	3	-	-	-	-	1	-	-	9	2	-	-	1	15
	-	1	-	-	-	3	-	-	-	-	-	-	-	6
	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	36	45	8	2	19	17	27	46	5	15	28	5	5	31
	-	-	-	-	-	3	-	-	-	4	-	2	45	295
	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Hawks and Eagles	-	1	1	2	3	1	-	-	1	-	1	-	-	10
	-	-	-	-	1	-	-	-	-	1	-	-	-	2
American Coot	-	-	-	-	-	-	-	-	-	-	-	3	3	6

APPENDIX, No. 2 (cont)

Christmas Waterfowl Count in the Traverse Bay Area 1957-1969

	'57	'58	'59	'60	'61	'62	'63	'64	'65	'66	'67	'68	'69	TOTAL
Gulls	150	611	75	61	1030	600	326	136	36	241	191	-	36	3493
Ring-billed Gull	-	3	-	9	19	18	25	5	19	138	195	1	181	613
Belted Kingfisher	1	1	-	-	-	-	1	-	-	1	1	-	1	6
TOTAL INDIVIDUALS	574	1619	228	403	1451	1459	1151	1132	719	1254	1371	304	1393	13058

1/ From "Walter Hastings Audubon Christmas Bird Count -- Tally sheet". Since 1959 the Hasting's bird count has been made near Traverse City. The area in which the count occurs covers a radius of seven and one-half miles from a center point about two miles south of Grand Traverse Bay at Four Mile Road and Highway 615. Information given here and other pertinent facts are available in the Jack Pine Warbler, vols. XXXIX - XLI.

COMMERCIAL CATCH IN POUNDS, BY SPECIES, GRAND TRAVERSE BAY, LAKE MICHIGAN<sup>1</sup>

	CHUBS	LAKE TROUT	SUCKER	LAKE HERRING	WHITEFISH	YELLOW PERCH	WHITEFISH ROUND	SMELT	MISC <sup>2</sup>
1929	125,990	67,544	55,305	117,725	72,629	459	7,702	-----	538
1930	88,792	90,457	65,089	102,917	84,119	15	8,068	-----	178
1931	64,578	102,111	145,141	70,852	84,253	11,273	6,528	-----	123
1932	57,009	113,013	136,960	30,951	78,771	5,429	2,104	-----	288
1933	39,695	101,763	132,473	30,618	51,010	13,218	2,009	-----	245
1934	95,833	71,005	107,597	30,027	48,369	19,427	4,788	-----	166
1935	147,509	89,401	119,304	30,041	47,978	16,321	5,050	-----	248
1936	75,957	76,036	86,465	28,333	56,234	14,069	7,608	-----	125
1937	29,877	88,328	78,232	32,068	43,866	11,712	13,628	-----	296
1938	16,645	117,210	124,875	52,742	29,249	21,418	7,063	-----	1,559
1939	12,890	100,011	123,123	85,684	31,767	44,869	5,497	-----	953
1940	24,176	108,603	90,374	92,158	40,355	22,211	1,869	-----	735
1941	37,305	141,102	94,915	100,629	67,487	14,615	1,664	-----	829
1942	19,513	133,181	73,770	60,321	70,646	23,379	2,679	-----	330
1943	20,049	122,226	73,533	100,332	27,897	19,011	4,285	-----	2,445
1944	32,491	131,166	93,782	63,987	31,712	22,685	4,542	-----	975
1945	43,815	96,144	112,502	16,233	16,593	6,784	8,304	-----	116
1946	33,874	67,595	14,233	12,376	13,588	4,914	4,591	-----	340
1947	63,900	37,882	5,313	10,414	10,140	5,886	1,800	-----	-----
1948	42,831	18,609	13,270	12,176	7,897	3,090	1,324	-----	-----
1949	61,890	13,478	5,961	12,742	12,150	2,237	392	291	-----
1950	27,289	1,249	2,955	7,820	5,560	2,257	1,882	-----	-----
1951	11,365	10	1,674	5,745	-----	819	1,246	220	-----
1952	52,497	111	3,185	2,998	676	1,516	7,981	3,980	33
1953	66,840	14	6,187	11,588	472	5,916	1,259	6,966	17
1954	62,936	3	5,717	19,808	419	6,364	1,295	6,743	66
1955	64,580	-----	3,979	25,789	125	9,877	1,615	13,129	134
1956	71,158	-----	671	9,108	-----	8,967	1,287	4,671	1,017
1957	86,851	-----	632	7,662	-----	3,059	-----	-----	3
1958	87,573	-----	1,686	3,132	12	2,558	-----	-----	4
1959	70,997	-----	570	1,926	-----	6,934	-----	-----	105
1960	34,245	-----	15	1,366	-----	31,112	2,124	9,212	80
1961	49,627	-----	59	1,074	2,628	18,378	154	8,765	-----
1962	78,319	123	943	2,629	2,454	8,286	306	9,614	-----
1963	26,372	1,226	164	1,166	7,559	5,789	110	6,020	-----
1964	6,886	11	707	1,005	13,116	5,755	189	4,890	4
1965	19,955	116	124	386	16,788	1,104	349	4,239	-----



