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THE EVOLUTION OF LONG ISLAND

A STORY OF LAND AND SEA

By

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TO
C. D. G.

PREFACE

The writer of the present pages is not a Long Islander. It is with some hesitation, therefore, that he presents a work of this nature to people whose lives have been spent in that beautiful region. The study grew out of a problem that arose in a seminary given by Dr. Isaiah Bowman, when Assistant Professor of Geography in Yale University. Professor Max Farrand suggested that the problem be worked into a doctor's dissertation. Under the supervision of these two men the dissertation was brought to completion. Since the time of its submission to the faculty of the Yale Graduate School, the work has been completely revised. My thanks are due, not only to the two men who with great generosity of time and suggestion saw the study through its early stages, but to the authorities of the Yale University Library, the New York Public Library, and the Long Island Historical Society. Mr. H. V. Smith kindly allowed me to use notes that he had collected on Long Island history. Professors Charles M. Andrews and Allen Johnson have made many useful suggestions. Finally, I wish to acknowledge the invaluable help rendered by my wife, whose criticism, encouragement, and practical assistance in the completion of the manuscript and reading of proof have played a large part in making possible the publication of this volume.

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THE PROBLEM—A FOREWORD

In this first half of the twentieth century the philosophy of Carlyle no longer dominates. Few men today would maintain, as did the famous transcendentalist, that "Great men are the inspired (speaking and acting) Texts of that divine Book of Revelations, whereof a chapter is completed from epoch to epoch, and by some named History." In our day we respect and honor the "Hero" but we do not believe that the history of any people can be summed up in the biographies of its great men. Thinkers who came after Carlyle saw that the activities of leaders could not satisfactorily explain the development of a nation. They sought for a surer foundation upon which to build the framework of their analyses. They found it in economic and social history, and, for the last quarter of a century, the dominant trend in historical writing and thinking has been in this direction. It may be, however, that the pendulum has swung too far away from the doctrines of the philosopher of the last century. Perhaps, sometimes, we have lost sight of the spirituality of men in the materialism of economics. History, after all, is the story of the deeds of leaders. If, however, that story of the leaders and their work be not founded upon the silent, unheroic forces of evolution, it is a house built upon the sands.

If it be true that the trend in present-day historical writing and thinking has been toward the economic and social explanation, it is also true that with this explanation men have, in the main, been content. We have traced the development in the adaptations of peoples to their

social and economic environment, their cities, their industries, and their customs, and have many times believed that we had taken into account all the factors of evolution. We have too often forgotten that literally underneath the unfolding life of any people is the earth itself and the great natural forces which play both with it and upon it. This is the natural environment, the mountains, the rivers, the sea, and all that complex of energy and matter that makes up climate. If economics has explained many a hitherto unsolved enigma, a study of this environment will explain many more. Civilization has in no way diminished man's ultimate dependence upon the earth.

The problem of the present study is to trace the development of a people as it has been affected, not only by its social and economic, but by its natural surroundings. Long Island is a definite entity, with boundaries fixed and easily determined. On every side the sea washes its shores. It is not, however, an oceanic island, isolated in the midst of one of the broad seas. It is a fragment of the North American continent, and its life is inextricably intermingled with that of the greater land body. Lying off the Atlantic coast of the United States it is, in reality, a part of that eastern coast zone which stretches back from the water's edge to the ridges of the Appalachians. Like every such coastal region, it is a transition zone between the two dominant forms of the earth's surface, the land and the sea.

Long Island, however, is not a typical coastal area with the sea on one side and the hinterland on the other. In this region the influence of both of these factors is greatly intensified. The ocean, literally surrounding the Island and asserting its mastery in a multitude of coves, bays, and harbors, would seem to be in a fair position to dominate the life of the region. But Long Island is set down in an unusual position. Three gateways open into the

broad interior of America, the Mississippi, the St. Lawrence, and the Hudson-Mohawk valleys. The first is far from Europe and the second is icebound during parts of the year. It is the Hudson, the central gateway, therefore, that, working through a system of lakes, canals, and railways, taps the limitless resources of the heart of the North American continent. It is this hinterland, acting through the metropolis which it has created at the entrance to the greatest of the three gateways, that contends with the encircling sea for the mastery of Long Island. These are the giant gamesters that play at moving hither and thither the kings, queens, castles, and pawns in the great game that is still unfinished. The story of this game is the problem of these pages.

CHAPTER I

AN UNFINISHED PLAY

It was in an age when the sea was asserting its power and making for the last time a wide extension of its dominions, an age when the land was undergoing great readjustments that were ultimately to check the onslaught of the oceans and to fix the boundaries of the continents, that the foundations of Long Island were laid down. The story began at the end of the Paleozoic era, that long period of geologic ancient history, the close of which was marked by a world-shaking revolution. It seemed as though the earth were shrinking. The sea, which for millions of years had covered a large part of North America, receded, and an immense folding, to shorten the crust of the globe, piled up in eastern America a mountain range with peaks three miles and more in height. What is left of this range is called the Appalachians. The place which is now Long Island lay in the eastern foothills of this mountain system. There were no marks or boundaries to differentiate it from the surrounding area. It was simply a tiny spot in the interior of a broad land-mass.[1]

With the completion of the bowing up of the great eastern ranges, the ancient Paleozoic times came to an end and the middle ages, the Mesozoic era, were ushered in. The Appalachian system, its foothills, and the broad land-mass that lay to the east and west of it were attacked by all the agencies of subaerial erosion. As the sculptor

[1] Pirsson and Schuchert, *A Text-Book of Geology*, pp. 748-749.

with tedious labor reduces the rough marble to smoothness, so the wind, rain, and rivers, working through thousands of centuries, base-leveled the great rock folds until what had been one of the great mountain chains of history took on the appearance of a rolling plain. On the west this plain reached well into the interior of the continent, and on the east, spreading beyond the old mountain area, it stretched its flat slopes far into the present Atlantic.[1] Over the slowly dissolving uplands roamed the creatures of the Mesozoic, the saurians, reptiles great and small, who ruled the earth, air, and ocean of those days.

There is no space here to describe the details of this erosion process or the many significant events in the history of the geologic middle ages. One episode, and that at the very end, must suffice. The era of the Mesozoic was brought to a close by a crustal disturbance second only in intensity to that of the Appalachian revolution. From Alaska to Tierra del Fuego the surface of the earth was cracked and folded, the result of mighty strains and stresses. When the tremors of the disturbance had died away, the snow-capped ranges of the Cordilleras stretched, as they do today, from the Arctic to the Antarctic.[2] These earth-shaking forces which piled up the Rockies made themselves felt in the east. The base-leveled country, part of which had once been the Appalachians, felt a heave from the northwest. Slowly and steadily the broad plain, like a giant table, was tilted. Its southeastern half sank below the waters of the Atlantic. Century after century, the sea crept westward from beach to beach, until, at last, it stopped somewhere near the eastern edge of the present Appalachians. The

[1] Pirsson and Schuchert, pp. 813, 814, 846, 849. The bulk of this erosion took place during Jurassic time. The details of the Triassic and Jurassic erosion cycles have been omitted.

[2] *Ibid.*, pp. 901-902.

place which was to become Long Island lay under water a little way off shore.[1]

The differential tilting of the broad eastern plain lifted up the broad core of the old worn-down Appalachian system. Rejuvenated rivers began again to cut deep valleys and to bring down to the sea loads of sediment from the new uplands. As time passed, these uplands were chiseled into the low, rounded, parallel ridges of folded sedimentaries that characterize the Appalachians of our times. It was this mountain mass that was destined to make a deep impress upon the history of the people of Long Island and of the eastern United States. The débris from the mountain valleys, which was carried down by ever flattening streams, was deposited as clays, sands, and marls on that part of the rock surface of the old tilted and partly sunken plain which now was the ocean bottom. It was those sediments, laid down in the angle between New Jersey and Connecticut, that were to become the foundation of Long Island. While this deposition was still going on, the Mesozoic era came to an end. The reptilian evolution ceased with dramatic suddenness and the dawn of the Cenozoic, the era of modern life, looked down upon a world in which mammals held the strongholds of their saurian predecessors. During the early centuries of this rule of the mammals, the laying down of the marine strata on the old tilted plain was completed. With this, the first act in the drama of the making of Long Island came to an end.[2]

The second act opened with a general vertical uplift of the tilted and now well-dissected plain. Strata which had been laid down on the ocean bottom were now lifted above the level of the sea. The ocean receded and a new coast

[1] Pirsson and Schuchert, p. 900; Fuller, *The Geology of Long Island*, p. 193.

[2] Fuller, p. 194; Pirsson and Schuchert, pp. 911-915, 927-942.

plain of soft and loosely consolidated materials sloped gradually to the water's edge. As a shingle, laid to cover the roof below it, is shaved to a thin edge at the top and increases steadily in thickness to the bottom, so this coast plain, thin on the north and west and growing thicker as it approached the ocean, lay on the base-leveled rock surface that had once been tilted below the sea. The rivers which wound their ways across the older country continued in a normal course across the new region.[1]

It is impossible to tell in detail the story of the resulting erosion. South-flowing rivers, rising in New England, crossed that part of the plain from which Long Island was to be chiseled. East and west tributaries flowing into these ate away the thin northern edge of the coast plain. In this way the surface of Connecticut was stripped of the sediments so recently uplifted. South of Connecticut, stream action began the creation of a depression running east and west. River courses developed and changed, how or why no one exactly knows. But the result is clear. A broad, shallow valley, draining ultimately to the east was formed in the place where Long Island Sound now lies. One standing in its bottom and looking southward would have seen a narrow line of low-lying hills separating the valley from the sea. The hills were to become Long Island. The depression was the inner lowland that lies behind a cuesta.[2] With the excavation of this Sound Valley and the consequent raising of Long Island in bas-relief the second act of the drama came to an end.

How changed was the stage setting for the next great scenes! The broad, green forests, full of birds and

[1] Fuller, p. 194; Bowman, *Forest Physiography*, p. 510. This uplift seems to have been a complex of movements, the details of which are not all clear. There was an uplift at the close of the Eocene and another at the beginning of the Pliocene.

[2] Bowman, pp. 509-510; Fuller, pp. 56-59.

animals, were gone. Even the rivers and valleys and hills disappeared. In their place was a vast, bleak expanse of ice. Pinned beneath a boulder-shod ice sheet that covered the northern half of the North American continent lay the hills of Long Island and the newly formed Sound Valley. Not once but four times did Long Island feel the creep of these great glaciers. Hundreds of years at a time the region lay underneath or at the edge of these ice masses loaded with rock and gravel that had been picked up to the northward. When the warm sun of a changing climate had driven the last of these, the Wisconsin Ice, toward the Arctics, it was possible to see what had been done.[1]

The Sound Valley had been somewhat scoured out by an early advance and slightly filled in by a later one. The front of the third ice sheet had stood for a long time just north of the western half of the range of Long Island hills and had built them out, leaving them, upon its retreat, with a steep scarp facing north. But the greatest changes were made by the Wisconsin Ice. Twice this broad glacier advanced its southern edge to the top of the Long Island hills and stopped. Each time it built a high ridge of terminal moraine. The first moraine extended from the western part of the island to Montauk Point and the second kept well to the north of Orient Point. And south of each of these ridges sloped the gently dipping sands and gravels of glacial outwash. The moraines form the present hills of the region, the "backbone of Long Island," in the language of its people. The outwash plains make up the flat country covered sometimes with prosperous farms but more often with stunted pine and scrub oak.

With one more episode the story of the third act is complete. As a result of the changing elevations that

[1] Fuller, pp. 195-212.

occurred during the ice age the sea came in to fill not only the Sound Valley but the low land between the eastern termini of the Wisconsin moraines. The new Sound made the hill country to the south of it an island, while Peconic Bay split its eastern end into two long, roughly parallel peninsulas. In this third act, Long Island, as a separate entity, came into being.

At the opening of the last act, Long Island, again covered with a mantle of forest, looked much as it does today. In its outline it suggested a huge fish lying with its blunt head at New York Bay and the two flukes of its tail stretching to Orient and Montauk points. Its greatest length must have been just over a hundred miles and its greatest width a little less than a score. Through the length of the Island ran the two morainic ridges. South of them the broad, flat, outwash plains sloped gradually to an irregular coast line whence they dipped gradually beneath a shallow sea. On the north shore was an abrupt escarpment, smooth and straight in the east but indented, west of Port Jefferson harbor, with many deep and sheltered fiords. It was this island that now began to be shaped into its present form by wind and rain and ocean.

The wind has played its part, for Long Island is sandy. Here and there in the level stretches of the interior rounded hills can be found, old sand dunes now caught and held by the roots of vegetation. In the Shinnecock Hills these were active scarcely more than a century ago. But on many parts of the bluffs of the north shore and the exposed beaches of the south the dunes still drift as the wind drives them, evidence that the form and surface of Long Island are not yet fixed.[1]

It is the sea, however, that is playing the dominant part in the present sculptoring of this fragment of the North

[1] Fuller, pp. 180-183.

American continent. The Wisconsin Ice had barely receded when the waves began their attack on the northern escarpment. In the east the assault was most effective. The constant undermining of the surf pushed the scarp southward until, in places, the morainic ridge has been cut through and the cross section of the outwash apron laid bare. In the west many of the headlands have been truncated and the material gathered by this erosion used to build sand bars, sometimes threatening to enclose the mouths of harbors and often connecting small outlying islands with the mainland. It is this constant assault of the waves which has made and is yet making the naked dirt cliffs of the north shore.[1]

Along the flat, irregular southern beach of glacial times the situation has been quite different. As soon as the Wisconsin Ice had gone, waves and currents attacked the southern side of the long Montauk peninsula with nothing to shelter the beach from the full power of the Atlantic. From Southampton to the Point, the land has been cut back hundreds of yards and the fragments ground up in the mill of the surf. This material taken from the Montauk peninsula has been, and still is being, carried westward by the littoral currents which have used it to build a series of long, narrow barrier beaches from Southampton to Coney Island. Fire Island Beach, the longest of these, stretches west from Southampton more than forty-five miles to the Fire Island inlet, with an average width of one-fourth of a mile. West of the inlet, Oak Island Beach, Short Beach, Long Beach, and Rockaway Beach, to mention only the more important, have been brought about in the same fashion. It is these beaches, built up by the westward-flowing littoral currents, that have brought into being the enclosed waters of the south shore —Shinnecock Bay, Moriches Bay, Great South Bay, and

[1] Bowman, p. 507.

the rest. The wrecks which line the outer sands of these sand barriers are mute evidence of how different the quiet life of the southern shore would have been without them.[1]

The curtain has never been rung down on this fourth act of the great drama. Though the murmurs of the primeval forests have given place to the noise of cities, the play goes on. Though civilized men have lived upon the island for nearly three hundred years, the wind still drives the dunes, the streams still carry the hills to the sea, and the ocean still carves and remakes the shores at will. It has not been given to man to control the elements. His task has been to take things as he found them, the changing hills and plains and shores, and to adapt himself as best he could to them. It is not strange, therefore, that those factors which have played such fundamental parts in the drama, the near-by continent, the Appalachians, the rivers, and the sea, should guide and direct the evolution of human life upon the Island. The elemental forces that have been operating since the beginning of things on the earth are still at work. It has been the task of the generations of Long Island people, as of every other people, to make true and sure their adjustments to the inevitable.

[1] Fuller, pp. 177-179.

CHAPTER II

THE STRUGGLE FOR EXISTENCE

It was in the first half of the seventeenth century that a few of the worthy Dutchmen from the little frontier trading post on the southern tip of Manhattan Island, crossed the East River and laid out their boweries on the hills and flats of the Breukelen region. These were the first civilized men and women to come to Long Island to live. Not many years later small ships could have been seen at one time and another carefully working their way around the irregularities of the strange coasts of the eastern peninsulas. Piles of goods surrounded by little knots of people appeared on the beach, two on the straight shore line of the southern side of the Montauk peninsula where the ocean had been cutting back for centuries, and one on the sheltered southern slope of the northern peninsula. The names of the hamlets thus founded—Southampton, East Hampton, and Southold—tell of their English origin. Long Island lay between the Dutch holdings at New Amsterdam and the English settlements of Massachusetts Bay and the Connecticut Valley. The frontier peripheries, steadily widening, finally touched the Island, and both English and Dutch gained footholds in those parts of the region nearest their important population centres.

For the Dutch, within sight of the little New Amsterdam fort, the adventure was not so hazardous, but for those first small companies of Englishmen and New Englanders, who unloaded their belongings onto the beaches of the eastern peninsulas, the prospect must have been

awe inspiring. Behind them lay the ocean over which they had come; before them, as far back from the shore as they could see, stretched an unbroken forest. From this they must wrest, by force and cunning, the means of subsistence. These men and women stood face to face with a struggle for existence in an environment unsoftened by the touch of civilization. As was the case among the primitive tribes of Indians,—their new neighbors,—the individual's penalty for failure was suffering and perhaps death. The little piles on the beach must have seemed scanty equipment, indeed, with which to meet the problems that lay before them. Yet their lot was no different from that of other pioneers. They found the same problems as did the Puritans of New England or the settlers of the South.

It is not strange that these little pioneer companies built their hamlets near the shore where were to be found the only means of communication with the people and the civilization they had left. Nor is it strange that they developed at once a group organization to meet the difficulties of their situation. Stories are told of herds of bison, in the old prairie days, that would make a circle, back to back, a ring of horns to fight off their enemies of the plains. From the same necessity, the early frontiersmen made groups so that they might stand together against the dangers of the forest. Their cabins, huddled together, were "fenced all around with pallissades or long boards and closed with gates, which is advantageous in case of attack by the natives."[1] As a community they acquired their land and later parceled it out among the individuals. Their laws were made at a meeting of all. The village group became the strong point of offense and defense in the struggle against the wilderness.[2]

[1] *N. Y. Col. Docts.*, I, 368.

[2] The lands at the end of the Montauk peninsula were owned in common

Their villages were laid out after the fashion of New England. On either side of the central street straggled the homes of the people, sometimes rude cabins quickly thrown up, sometimes cellar-like pits, six or seven feet deep, lined with something to prevent the caving of the earth, and covered with a roof of bark or green sod.[1] These were the homes of a people, not great and powerful, but poor and often ignorant. Close to the cabins lay the "Common," reserved for the use of all. Beyond this the rest of the land was divided up from time to time among the members of the company.[2] As the seventeenth century wore on, such small, palisaded towns began to dot the western end of the Island and to create a line of clearings along the fiord-indented northern shore. Gravesend, Hempstead, Newtown, Huntington, Smithtown were, with one or two exceptions, built near the water. In these diminutive communities, visited by an occasional trading ship, were laid the foundations of civilized life on Long Island.

The people of a later generation can only with the greatest difficulty picture the world that surrounded these little isolated groups of pioneers. The village herdsman in caring for the animals of the community had to contend with predatory wildcats and wolves.[3] More important than the forest animals, however, were the Indians. Thirteen tribes living on Long Island kept the possibility of an Indian war always before the eyes of the householder. As the village groups of the white men grew larger and

by the first settlers of East Hampton. Common ownership by the descendants of the first proprietors continued until 1879, one of the most remarkable cases in American land records. Jameson, *Magazine of American History*, IX, 225-239.

[1] *N. Y. Col. Docts.*, I, 368.

[2] For typical cases, see *Huntington Records*, I, 110; *East Hampton Records*, IV, 17-27, 64-81, 96-110.

[3] *Hempstead Records*, I, 88; *N. Y. Col. Docts.*, VI, 161.

more numerous, the competition of life between the two races became more keen. The hamlets with their palisades developed into military outposts. In 1643, the storm broke over the Dutch settlements on the western end of the Island. "Coming next to Long Island: It also is stripped of people and cattle, except a few insignificant places over against the main, which are about to be abandoned. The English who have settled among us have not escaped. They too except at one place are all murdered and burnt. Staten Island . . . is unattacked as yet but stands hourly expecting an assault."[1] It was with reason, therefore, that all trees were felled within gunshot range of the palisades, and that every male between sixteen and sixty years of age was required to furnish himself with a gun and sword, a pound of powder, several "fathom of match," and a supply of flints and bullets. Training days were common. East Hampton was not many years old when the actions of the Indians roused among the villagers the suspicion that the Dutch, jealous of English encroachments, were stirring up the red-skins. The town meeting promptly decreed that no Indian was to set foot within the village gates. Should one approach in the darkness, the watch was ordered to shoot the interloper if he did not halt on the third "stand."[2] In 1657, the general court of Connecticut, sent the doughty Captain John Mason with nineteen men to the outlying settlement of Southampton "to consider of all matters and things whatsoever, that may appear necessary to be attended to" with regard to "several insolent injuries and insufferable outrages committed . . . by some Indians of Long Island."[3] It was in the face of such a menace, when

[1] *N. Y. Col. Docts.*, I, 190.