APPENDIX, No. 3 (cont.)

1966	8,957	-----	6,568	919	21,874	783	272	1,974	151
1967	27,875	-----	2,112	931	18,553	627	362	3,279	29
1968	66,125	4,524	377	14,498	43,303	59	---	-----	---
Average production in pounds 1929-1968	51,376	48,570	45,911	31,099	27,185	10,338	3,126	2,153	311

<sup>1</sup>Data furnished by Howard J. Buettner, United States, Bureau of Sports Fisheries and Wildlife, Ann Arbor.

<sup>2</sup>This includes the following categories, in order of abundance: Carp, Burbot, Gizzard Shad, Walleye (Menominee), Northern Pike, Rock Bass, Smelt (animal), Sturgeon, Catfishes, Buffalo, Alewife and Sheepshead.

<sup>3</sup>Fish names conform to the usage in A List of Common and Scientific Names of Fishes From the United States and Canada. Special Publication, no. 2, American Fisheries Society. (Ann Arbor, Michigan, 1960).

APPENDIX No. 4 ( From: Michigan Recreational Harbor Facilities, Waterways Division,  
Lansing, Michigan. Department of Natural Resources )

GRAND TRAVERSE BAY HARBORS

	Northport	Suttons Bay	Greilicks- ville	Traverse City	Elk Rapids
Gasoline and Oil	P	-	C	P	P
Telephone	P	P	P	P	P
Water	P	P	C	P	P
Electricity	P	P	C	P	P
Ice and Supplies	C	C	C	C	C
Transient Wells	41	8	*	30	12
Restroom Facilities	P	-	C	P	P
Shower Facilities	P	-	C	P	P
Dock Attendant	Y	-	Y	Y	Y
Marine Repair	-	-	C	-	C
Haul-out Facilities	-	-	35 TONS	-	-
U.S. Coast Guard	-	-	-	Y	-
Great Lakes Chart Number	70/706	70/706	70/706	70/706	70/706
Launching Ramp	P	P	P	P	P
Holding Tank Pump Out	Y	-	-	Y	-
VHF - FM Marine Radio	-	-	-	-	-
Base Station	-	-	-	-	-

C - Commercial  
P-- Public

Y - Yes  
CG - U.S. Coast Guard

\*Seasonal Accommodations Only (Mich. State  
Waterways Commission, Dept. of N. R.,  
Michigan Harbor Guide, 1969)