[2] *East Hampton Records*, I, 31.

[3] Quoted from the records of a general court sitting at Hartford, May 15, 1657, by B. F. Thompson, *History of Long Island* (third ed.), II, 153-154.

the snapping of a twig was an ominous sign, that the small, ill-equipped pioneer groups commenced and carried on their battle to subdue the wilderness.

Pressing as was the problem of defense, that of subsistence was greater. In view of this fact it is not without significance, that most of the pioneer villages were built within sound of the surf. Not one of these early towns was many miles inland. The ocean, aggressively grinding back the cliffs of the north shore and the beaches of the Montauk peninsula, held the hamlets of the pioneers close to the sand, not simply because the sea was the only means of communication with the outer world, but because it was rich in useful products. Clams abounded and eels were found in the shallow waters of the creeks and marshes. People of the west end gathered oysters in the sheltered coves of the southern beaches. The great schools of menhaden which from time to time filled the bays and harbors of the whole region furnished bait for the fishing farther out. Off Sandy Hook and off Montauk were cod banks. There were times in the latter half of the seventeenth century when "most of the vessells" to and from Virginia paused to "take good quantityes . . . of excellent good Codd" not many leagues south of Rockaway. Jealously guarded from poaching strangers were all these sources of food supply. Making laws to govern the taking of the products of the creeks and bays gave zest to many a town meeting.

It was at the eastern end of the Island, however, that the pull of the sea was strongest. In the heavy surf off the Hamptons many an unwary whale was stranded. Almost with their arrival the settlers divided the beach into sections and designated men in each to cut up the whales that were washed in. Not long, however, did these people depend on such accidents. Before many years they were establishing on the sand dunes lookouts who

scanned the sea for the familiar black hulk and geyser-like spouting. Whenever one of these denizens of the deep nosed his way in sufficiently close to shore, the alarm was sounded. From wherever they might be the people of the villages came scurrying to the beach, where they put off in small boats to capture the quarry and bring it in. The whale oil from the catches passed for currency throughout the Island and in the trade with Boston.[1]

Important as were the products of the sea, however, the time had not yet come when permanent establishments could be founded on them alone. The sea could not carry the settlers beyond the collection stage and the hunting stage in the development of their civilization. The hazards were too great. If the whites were to surpass their red-skinned competitors, they must advance to the agricultural stage and found their homes on cleared fields and cultivated soil.

The first adventurous men who built their villages on Long Island bays and beaches were, of necessity, men of many occupations—soldiers, hunters, fishermen, oystermen, whalers, and, with all the rest, farmers. There was little division of labor. Every family tried to get a living by taking advantage of all the opportunities that offered. The main dependence of these people, however, was on their crops and their animals. The civilization of Long Island, as of all the English settlements in North America, was founded on agriculture. Before farming could begin the forest must be invaded.

It is hard to realize what the subduing of the woods meant to a little group of these pioneers. They had none of the saws, the stump pullers, and the dynamite of our day. Their weapons were only two, the axe and the grubbing hook. Besides these they made use, as the Indians

[1] For more complete accounts of fishing in colonial times, see chapters V, VI, VII, and IX.

did, of fire. It was the custom of the villagers every spring to burn over the woods in the immediate locality. The matter would be taken up in the town meeting, a day would be set, and two or three men named to have charge of the work. Every citizen was obliged, under penalty of fine, to turn out and assist.[1] With the "firing" of the woods the activities of the group, as such, ceased. The remainder of the task of clearing away the trees and underbrush from his fields was the problem of the individual landholder. It was slow and tedious work. "The trees are usually felled from the stump, cut up and burnt in the fields, except such as are suitable for buildings, for pallissades, posts and rails. . . . In most lands is found a certain root called Red Wortel, which must before ploughing be extirpated with a hoe, expressly made for that purpose. This being done in the winter, some plough right around the stumps, should time or circumstance not allow them to be removed. . . . The farmer having thus begun must endeavor every year to clear as much new land as he possibly can. . . ."[2] This great outlay of time and labor was the price the pioneer paid for his farm.

The "farm management" of these early settlers on the shores of Long Island was an ingenious adaptation to the exigencies of their situation. They needed capital, houses, barns, cleared land, domestic animals, and tools,—in short, energy stored up against the struggle for existence. To acquire a sufficient amount of this capital to make their little establishments permanent was the work of years, during which the rough tables of the small cabins must be supplied with provisions. Some of the food came from the creeks, the bays, and the sea, but this supply was not assured. Men with families dependent

[1] *East Hampton Records,* I, 17; *Huntington Records,* I, 111-112; *Smithtown Records,* p. 94.

[2] *N. Y. Col. Docts.,* I, 367.

upon them found it necessary to utilize the scanty resources of the very woods they were destroying. They became herdsmen as well as farmers. Their animals foraged among the trees under the watchful eye of the village "cow keeper." From these herds and flocks the frontier families obtained materials for their simple clothing and food for their tables. From Gravesend to Southold herds of cattle could everywhere be found.[1] The Hempstead Plains, a little natural prairie in the midst of the forest, were rich in them. The blunt end of the Montauk peninsula, fenced in by the surf, was covered with the animals of the East Hampton villagers. Besides cattle, small flocks of sheep, raised for their wool, could be seen throughout the Island, pasturing on the "commons" or foraging in the woods. In the eastern settlements, goats grazed with the sheep.[2] These two, however, both ill fitted to fight the necessary battle for existence against the wolves and the wildcats, never became very plentiful. The same was not true of the swine, slab-sided, long-legged, fleet, razorbacks. These animals, living on the nuts under the trees, were a factor of the greatest importance in the primitive economy of the pioneer farmer. "The hogs, after having picked up their food for months in the woods, are crammed with corn in the fall; when fat they are killed and furnish a very hard and clean pork; a good article for the husbandman who gradually and in time begins to purchase horses and cows with the produce of his grain and the increase of his hogs, and instead of a cellar as aforesaid, builds good houses and barns."[3]

[1] *N. Y. Col. Docts.*, I, 285; II, 433; *East Hampton Records*, I, 23, 28; *Jamaica Records*, I, 6, 8.

[2] *East Hampton Records*, I, 16, 32, 47; *Huntington Records*, II, 411, 515; *Hempstead Records*, I, 100.

[3] *N. Y. Col. Docts.*, I, 368; *Hempstead Records*, I, 16, 91, 123; *Smithtown Records*, p. 99.

At the same time that his animals were growing more plentiful with little effort to himself, the settler's slowly broadening fields were planted to crops. Corn, rye, and wheat seem to have been the earliest grains. Soon flax was added, together with barley, buckwheat, oats, and, in a few places, tobacco. In the fertile fields of the western settlements gardens flourished. Potatoes and watermelons "with all sorts of pot-herbs, principally parsnips, carrots and cabbage" brought "plenty into the husbandman's dwelling."[1]

The "farm management," therefore, of the pioneer was, in its general outlines, very simple. Isolated from practically all markets, he had to support his family with very little help from outside. He needed food, clothing, and capital. To gain these he carefully balanced two complementary types of industry, the raising of animals and the tilling of the soil. He united on one farm the pastoral and the agricultural stages of the arts. His acres not only supplied the needs of his household but furnished him with most of the articles of the currency of the region—beef, pork, wheat, rye, and whale oil.[2] Aided by his wife and his boys and girls, the adventurer who had perhaps started life in a cellar, with nothing save a few tools and animals, could by dint of hard work and careful planning lay the foundations for an establishment both self-sufficient and permanent.[3]

In the dual economy of the early pioneer it was inevitable that the ox should play a leading part. Like the

[1] *N. Y. Col. Docts.*, I, 267, 368; VI, 122-123; Jasper Danckaerts, *Journal* (1679-80), pp. 169, 230; William Smith, *History of New York* (1756), I, 272.

[2] *Huntington Records*, I, 161, 239.

[3] Large families were of great assistance in solving the problem of labor. Governor Dongan reported: "In this country there is a Woman yet alive from whose loins there are upwards of three hundred and sixty persons now living." *N. Y. Col. Docts.*, III, 391.

rest of the animals, the tough and hardy ox could forage for its living. Like the flocks of sheep and droves of swine, it was valuable at any time as a food product. The ox fitted perfectly into the animal husbandry of the pioneer herdsman. At the same time there could be no tilling of the soil and raising of crops without this same slow and powerful beast to draw the plough and cart. The animal had, therefore, a double value, one for each half of the dual economy which characterized the agriculture of the early settlements. The horse could be of service to but one of these. It was too specialized for the agricultural development of the day. Until the introduction of new conditions should give this fleeter and more intelligent animal an opportunity to show its superiority, the ox was to remain the most important source of power for the farmers of America.

With the passing of the seventeenth century, the period of the primitive struggle for existence in a new and untouched environment began to come to an end. The tiny villages of the settlers increased in size and, at the western end of the Island near the infant city of New York, new ones were built farther and farther from the shore. Trading ships moored at the crude docks were no longer a rarity. They came to the fiords of the north shore and the sheltered coves of the south, sometimes for legitimate trade but often to flout the navigation acts of England and smuggle illegal stores into the province of New York. The contact with the outer world caused a new life to pulse in the village settlements. In those communities where every man had been a jack-of-all-trades a division of labor appeared. Some put to sea as sailors or whalers. In the villages weavers, hatters, tailors, brickmakers, blacksmiths, carpenters, cord wainers, and coopers reflected the changing life. Merchants and "tapsters" bespoke the origin of commercial enterprise and

doctors marked an improvement in the standard of living.[1] It was during this period that the farmer, dependent solely on the land for his support, came into being. Gristmills, driven by wind and tide and small streams, relieved him of much labor and enabled him to handle larger crops.[2] The opening of markets caused the breakdown of self-sufficient agriculture. In the eighteenth century wheat from Long Island poured into New York to be shipped to the sugar-producing islands of the West Indies.

With the appearance of the new division of labor and the disappearance of the primitive struggle for existence, the unfolding life of the people of Long Island became more and more complex. To understand the evolution that followed, it is necessary to separate the various strands that are woven together to make the whole fabric. Only in the separate stories of the farmers, the whalers, the oystermen, and the rest are to be found the elements that make up the whole.

1 *Jamaica Records,* II, 74; *Huntington Records,* I, 268, 393; II, 448; H. P. Hedges, *History of East Hampton,* p. 79.

2 *Southold Records,* I, 212; *Huntington Records,* I, 98; II, 14, 87, 100.

CHAPTER III

THE INFLUENCE OF THE HINTERLAND

Physiography, climate, and location have all combined to make Long Island a farming country. The hills of glacial moraine and much of the outwash plains, covered for centuries with forest mould, offer a rich soil to the husbandman. A mild, maritime climate brings the spring earlier and holds the autumn later than in the interior. The great city at the entrance to the Hudson-Mohawk gateway offers a market without equal in America. Natural and societal forces, therefore, have made agriculture the basis for Long Island's civilization. In spite of the fact that the sea has pushed its influence to every crossroads, it has had less influence than the great hinterland in controlling the development of Long Island farming. The story of the farmer on this offshore island is closely bound up with that of the mainland, for the evolution of agriculture on the larger land-mass has dominated that on the smaller. Yet, with all this domination, Long Island has never lost its individuality. Its own development has never been lost in that of the whole.

The close of the long war of the Revolution ushered in a new era for American farming. Forces which had been occupied solely in the winning of the conflict were now freed to assist in the task of creating a nation out of the fragments that the war had left. Among the men who, in the critical years after the war, became prominent in the upbuilding of the political and economic life of America, was a small group who were convinced that "it is in a

spirited and flourishing husbandry that the soundest health and comfort of nations is to be found." In days when more than three-quarters of the American people were farmers, and yet when American agriculture was so bad as to be the subject of the sharpest criticisms from practically all observers, this group of men believed that national and individual greatness had its best foundation on the soil. "Those who seek for personal distinction in our government, and those who from disinterested and virtuous inclinations, perform duties the most honorable to themselves, and beneficial to society, will find the most solid popularity and durable fame in measures promotive of the interests of agriculturists; who compose the great body of the people."[1] It was this pioneer group of agricultural thinkers who were destined to set in motion an evolution of the greatest importance. Yet, if it had been suggested to any small farmer, following his plough over his Long Island farm, that he was witnessing the beginning of a great agrarian awakening, he would have smiled and urged on his dawdling oxen.

At the close of the eighteenth century, the hinterland of Long Island was a long, narrow strip of settled country, reaching roughly from the Potomac to New England. Its width was little greater than the distance from the sea to the Appalachian barrier. A traveler among the people of this region would have noticed that practically all were farmers, and that the important unit in the economic life of this region was the little rural hamlet of perhaps a few hundred inhabitants. As he traveled from place to place over unimproved roads and forest trails, he would have observed that the farms of this hinterland were divisible roughly into three types, each widely differentiated from the other, and only when he had seen and studied these types, would he have been able to understand the signifi-

[1] Philadelphia Society for Promoting Agriculture, *Memoirs*, I, preface.

cance of the life and development in the small farming villages that dotted the Long Island shore.

At the western border of the hinterland was the frontiersman, chopping his way into the forest beyond the Appalachians. Rough, weather-beaten, and independent, he was little different from his forerunner who, a century and a half before, had attacked the forests on the shores of Massachusetts Bay or Peconic Bay. He had discarded the awkward matchlock for the more modern flintlock but, otherwise, his tools and methods and problems were practically the same as those of the first settlers. His was the same isolated struggle for existence in an untouched environment. He girdled his trees and destroyed his timber lavishly. He "stubbed in" his crops, with no thought of rotation, until virgin soil became so exhausted that it would produce little but sorrel. Year after year the roads and the trails brought to his neighborhood a flood of new people, the ambitious and the luckless, the shiftless and the thrifty, from the older regions. With them came the foreigner. On the frontier mingled the American and the European, the reputable and the disreputable, the intelligent and the ignorant, a mixture of discordant elements bound together by the ties of a common lot and the frontier dreams of the future greatness of their section.[1]

As a prairie fire works its way across the plains and leaves behind a wake of charred and blackened stubble, so the frontier, pushing its eventful life steadily westward, left behind the dull listlessness and the impoverished fields of the back country. It was on the farms of this back country, covering county after county in the

[1] For contemporary accounts of the farming methods on the frontier see: J. B. Bordley, *Essays and Notes on Husbandry and Rural Affairs* (1799), pp. 448-449; The Philadelphia Society for Promoting Agriculture, *Memoirs*, I, preface.

interior of Pennsylvania, New York, and New England, that American farming could be seen at its worst. Long miles of almost impassable roads and trails lay between these farms, exhausted by years of ignorant or heedless cultivation, and the markets of the coast cities. Only the lightest products, of which whiskey was the most common, could cover the journey with profit. There was but slight incentive to improve the worn soil, when any material increase in crops, beyond what the farmer and his family could consume, must rot in his barn for want of a purchaser. From the enervating stagnation of these inland communities many men, plunged into debt, saw but slight prospect of extricating themselves. To such people "stay laws," to ward off for a time the demands of creditors, or a cheap paper currency, which would enable them to return to the money lender less value than they had received, offered the easiest ways out of the dilemma. Practically the only alternative was emigration to the frontier. It may be that the group of leaders near the coast who were initiating the science of agriculture were stimulated in their efforts partly by a fear of what this numerous debtor element might do. If this be true, the attempt was ill-advised. On the scrubby, badly managed, and practically self-sufficient farms of the back country there could be no progress until canals or improved roads brought them within the invigorating influence of a market.[1]

Long Island, at the end of the eighteenth century, was not a part of the back country. Its fields and meadows made up an important portion of that narrow zone within reach of markets which stretched, with few interruptions,

[1] The best analysis of the life and the agriculture of the back country is to be found in P. W. Bidwell, "Rural Economy in New England at the Beginning of the Nineteenth Century," *Transactions of the Connecticut Academy of Arts and Sciences*, XX, 241-399.

along the shore of the sea and drove reëntrant angles inland along the banks of navigable rivers. The region was as wide as the limit allowed for the hauling of miscellaneous farm products by ox-drawn or horse-drawn vehicles. For the people of this zone the ocean was the great highway. To and from New York, along the shores of Long Island, plied fleets of sturdy little sailing vessels, which put into the harbors and bays and moored at the docks of the shore villages or, as often, at the "landings" on creeks and coves that lay between. The docks and the "landings" were the centres to which the farmers hauled their produce. Here their loads were piled aboard the small crafts to be taken to New York and sometimes to Boston. At the end of the eighteenth century, therefore, the sea which had dominated the life of the early Long Island settlements was still a controlling factor and, throughout the greater part of the region, profoundly influenced the basic industry of the people.[1]

Though the countryside of Long Island had changed with the passing years since pioneer times, its farming methods had altered but little. If one could have visited the little hamlets of Hempstead, Huntington, Southold, or the rest, at the end of the eighteenth century, he would have found establishments quite typical of the Atlantic seaboard. The farms, one hundred or one hundred and fifty acres in size, were fenced with rails or posts. There were no stone walls, as in New England, but in some places where timber was scarce, could be seen the hedges of old England. Over the pastures grazed herds of flat-sided, mongrel cows, more distinguished for their hardiness than for their beef or dairy products. But the farmers fattened them and were satisfied. To these animals the "rat tailed" sheep of colonial lineage formed fitting companions. The Hempstead Plains, the Shinne-

[1] For a more complete account of this sea trade, see chapters X and XI.

cock Hills, and the blunt end of the peninsula of Montauk furnished ranges of exceptional value. Eastern Long Island was, at that time, probably better stocked with cattle and sheep than any of the neighboring farming country in either New York or New England. Growing on the fields of the farms could be found such staple crops as wheat, rye, barley, oats, corn, flax, and the common grass which was cut for hay. The yields were not large, because an impoverished soil, inherited from colonial times, was scratched with shallow and unlevel furrows and constantly drained by an exploitative crop rotation. Moreover, the Hessian fly ravaged widely in the wheat fields. When this crop failed, the farmers in desperation began putting a little manure or some menhaden fish on their wheat ground, but that was, in general, the extent of fertilization.

The tools of the Long Islander of those days, often clumsy and ill-contrived, were the same that Englishmen had used from the Middle Ages. He could have carried practically all of them on his back save the spike-toothed harrow, the awkward cart, and the Brobdingnagian wooden plough. Most of the grain was cut with the sickle, of long and honorable history, and all was threshed on the threshing floor with the flail, or beaten out by the hoofs of horses and oxen. The threshed grain was hauled to the tide mill or to one of the picturesque, great-armed windmills that dotted the eastern end of the Island. The "grist" which jolted homeward was the product of the summer's labor transformed into provisions for the bleak months of winter. The farm still produced most of the things that the farmer's family needed—food, fuel, and clothing. Some of his grain and animals, however, he took to the nearest "landing" and shipped to market. The income, thus derived, brought a meagre prosperity, which neither the frontier nor the back country knew.

The simplicity and the quiet of these Long Island farming communities, most of them sequestered from the more active world, tended to make these people more attentive to what was their own and gave their customs, especially those which had come down from their ancestors, a commanding influence on their conduct. Among such people the "new fangled" notions of scientific agriculture could meet with only a slow and unwilling acceptance.[1]

The time for a step forward, however, was almost at hand. A type of farming, developed to meet the primitive needs of the pioneers, was proving ill-adjusted to the new environment of cities and markets. As a result of the discomforts of this maladaptation came the first steps of progress. It was not, however, the man who held his own plough to the furrow who made the earliest attempts toward the improvement of agriculture, for the small farmer who, in the fall of the year, drove his "grist" to the neighboring windmill, had neither the leisure nor the capital for study and experimentation. Moreover, his judgments were narrowed and warped by superstitions, handed down from father to son for generations. If the man of the soil was unable to originate new methods, neither had the state yet been brought to see the necessity for supporting agricultural experimentation. There were no nonproducing agriculturists, maintained at public expense, such as are now found in the agricultural college or the department of agriculture. Agricultural science, therefore, could only begin under the leadership of men who had both capital and leisure. Such men must have a knowledge of farming at home and abroad and time

[1] New York Society for the Promotion of Arts, Agriculture, and Manufactures, *Transactions* (1795), I, 44, 136, 238, 232-233, 240; Bordley, pp. 37, 67, 140-141, 200-203, 335-336; Philadelphia Society for Promoting Agriculture, *Memoirs*, I, preface; Spafford, *Gazatteer of the State of New York* (1813), pp. 138, 187, 195. (The New York Agricultural Society will hereafter be referred to as *Transactions*.)

enough for study. They were not plentiful in the new country.