Acknowledgements

In an early Michigan local history, its author wrote, "I crave your indulgence for the errors you may observe and the anachronisms which more extended research will enable you to correct," and that statement is no less true of this work. However, I believe that this work will be quite useful. Many people helped along the way. Special thanks are in order for Dr. John M. Armstrong, Director of the Sea Grant Program, who has been unswerving in his patience, understanding and interest in the work; to Paul Lutzeier, Advisory Services, Sea Grant Program, whose aid and advice have been invaluable; to Walter Crowe, Administrative officer, the Sea Grant Project, who has been generous with his knowledge of fish and fishing, and who obtained special information pertinent to this history-report; to Dr. Charles E. Olson, Associate Professor of Natural Resources; to Dr. David Chandler, Professor of Zoology and Director of the Great Lakes Research Division, I.S.T.; to Dr. Karl Lagler, Professor of Fisheries; to Dr. Howard Peckham, Director, William S. Ewing, Manuscript Librarian, Douglass Marshall, Map Librarian, William S. Clements Library; Mary DeVries, Map Librarian, Hatcher Library; Sheldon Miller, Technical Aide, Zoology Museum; all of the University of Michigan, Ann Arbor; to Howard Buettner and Leo Erkkilla (retired), the Great Lakes Fisheries, Ann Arbor; to Thomas Martin, of the Michigan Municipal League, Ann Arbor; to Genevieve Gillette, Ann Arbor; to Alice Daligan, Archivist, of the Burton Historical Collections, Detroit; Louis Barbalas and James Battaglia of the Department of Commerce's Great Lakes Research Center; to Lt. Richard Rondy, of the Corps of Engineers, Lake Survey, Detroit; to Robert E. Lee, Dossin Great Lakes Museum, Detroit; to Robert Lusk, Automobile Manufacturers Association, Detroit; to Tom Kamppinen and Michael Newton, Michigan Water Resources Commission; A. Gene Gazlay, Deputy Director, Stanley Lievense, George Hosek, Ralph Wilkins, Helen Wallin, William Colburn, William Walden, Roger Smith, all of the Michigan Department of Natural Resources, Lansing; to Jerome Maslowski, of the Michigan State Attorney General's staff; to Herman Bushnell, of the Michigan State Highway Department; to Geneva Kebler Wiskemann, Archivist, Michigan State Department, Archives; to Mary Armstrong, Documents Head, and to Richard Hathaway, Michigan Unit Chief, of the Michigan State Library, Lansing, Michigan; to Esther Loughin, Reference Librarian, Michigan State University Graduate Library, East Lansing, Michigan.

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All of these people have added to my own interest and knowledge in this work, and their help made this a very interesting research project. The importance of the Grand Traverse area, and the need for the scientific, multidisciplinary studies now being carried out by the University of Michigan's Sea Grant Project in the Grand Traverse Region made the researching of this history a rewarding enterprise.

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1866

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There are maps and tables included in this. State geologists consider this to be still a useful work.

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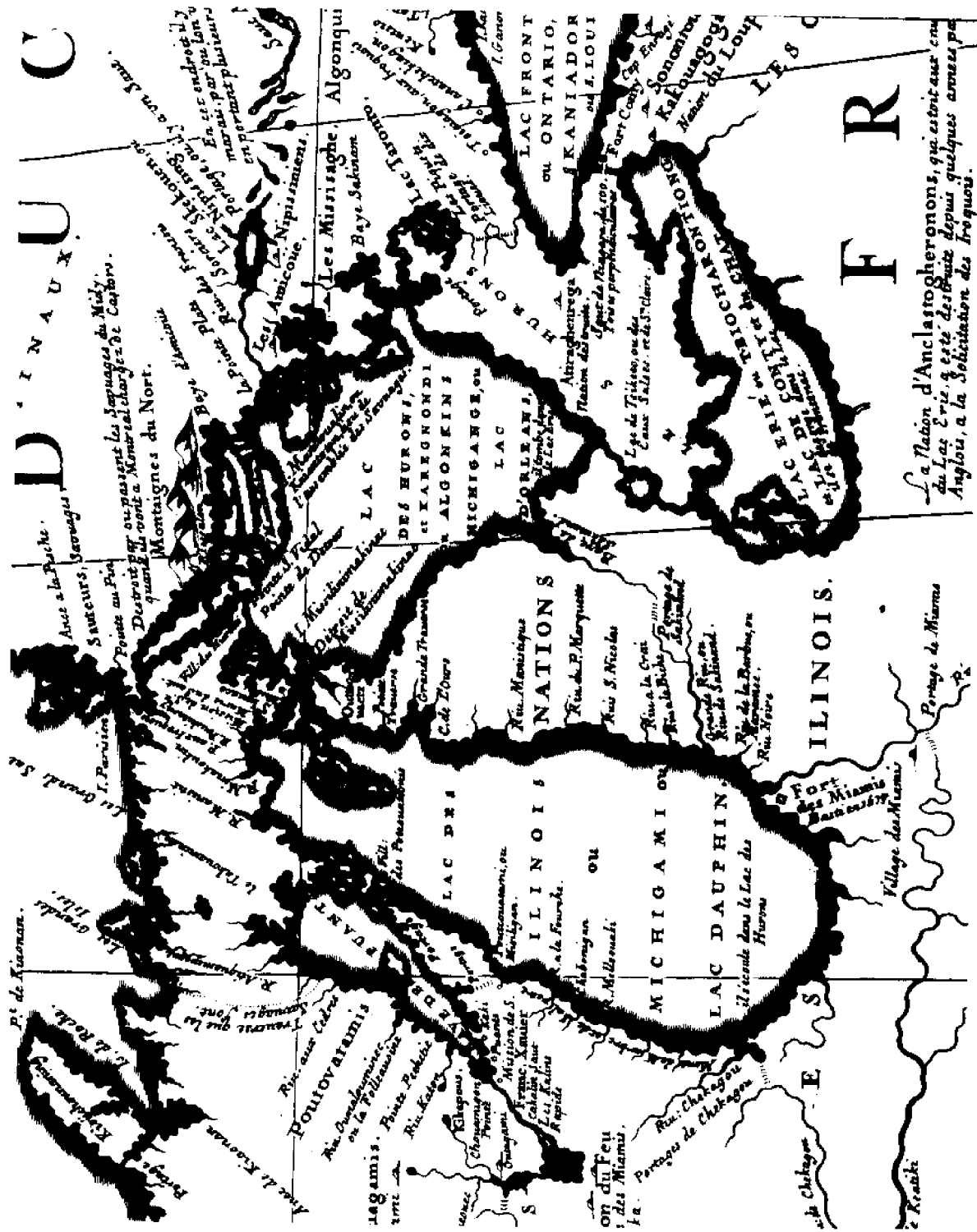
A Map [sic] Exhibiting the Relative Positions of Lake Erie & [Lake] Michigan According to Mitchell's Map, Published in the Year 1755. By David H. Burr. Engraved by J. N. Throop. Courtesy of the William L. Clements Library.