Scattered here and there throughout the farming country were to be found, at the close of the eighteenth century, the homes of the gentlemen-farmers, the American Sir Roger de Coverleys. Among them were the planter of the South, the manorial lord, descended from the old Dutch patroons of the Hudson Valley, and the man of commercial or professional prominence in the larger towns who signalized his success by the acquisition of an estate. They formed a group of high-spirited agrarian aristocrats, many of whom were conspicuous in the founding of the new nation, and they gave a prestige to farming and a prominence to agricultural problems scarcely rivaled at any later time. Crops, as well as politics, were discussed in the gossip of the best circles. America was distinctly a farmer nation. Here and there, in this aristocracy stood out a man, so interested in his calling as to be willing to devote much of his time and energy to the improving of his own fields and the spreading of the gospel of better farming. These men made up the group that laid the foundations of agricultural science in America.

The Rev. Jared Eliot, a member of the New England theocracy, was the voice crying in the wilderness preparing the way for the movement to come. His *Essays on Field Husbandry in New England,* first written in 1749 and published in collected form in 1760, made up the first important agricultural treatise to appear in the new country. The pioneers who followed Eliot, after the close of the American Revolution, formed a group of remarkable men. General Washington, owner of ten thousand acres on the Potomac, was the first farmer of his day. The friend and correspondent of many of the agricultural leaders and the originator of many improvements on his own acres, he would probably have been the foremost

figure in the new movement had his countrymen permitted. As it was, the great influence of his name supported and aided the work of others. Neighbor to Washington on the other bank of the Potomac was John B. Bordley, living at Wye, a lawyer-planter, and a former judge of the provincial admiralty court. Familiar with the work of the leaders of agricultural thought in England, he tried to bring their conclusions to the attention of Americans. After editing *Forsythe on Fruit Trees* and writing a number of special studies, he published one of the most complete and sound agricultural treatises thus far issued, *Essays and Notes on Husbandry and Rural Affairs*. In 1794, together with Richard Peters of Philadelphia, he was engaged in an unsuccessful attempt to induce the state of Pennsylvania to organize a state agricultural society. Peters, the other man interested in the effort, a leader of the Philadelphia bar and a United States circuit judge, was long a close friend and correspondent of General Washington. For years he was president of the Philadelphia Society for Promoting Agriculture. His essays, more than a hundred in number, covering practically every phase of agricultural research, published in the *Memoirs* of that society, form the great contribution made by that organization to the advance of agricultural knowledge.

It was but natural that Long Island, one of the most important farming sections of the day, should furnish a member to this group of agrarian leaders. Ezra L'Hommedieu was a New York lawyer and a Long Island farmer. During the Revolution he represented his state in the Continental Congress. He was one of the two leaders in the New York agricultural society and published in its *Transactions* a large number of able papers setting forth the results of his investigations and experiments. To the north of Long Island, in New England, Colonel David

Humphries, at one time ambassador to Spain, rose to agricultural prominence for his flock of merino sheep, the nucleus of which he obtained from the Iberian Peninsula during the Napoleonic wars. Greatest of the group, however, and dean of the new school of agricultural thought, was Chancellor Robert Livingston of the Hudson Valley. Jurist, statesman, and ambassador, Livingston seems to have found his greatest interest in farming. He was the dominant figure in the New York Society for the Promotion of Arts, Agriculture, and Manufactures. On his great farm were carried on all manner of experiments. His barns sheltered the best animals that he could obtain. In his office were letters and literature relating to almost every phase of agriculture. His pen was constantly being called upon to turn out many papers and treatises setting forth his theories, experiments, and conclusions. Livingston, like every one of his colleagues, was a man of distinction in a field other than farming. Although each did much in other lines of activity, it was their joint efforts that started one of the most important movements in American history. They were not alone. Other men worked with them. They were, however, the leaders, the pioneers who blazed the trail to better things.

The experience of these men was not limited to the happenings of their local parishes. They approached their task with a broad vision. All were familiar with the work of the English leaders, Tull, Bakewell, Townshend, and Arthur Young. Some of them had connections and correspondents in England. They drew their inspiration from the profound agricultural revolution that was bringing such changes to the farms of their late enemies. This British revolution was of the greatest importance in starting the new era in America.[1]

[1] Bordley, pp. 386, 567; Philadelphia Society for Promoting Agriculture, *Memoirs*, I, preface.

The ambitious projects of the American pioneers were as wide as agriculture itself. The small farmer sowed his cereals year after year with no idea that there were any other crops worth raising. Livingston and the others made an attempt to bring to the western shore of the Atlantic the root crops, beets and turnips, that were in vogue in England, and thus add a new element to the American rotation. Moreover, Livingston coveted the fame of introducing into the young nation lucern, later famous as alfalfa. He lived to see his effort crowned with a mild success. The American leaders strove to interest the small farmers in timothy and, particularly, in the "ameliorating" clover grasses that created "artificial" meadows to take the place of the scrubby lots of common grass. New plants, however, were not all. This first school of experimenters began the attempt, which has continued for more than a century, to raise the standards of American livestock. The mongrel cattle and the razor-backed swine came up for consideration. New breeds, usually of large cattle, began to be introduced from Europe. Interest centred, however, in sheep. The Napoleonic wars that gradually cut off America from European wool and cloth also broke up the Spanish cabanas. Both Livingston and Humphries brought Spanish merinos to their farms and started flocks of blooded sheep. Peters built up his flock in part from Barbary mountain stock. Others followed their example. High wool prices gave sheep-raising an importance, that diffused the new blood widely through the old "rat tailed" flocks. The growing of wool and the weaving of woolen cloth became permanent industries in America, and Livingston and Humphries were recognized as the two leading experts on American sheep culture.

The advocates of the new agriculture, however, were not content merely with the introduction of new crops and

animals. They struck at the root of the evil, the dissipation of soil fertility. They knew practically nothing of soil chemistry. Their conclusions were all empirical. On this foundation, however, they built solidly. An effort was made to do away with the soil scratching of the ordinary farmer. "Trench ploughing," with furrows at least ten inches deep, was experimented with and encouraged. Although the concept of humus had not been developed, the value of manure fertilizer was recognized. The work of L'Hommedieu and Bordley on the conservation and use of this product of the barnyard has been superseded by later men in but few particulars. L'Hommedieu, on account of the peculiarities of his Long Island neighborhood, went further. He gathered and published a considerable body of information relative to the use of menhaden fish for fertilizing purposes. For a number of years the farmers of the coast region had been applying gypsum or "land plaster" to their fields. Peters and Livingston independently made extensive studies of this calcareous fertilizer and both published conclusions favorable to its use. It was Bordley, however, more than any other, who went to the heart of the matter. In unsoftened language he condemned the usual three field rotation of "maize, wheat or rye, and spontaneous rubbish pasture" or the four field type of "maize, naked fallow, wheat, and the like mean pasture." He demanded that farmers adopt a six or seven year rotation and that they build it around the legumen clover. Neither Bordley nor any of his colleagues knew that the legumens added nitrogen to the soil. They only knew that clover and lucern left the land better for having been raised. "The man who manures the whole of his arable fields" and who does not shy at clover on account of the cost of the seed and the labor of raising it "will accomplish a great object, tending highly to his domestic comfort, his reputa-

tion, and his independency of creditors." No one, even in these days of the high development of the science of agriculture, can turn the yellow pages of the publications of these pioneer agriculturists without being struck by the clearness of their perception of the needs of the times and the sanity of the remedies they proposed. Their vision was broad and their purpose above reproach. "Let us cultivate the ground, that the poor, as well as the rich, may be filled: and happiness and peace be established throughout our borders."[1]

These pioneer experimenters labored under no illusions as to the attitude of the common farmer toward their work. They were of the cynical opinion that men of this class were "much more attached to their old customs than the people of other professions." The fog of superstition, the pride which prevented a man from admitting that other methods were better than his own, and the "degrading and shameful" excess of the crossroads tavern were all recognized as obstacles in the way of improvement. Nevertheless, they set themselves to the task of combating these things. They wrote books. They tried to interest their neighbors in the experiments on their farms. They organized societies, not in the country where the time for them had not yet come, but in cities, anxious to further their own interests by bettering the farming in their immediate environs. These societies published articles in the press and, from time to time, issued collections of theoretical and practical papers. They also offered premiums for a wide range of agricultural improvements. The leavening of the mass, however, was slow. The press did not reach all men and those interested in the formal papers of the *Transactions* must have been few. The bounties of the city societies seem frequently to have been ignored by the sturdy yeomen of

[1] Philadelphia Society for Promoting Agriculture, *Memoirs*, I, title-page.

the small farms, perhaps too often filled with the leveling doctrines of an Anti-federalist democracy, and in at least one organization they accumulated, unclaimed, in the treasury year after year.[1] Yet the movement did not fail. When its leaders had finished their work, new and unfamiliar crops were growing on many fields and better animals grazing on better pastures. To many men had come the vision of the new farming. Perhaps most important of all, however, there had been created a considerable body of agricultural literature, the first that America had known. Though obscured for a while by the stirring changes of the early years of the nineteenth century this literature was ultimately to become the foundation for the new science of American farming.

The real reason, however, why so many of the seeds of agricultural reform fell on sterile ground was the influence of the West. During the opening years of the nineteenth century, the farmers of Long Island saw the trickle of emigrants across the Appalachian barrier increase to a flood. The siren-call of the West lengthened, year after year, the caravans of Conestoga wagons that jolted over the mountain roads. Many families from the shore villages of Long Island Sound and Peconic Bay were among them. Sales of land in the public domain, which had averaged less than a hundred thousand acres a year from the close of the Revolution to 1800, leaped to eighteen million acres in the next two decades and aggregated seventy-six million in the two that followed, from 1820 to 1840. Why waste time and energy improving the worn-out fields of the East when an untouched empire lay beyond the mountains! Those who stayed at home on Long Island saw a new section come rapidly into being with its

[1] Elkanah Watson, *History of the Rise, Progress and Existing Condition of the Western Canals in the State of New York together with Rise, Progress, and Existing State of Modern Agricultural Societies*, p. 132.

own individuality, its own problems, and its own leaders. They began to hear the echoes of a new issue that had come out of the West. Henry Clay, of Kentucky, was demanding at Washington that internal improvements be built to connect the virgin fields beyond the mountains with the growing markets of the seaboard. They saw New York City, so long largely dependent on their farms for its food and forage, roused to competition with Philadelphia and Baltimore, and reaching out through the Erie Canal and a network of turnpike roads to tap the reservoirs of the valleys of the Genesee and the Ohio. In the effort to get to the West the old "back country" was crossed and its isolation broken. Counties, that had long been remote and stagnant, were stirred with a new life and became active competitors with the older regions for the eastern markets. Swiftly and surely, the farmers of Long Island saw their position of vantage disappear. What had once been one of the most important producing regions of the coast sank into relative insignificance. The hinterland had suddenly become a giant, which through ruthless competition threatened the very foundations of their institutions.

CHAPTER IV

VARIATION AND ADAPTATION

"The bane of this country, Squire, and, indeed, of all America," remarked an eastern farmer in the first half of the nineteenth century, "is havin' too much land; they run over more ground than they can cultivate and crop the land so severely that they run it out." When land was plenty and labor scarce, production per man rather than production per acre was, of necessity, the goal of the American farmer. "That's the reason you hear of folks clearin' land, makin' a farm and sellin' off again and goin' further into the bush." That was also why people were more interested in Governor Clinton's grand canal than in Chancellor Livingston's new farming. Internal improvements, to be sure, brought the competition of the West to the doors of the East, but they also offered the eastern farmer an opportunity to abandon a losing venture and to try his luck in the country of romance beyond the mountains. This was the situation that the stay-at-home farmer on Long Island faced, as the hinterland grew in size and power. His problem was to adapt his farming to a constantly changing environment.

It was the necessity, therefore, of meeting the threatened competition of the hinterland that brought home to the men of the coast a realization of the value of the work of the early agricultural experimenters. Competition compelled better husbandry. There was a touch of irony in the fact that Elkanah Watson, the pioneer promoter of the Erie Canal project, was instrumental, perhaps

more than any other, in bringing the new farming to the old farmer. Watson was not a member of the early school of theoretical agriculturists; he was its most distinguished pupil. As a business man he had traveled along the Atlantic seaboard and in Europe. Then he came under the influence of Livingston and became the friend of Humphries. In 1807, he gave up commerce and began farming at Pittsfield, Massachusetts. During the next four years he made his great contribution to the development of agriculture. By 1811, he had completed the organization of the Berkshire Agricultural Society. Watson was an able student of human nature and he used his best skill in forming a society that would appeal strongly to the small farmer of the early nineteenth century. He was convinced that success could only be achieved if the wives, as well as their lords and masters, became participators in the enterprise. The diplomacy that he and others used to win over these country women, unaccustomed to activities outside their own homes and fearful of arousing comment by appearing in public, is an interesting example of the different standards of this earlier generation. The purpose of the organization was to hold every year an exhibition of the best work and the best products of the locality. Prizes were awarded for preëminence in farms, animals, and crops, and the butter, cheese, and cloth made in the home. At the end of the exhibition came the general assembly, usually in the largest local church. It was here, amid impressive ceremony, that the honors were distributed, each prize accompanied by a certificate of distinction that, when framed, became a valued decoration in the rural household.[1]

The Berkshire organization had the good fortune to appear when the times were ripe for it. When Watson introduced it into one or two communities in eastern New

[1] Elkanah Watson, pp. 114-132.

York, it caught the popular fancy and began spreading rapidly from its own momentum. In 1817, it came to Long Island.[1] By the twenties, it had reached most of the states north of the cotton belt. The old communities of the East and the new ones of the West were both affected. The rapid growth of the Berkshire System, as it was called, was the first great movement for better conditions among the small farmers of America. In its way it played as important a part in the evolution of American agriculture as did the Grange of the sixties and seventies. By arousing the interest of the small farmer in his profession and stimulating in him a desire for improvement, it did much toward opening the minds of the vast, conservative agrarian mass to the new ideas and methods of the new farming.

These ideas, which Livingston and his colleagues had found so difficult to dispense, were now worth money. One of the most important results of the new and widespread interest in better farming was the birth of the farm press. For some time newspapers had been running columns of hints to farmers. Now, however, a few courageous editors were willing to risk the entire support of their publications with the men of the fields. They were the first nonproducing agriculturists. One after another farm papers made their appearance, *The American Farmer,* Baltimore, 1819, *The Plow Boy,* Albany, 1819, *The New England Farmer,* Boston, 1822, and *The New York Farmer,* New York, 1827. No longer were the benefits of agricultural experience limited to the local neighborhood.

It is one thing, however, to trace what seem to be the broad phases of agricultural development and quite a different thing to find out how these developments affected, if at all, the cultivation of the stony side hills of

[1] *Long Island Star,* IX (1817), no. 447.

the ordinary farmer. City people are too apt to think the story is told when the accounts of "organizations" and "movements" are finished. The picture of the new farming, as the small, ox-driving farmers of Long Island knew and practiced it, is not exactly what might be expected, but it presents an interesting contrast to the habits and methods of an earlier day. Instead of the old, unimproved roads of ruts and bottomless mudholes, turnpikes were beginning to stretch eastward from Brooklyn and Williamsburg. Farmers made up many of the companies that were building these. Although the tollgate was exacting its stipend, the cost of the trip to market was being lessened.[1] Over these new roads, after the beginning of the century, rolled a steadily increasing number of farm wagons loaded with sweepings from the streets of New York or refuse from its stables. Similar cargoes weighted down the fleets of small boats that plied their trade along the coast. The farmer who, a quarter of a century before, had been exploiting the land, was now spending his hard-earned money on soil fertilization.[2] Moreover on the farms near the shore the use of seaweed was increasing and many more thousands of menhaden were spread upon the fields.[3] Nor were the changes limited to new methods. During the second decade of the nineteenth century, cast-iron ploughs began to replace their wooden forerunners and grain-cradles to eliminate the time-honored sickle.[4] A remarkable revolution in agricultural tools was beginning.

On the fields of Long Island, along with new tools, unfamiliar crops were appearing. Here and there could be seen plots of the newly introduced turnips and patches

[1] For the details of this road building, see chapter XII.

[2] *Long Island Star*, I (1810), no. 36; XIX (1825), no. 35; Mitchell, *The Picture of New York* (1807), p. 160.

[3] Chapter VI.

[4] *Long Island Star*, VI (1815), no. 310.

of Livingston's alfalfa. The old meadows of common grass were beginning to be covered with clover and timothy.[1] At the western end of the Island, where at least one nursery had been started far back in colonial times, orchards of apples, peaches, and cherries told the story of a broader farming.[2] With them came the garden, not intended merely for the family use, but as an investment from which a money income might be derived.[3] At the opening of the nineteenth century, heralded by no less a poet than the bard of the Revolution, Philip Freneau, the "Market Girl" made her début.

> "At dawn of day, from short repose,
> At hours that might all townsmen shame,
> To catch our money, round or square,
> She from the groves of Flatbush came
> With kail and cabbage, fresh and fair."

The new farming, however, brought to Long Island a time of uncertainty, a period of experimentation, in which were tested many possibilities both as to crops and methods. It was becoming evident that the old farming must go, but what the new type should be few could tell. Gardening, horticulture, animal husbandry, and the raising of the common crops of the old days were all being tried. The farmers of the region, however, were feeling their way forward with caution. The famous English radical, William Cobbett, in 1817, living in exile on Long Island, thought them backward. He sought to introduce among his neighbors of the Island the general use of

[1] The new crops were Ruta Baga turnips, Cobbett, *A Year's Residence in the United States of America* (1818-19), I, 158; Mangel Wurzel beets, *Long Island Star,* VIII (1816), nos. 368, 374; alfalfa, Cobbett, I, 16, 22.

[2] *Long Island Star,* I (1809-10), nos. 5, 27, 35, 44.

[3] Spafford, *Gazatteer of the State of New York* (1813), p. 138; Cobbett, I, 41; *Long Island Star,* XIX (1828), no. 36; *Long Island Farmer,* II, no. 35.

turnips, but his efforts made little breach in the wall of conservatism.

The caution of these farmers was not, however, without a reason. Agriculture breeds personal independence. The farmers of America are and always have been individualists. The nature of the enterprise which they manage and the distance that separates them from their neighbors both conspire to make them an upstanding, self-reliant people. This independence found its origin far back in the days of the old frontier, when a man's farm produced all that he needed. During the eighteenth century, the husbandman of Long Island and the coast had modified, somewhat, the self-sufficient establishment which he controlled and allowed himself to become dependent, to the extent of selling his "cash crops" in a market over which he had no influence. In the early decades of the nineteenth century, he was confronted with another change. Not only was the new farming threatening the old independence, but standards also were shifting. A farmer must have a larger money income both to run his business and to support his home. This meant more crops for market and less for domestic use. He was becoming more and more dependent upon the buyer. During those unsettled years when men were crowding into the new settlements of the West and when turnpikes, canals, and the early railroads were opening up broad acres in the older country, markets fluctuated. No one could foretell from year to year what the conditions would be. If markets were unstable, the farmer, entirely dependent upon them, gave, indeed, hostages to fortune. It is no criticism of the small eastern agriculturist, therefore, to say that he adapted himself to the new conditions slowly. Nor is it surprising that the period of adaptation, the trying out of new crops and new methods, lasted for practically the entire first half of the nineteenth cen-

tury. For Long Island, however, two conditions brought this period to an end: one was the unprecedented growth of New York City in the middle years of the century; and the other the development of the American agricultural revolution.