Map No. 1

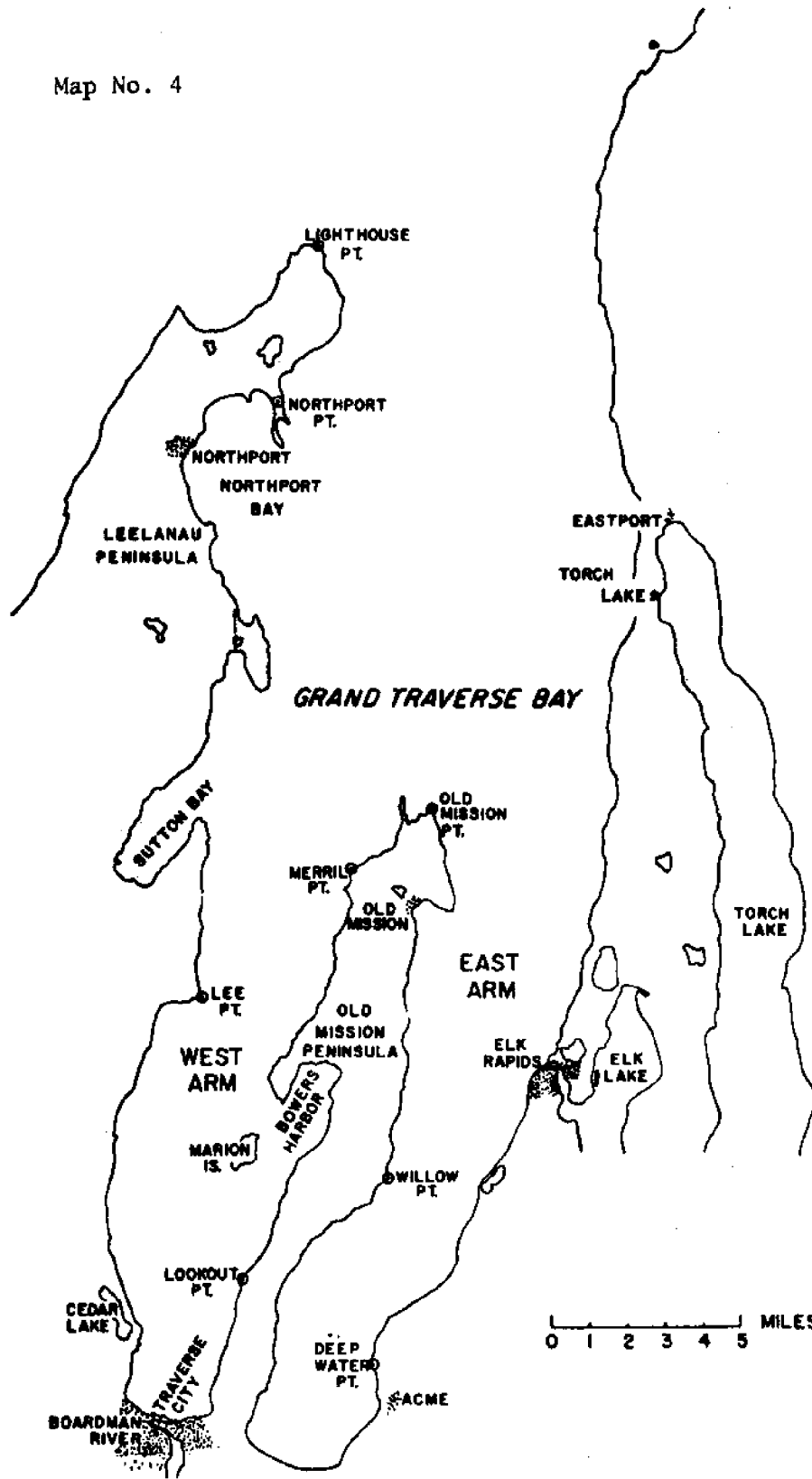
Map No. 2

Partie Occidentale du Canada on de la Nouvelle France ou sont les Nations. 1688. P. Mro Coronelli.  
 This a copy of the section of this map which shows the Grand Traverse Bay and the Illinois Nations.  
 This reproduction was made from the original Coronelli map in the William L. Clements Library.



Map No. 3

Map No. 4



Map of Grand Traverse Bay.

# GRAND TRAVERSE BAY IN THE GREAT LAKES BASIN

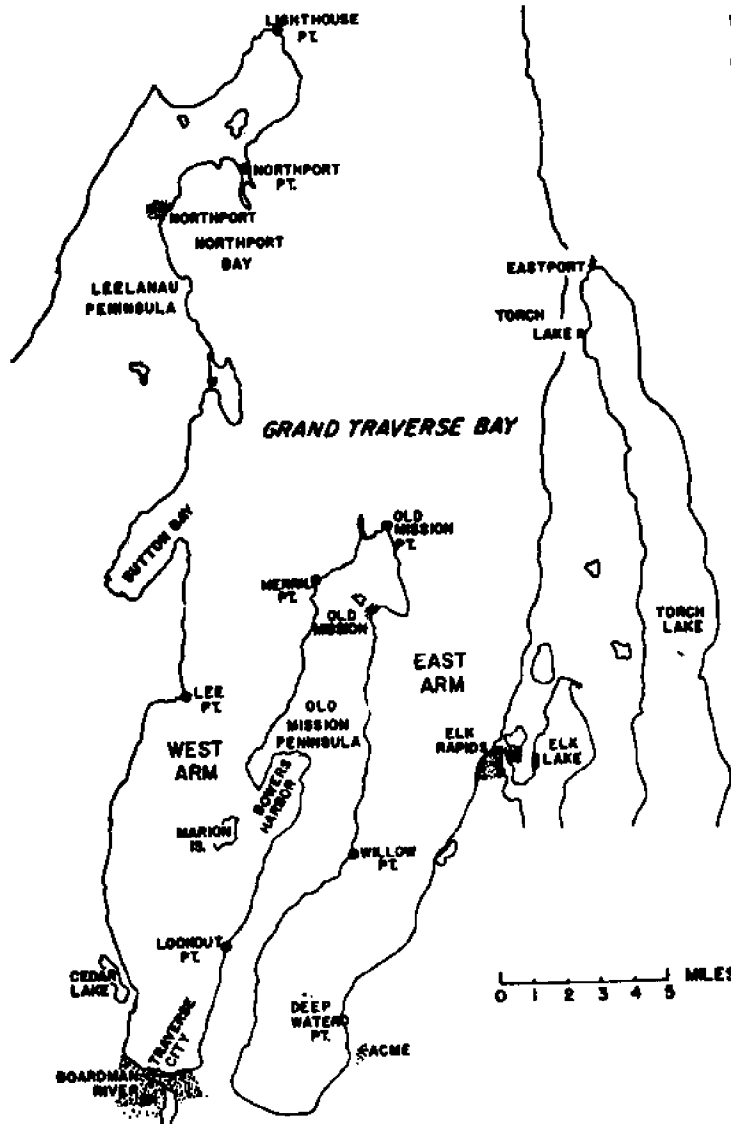
A History of a Changing Area

By  
Lila Colby

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Map of Grand Traverse Bay.

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