By the time of the Civil War, the growth of American agricultural science was well under way. If scanty crops and scraggly meadows had been among the reasons for its appearance at the end of the eighteenth century, scarcity of labor was, perhaps, the dominant factor in its later development. The West had drawn off the people of the East only to spread a thin veneer of settlements over the plains of the Mississippi Valley. Neither West nor East had an adequate labor supply. Production per man rather than per acre was still the point of view of a nation that had more land than it could use. To increase a man's capacity to produce, therefore, became the aim of the forward-looking agriculturists. The result was the development of machinery that would enable the farmer to raise a greater acreage of crops. One after another, the labor-saving devices of present-day farming made their appearance. The new cast-iron plough came into general use about 1825. From 1830 to 1840, a primitive form of grain thresher was eliminating the flail and the threshing floor. In the forties, the "horse rake" relieved the farmer's wife of the necessity of raking the cured hay into winrows after the scythe. During the same years, the epoch-making reapers of Hussey and McCormick were increasing enormously the amount of grain which a farmer could raise and handle. In the following decade, the mower did for the hayfield what the reaper had done for wheat, and the modern type of thresher, which not only threshes the grain but separates it from the chaff, began to be hauled from farm to farm. These were the important tools. Beside them, a host of minor inventions

affected almost every phase of the farmer's life. The age of homespun came to an end.[1] The new tools spelled the doom of the ox. That great, slow-moving beast, admirably adapted to the simple needs of the old farming, could not compete with the specialized horse in the hauling of the machines of the new era. Thus the development of the agrarian revolution brought the first important change of power on the farms of America.

If the passing of the ox is one of the milestones marking the progress of American farming, another is to be found along the path of knowledge. In 1857, was established the Agricultural College of the State of Michigan, the first important institution of its kind in America. Three years later, after a series of "lectures and discussions at New Haven" in which Silliman participated, it was announced that a "large sum of money . . . has already been contributed toward the erection of commodious buildings for the Yale College Scientific and Agricultural School and, during the summer, a complete set of models and paintings of animals, of different kinds of agricultural implements, of fruits, etc., will be gathered for use in illustrating future lectures and discussions."[2] Whether because Connecticut farming was too backward to support it or for other reasons, the Yale Agricultural School never developed, although the importance of the Yale conferences was very great. In 1862, the Morrill Act of the United States government gave each state thirty thousand acres of government land or its equivalent, multiplied by the number of state's senators and representa-

[1] *Long Island Star,* XV (1825), nos. 807, 814; XIX (1828), no. 45; *Long Island Farmer,* XII (1831), no. 640; *The Cultivator,* I (1834), 52; V (1838), 7; VI (1839), 7, 36, 72, 181; VII (1840), 89; New York State Agricultural Society, *Transactions* (1842), p. 188; *Long Island Farmer,* XIV (1846), no. 36; XVIII (1850), no. 5; XIX (1851), no. 24; XXIX (1861), no. 12; *American Agriculturist,* XIV (1855), 15.

[2] *American Agriculturist,* XIX (1860), 102.

tives, to found a college of the agricultural and mechanical arts. Beginning with the Cornell Agricultural College, in 1867, more than forty institutions for the promotion of husbandry have been founded. With the development of these institutions farming definitely began to leave the "rule of thumb" stage and to enter upon that of science.

To Long Island, agricultural development brought the same general changes that it did to all the seaboard from New England to the cotton country, for the improved machinery, the changed power, and the scientific methods all speedily found their way to its fields. But in the issue the revolution there was fundamentally modified by the development of New York City. When, in 1825, a line of booming cannon, stretching from Buffalo to New York, announced the opening of the Erie Canal, forces were loosed which were ultimately to bring almost a complete overturn to the life of the Long Island people. The great Hudson-Mohawk gateway into the interior had, at last, been opened. During the years when the agrarian revolution was developing, canals, highways, and railroads had been carrying the products of the vast hinterland through the broad pass, and New York City, winning the contest with the other cities of the coast, became the metropolis of America. This great centre of population covered Manhattan Island and spread westward to New Jersey, northward across the Harlem, and eastward to the plains of Long Island. Brooklyn, absorbing the village of Williamsburg, became an important city. At the mouth of the Hudson the life of the hinterland met the great highways of the sea. Long Island lay just beside the meeting ground. He would have been dull, indeed, who could not have foretold the result.

The power of the larger New York came home to every hamlet from one end of the Island to the other, when, in 1844, wheezy locomotives rumbled, for the first time, over

the tracks of the old "main line" of the Long Island Railroad from Brooklyn to Greenport. Markets whose distance from the eastern villages had been measured in days were now only a few hours away. New York, like a great magnet, was pulling everything toward itself. Furthermore, the market had stabilized. For Long Island, the period of variation was at an end. The decision as to what Long Island farming should be had been made. Gardening was to be the lot of the Long Island farmer. The only task that remained was adaptation to the inevitable.

It was not easy, however, to leap directly from the general farm to the truck farm. It meant that the husbandman must learn a new business. It meant, further, that the last vestige of the self-sufficient farm must go. Under such circumstances, a conflict was inevitable between extensive and intensive agriculture. The farmers in the hill country of the northern half of Queens County became dairymen, producing milk for the consumption of New York and Brooklyn. In the sixties Westbury was the most important milk-shipping station of the Long Island Railroad. During the next two decades, the business grew to such proportions that in 1886 five hundred dairy farmers were found to sign a petition against an alleged grievance on the part of the railroad. Although, for a few years, the business underwent a boom, its days were limited. The time was soon to come when the land of Queens County would become too valuable to use for hayfields and pasture lots. Sooner or later, the intensively cultivated garden was bound to drive off the herds. By the end of the nineties the dairy business had practically ceased to exist.[1]

[1] *American Agriculturist,* XIV (1855), 73; XX (1861), 38; *Long Island via the Long Island Railroad* (1868), p. 18; *New York State Railroad Reports* (1884), I, 196.

Little would be gained by telling in detail the complicated story of the introduction of the new plants that brought the truck farm to Long Island in the latter half of the nineteenth century. On the farms at the western end, the gardens simply grew in size until they swallowed up all the fields. Here and there, a flower farm made its appearance. Night after night, the ever lengthening caravan of truckmen rolled into Brooklyn and across the ferry to reach the markets of New York before the opening morning hours. The story was but little different at the eastern end of the Island. Within a decade after the completion of the main line of the railroad, the potato output of Suffolk County had nearly doubled.[1] The years from the fifties to the nineties saw the rise and fall of the strawberry business on farms from Riverhead to Cutchogue.[2] With the decline of strawberries, came the introduction of crops that have stood the test of time, first cauliflower, then asparagus, and, finally, cucumbers and brussels sprouts.[3] These, together with potatoes, are the main dependence of the new eastern farmers. Down upon the green fields of the small farms, neatly laid out in parallel rows, look the quiet, great-armed windmills, picturesque and unused relics of a generation that has gone.

Together with the introduction of new plants have come other developments. The fertilization of the fields with

[1] French, *Gazatteer of the State of New York* (1860), p. 639; *Sag Harbor Express,* XIII (1872), no. 29; Hedges, *Bicentennial of Suffolk County* (1883), p. 43; *Long Island Traveler,* XXII (1892), no. 5; XXIX (1899), no. 1.

[2] *Sag Harbor Express,* XIV (1872), no. 1; *Long Island Traveler,* XV (1886), no. 43; XX (1893), no. 43.

[3] Cauliflower, *Sag Harbor Express,* XIII (1871), no. 21; *Long Island Traveler,* XV (1885), no. 11; XXX (1901), no. 41. Cucumbers, *Jamaica Farmer,* XLIX (1870), no. 21; *Brooklyn Daily Eagle,* LIX (1899), no. 278. Asparagus, *Long Island Traveler,* XV (1886), no. 40; XXX (1901), no. 41. Brussels sprouts, *Long Island Traveler,* XXXI (1901), no. 1.

fish was largely abandoned because the menhaden became too valuable. In its place carloads of manure were shipped, as they still are, from New York to be laid thickly over the mellow gardens. Here and there, overhead irrigation has made an occasional gardener independent of the rains. In other places, the vegetables have begun to be raised under the glass of a greenhouse roof. In more than one of the villages the canning factory, that institution which has taken so much labor from the shoulders of the busy housewife, has begun with the city market its competition for the output of the locality. Along the swamps of the Peconic River red-fruited cranberry fields, crossed by tiny canals and held in by dykes, have increased in size and number. Beside the shallow, tidewater creeks that empty into the quiet waters of Moriches Bay or into the eastern end of Great South Bay has occurred a development that is a direct adaptation to the peculiarities of the local topography. On these flat-banked creeks which broaden out into little estuaries duck raisers, furnishing thousands of ducks yearly to the New York markets, have laid out their noisy pens half on land and half in the water. What a contrast is there between the duck farms and the much cultivated gardens of the present day, whose products are hurried to market in motor vehicles over macadam highways, and the broad fields of old, ploughed by lumbering oxen, and the meadows dotted with cocks of hay cut with the scythe and raked by hand. The old farming has given place to the new, and only an occasional plantation, like a quiet eddy beside the main stream, remains to tell the story of what once was.

Looking back over a span that covers nearly three centuries, it is possible to see a little more clearly the rôle that the farmer has played in the story of Long Island. It is not too much to say that into his hands was given

the task of laying the foundation for the civilization of the region. He cleared away the forests and built and defended the first rough hamlets that dotted the shore. It was he who first laid out the roads that ultimately joined these settlements together. In the beginning, when practically all the people were farmers, it was on the fields and meadows that the life of the Island rested. During the eighteenth century a division of labor divided Long Island people into different occupational groups. By the end of that century a small school of theoretical agriculturists was beginning the science of agriculture. To the common farmer of the East the new ideas and theories made small appeal until improved transportation facilities brought the competition of the rejuvenated back country and the vast West to his very doors. The interest in better farming which economic necessity had aroused was greatly stimulated by the tremendous success of the Berkshire societies. The new state of mind of the farmer was almost immediately reflected in the birth of the farm press. Long Island reacted to these changes in much the same way as did other farming sections east of the Appalachians. It is not too much to say, however, that the first half of the nineteenth century, which saw the growth of revolution in farming, was a period of variation and adaptation not only for Long Island but for the whole of America as well. Before the revolution was complete, crop specialization by sections had made its appearance. The corn belt and the wheat belt had begun to be recognized. Dairy sections had appeared here and there and certain localities had been marked off for diversified farming. For climatic and geographic reasons Long Island became a garden and ultimately developed into one of the richest garden areas in America. Thus from the beginning of the garden phase Long Island has reflected very imperfectly the agricultural development

of the nation, though the change has not diminished the basic importance of agriculture for the civilization of the region. As the old range of low-lying hills that made up the first Long Island supports the tumbled glacial deposits that later eras have piled upon them, so the farmer, who was the first Long Islander, still supports the life that later generations have called into being.

CHAPTER V

THE THREE-YEAR VOYAGE AROUND THE WORLD

Not all the men of Long Island were destined to be farmers. Some chose to go down to the sea in ships. There is a relation between the land and the adjacent ocean full of significance for the man who lives on the shore. The sea pulls one way and the land the other. The shore dweller must choose between the two. There is no option. Long Island lies offshore like a great tree, uprooted and fallen in the water, its trunk and branches half submerged. To Long Island people, therefore, this choice has come in all its difficulty. It is not surprising that many have answered the call of the sea or that the story of the life of Long Island people broadens out to the ocean beyond the beach.

To the eastern peninsulas that enclose Peconic Bay clings a sea-tale well worthy of recounting. It begins with the first appearance of human life on the Island. In the years when the early colonists were founding tiny settlements here and there along the coast of New England and Long Island, the rough winter waters of the north Atlantic were dotted with whales. Many a fisherman, on his way to the Newfoundland banks, sailed past them. People standing on the bleak beach could see them often come nosing in close to shore. Like the bison on the yet unknown western prairies, they offered both sport and profit to those who would hunt them. These whales were to play an important part in the lives of the adventurous

men and women who built their cabins and their palisades on the shore at East Hampton and Southampton. It was an exposed beach against which drove the full force of the Atlantic. Offshore, where the sea had cut back the land, the water was shallow and the surf unusually heavy. Many a whale, unable to weather a winter storm, was driven onto the sands of this wind-swept peninsula lying far out to sea. So frequently, after a blow, did the early people of the Hamptons find a whale cast up that they quickly became familiar with the manner of handling the carcass. On their exposed beach American whaling is supposed to have begun. In 1644, within four years after its settlement, the men of Southampton divided the villagers into four groups, each group to take charge of all drift whales cast ashore in its ward. Whenever one was washed up, lots were promptly cast and two persons from each group selected to cut it up. In East Hampton, "oversears" were appointed by the town meeting to see that each man did his work and that "all be cut soe near as may be." The bounty of the sea was shared by all alike save the cutters, who received a double portion for their labor. When the work was done, the watchful Indians by right of treaty, were allowed to carry off the "fynnes and tails." On these exposed southern beaches of Long Island, therefore, whaling began as a community enterprise.

The aggressive Hampton frontiersmen, however, were not long content to wait upon fortune. On the tops of the highest sand dunes along the shore they planted watchmen, the men of the town being called out "by succession to loke out for whale." When the black, spouting mass was discerned in the gray offshore waters, the watch would sing out the alarm. It must have been a strange sight to see the quiet little village of cabins, tucked up for winter inside the palisade, suddenly rouse itself to energy

and excitement. At the sound of the familiar call, the street would suddenly be filled with men, women, and children running for the gate and the path that led to the water. Crude harpoons would clatter on the bottom of small boats into each of which six men would clamber and seize the oars. The breathless watchers on the shore could see a small fleet of these, hovering like kingbirds above a hawk, about the swashing whale. They could watch the risky chase as it zigzagged along the coast until the prey was killed or had disappeared in the rollers of the deep sea. The fishery had advanced from the collection to the hunting stage. If the whale was killed and the great carcass guided to the beach, the villagers had work for days to come.[1] First came the cutting up. Then the oil was tried out. When this latter task was reached, the romance of whaling came suddenly to an end. Nothing can describe the scene that followed a successful chase better than the unadorned words of a public order to the people of Southampton, issued March 4, 1669. "Whereas the trying of oyle so near the street and houses, is soe extreme noysome to all passers by, especially to those not accustomed to the sent thereof, and is considered hurtful to the health of people—and . . . is very dangerous (if oyle should fire) for firing houses or hay stacks, the cort doth order that noe person after this present yeare, shall try any oyle in this towne nearer than 25 poles from the main street of the towne, under penalty of paying £5 fine."[2] With "oyle" passing as currency in some of the local trade exchanges at the rate of one pound ten shillings per barrel the thrifty Hampton people could afford to put up with the olfactory discomforts of the business.[3]

[1] *Documentary History of New York*, I, 677; *East Hampton Records*, I, 54; Tower, *A History of the American Whale Fishery* (1907), pp. 19-25.

[2] Quoted from the record of the Court of Sessions for Suffolk County in Thompson, *History of Long Island*, I, 255.

[3] 1679, *Huntington Records*, I, 239.

As the seventeenth century drew to a close, there occurred a further development in the fishery. Whaling "companies" were formed. They were primitive concerns, simple associations of a few men owning small boats and tools. These companies usually hired Indians to man the boats. During the winter season, when the whales were in the ocean, these boats, manned by redskins and commanded by whites, could be seen working their way along the treacherous waters outside the barrier beaches of the southern Long Island shore. When night came, the parties would pull up on the beach and camp for the night. Sometimes these adventurous companies would be gone two or three weeks down the desolate and uninhabited coast.[1] Occasionally there would be an altercation with a representative of His Majesty the King of England, who would learn of a stranded whale and appear upon the shore to collect the king's share. Even the efficient Governor Andros, however, had to admit failure and report that "very few whales have been droven on shoare but what have been killed & claimed by the Whalers . . . and tho' I have not been wanting in my endeavours I never could recover any part thereof for his Royal Highness."[2] The prosperity of the offshore whale fishery grew until on Long Island in one year alone (1707) four thousand barrels of oil were made.[3] This year seems, however, to indicate a high-water mark. As the eighteenth century progressed, the business declined. In 1718, it was reported that the whales had left this coast. By the middle of the century, the industry had fallen into almost complete neglect.[4]

The reason for the decline of the Long Island offshore

[1] *Huntington Records*, I, 295; Tower, p. 23.
[2] *N. Y. Col. Docts.*, III, 311.
[3] *Ibid.*, V, 60.
[4] *Ibid.*, V, 510; Smith, *History of New York* (1762), I, 273.

whale fishery is not difficult to discover. To the east of Montauk Point, lay Nantucket Island, like a great boulder off the Massachusetts coast. On Long Island the pull of the sea had been strong enough to draw the people only to the waters off the shore. The sterile soil of Nantucket, however, joining its influence to that of the ocean, drove its inhabitants out into the deep sea. There being few other ways whereby to make a living, whaling became the dominant pursuit of the people of the region. Hardly had the eighteenth century begun, when ships from Nantucket were turning whaling into a deep-sea fishery. In 1712, sperm-whaling was begun by the men of that island. Year after year their sturdy, square-rigged vessels could be seen pushing farther and farther out. Some ventured as far north as the icebound waters of Davis Strait. Others worked their way southward toward the equator. On the eve of the American Revolution, the prows of Nantucket whalers were disturbing the waters of the Brazilian coast.[1] The little boat, creeping along the shore, could not compete with the seagoing ship. When deep-sea whaling supplanted the offshore type, the villagers of East Hampton and Southampton discovered that their coast was not suited to the industry in its new form. Neither village had a harbor. If the men who had formed the whaling companies wished to continue to catch whales, they must seek a home elsewhere. By the middle of the eighteenth century, a few had moved across the narrow peninsula and had established themselves on a sheltered arm of Gardiners Bay. "Sag" they called the new abode. In this new station deep-sea whaling by Long Islanders began. Their development, however, was far behind that of Nantucket. In 1760, Sag Harbor's three ships, *Goodluck, Dolphin,* and *Success,* made up her whole fleet, while fifteen years later, Nantucket was sending to sea one

[1] Tower, pp. 23-28.

hundred and fifty vessels. This tiny hamlet, south of Shelter Island, however, founded by whalers, was destined ultimately to become one of the great centres of the American fishery.

The battle of Lexington was the opening event in a long period of uncertainty and disaster for the whale fishery. This period did not end until, forty years later, Andrew Jackson defeated the British at New Orleans. For years, during the Revolution and the War of 1812, the guns of English warships blocked the paths to the open ocean. In the interim between the conflicts, John Adams's unpleasantness with France and Thomas Jefferson's policy of "peaceful coercion" were almost as disastrous to the whaler as formal wars. During these forty years, well named "the critical period of American whaling," the people of Nantucket suffered the greatest hardships. The Long Islander, however, was able to turn to other work until a real peace made the ocean once more secure. When the second war with England came to an end, a sadly diminished fleet put out from the old whaling ports to try again its luck at sea.[1]

At the outset of the building up of a new business, Sag Harbor met with misfortune. In June, 1817, the little town of closely packed wooden buildings was gutted by fire. Scarcely a store in the business section was left standing. The life of a whaler, however, is one long gamble. Neither fires nor shipwrecks need block his enterprise. By 1820, the village was fully able to meet again the competition of its rivals. These were more numerous than before the long period of war and uncertainty. New Bedford and New London had now taken their places beside Nantucket and Sag Harbor. From these four, of which the greatest was to be New Bedford, sailed the bulk of the great American whaling fleet which

[1] Starbuck, *History of the American Whale Fishery* (1876), p. 43.

swept the seven seas. Year after year, as new fields were opened up, an increasing number of vessels put off from the docks of Sag Harbor for voyages that rounded the Horn and turned northward into the Pacific. By 1836, there were twenty-one whalers, some of them from the "Eastern oceans," that called Sag Harbor home. Five hundred thousand dollars represented the investment of the villagers. It was the golden era of the whale fishery. During the forties, this village, now grown to more than three thousand people, fairly burst with prosperity. The forty-four ships in 1843 increased to more than sixty in 1847; the investment to more than two million dollars. Other towns also on Peconic Bay felt the pull of the sea. Jamesport and New Suffolk sent out an occasional vessel and Greenport had a fleet of twelve. With all the expansion, however, Sag Harbor remained the centre for Long Island.[1] At the wharves of this village were to be found the weather-beaten ships that had been around the world.

"I touch my country's mind, I come to grips
With half her purpose, thinking of these ships,
That art untouched by softness, all that line
Drawn ringing hard to stand the test of brine,
That splendour of fine bows which yet could stand
The shock of rollers never checked by land.
That art of masts, sail crowded, fit to break,
Yet stayed to strength and backstayed into rake,
The life demanded by that art, the keen
Eye-puckered, hard-case seamen, silent, lean,—
Earth will not see such ships as those again."

By the decade of the forties, when American whaling reached the zenith of its prosperity, great changes had

[1] Spafford, *Gazatteer of the State of New York* (1824), p. 491; Gordon, *Gazatteer of the State of New York* (1836), p. 715; Thompson, I, 349, 351; Mather, *Geography of the State of New York* (1847), p. 168.

come to the fishery. In those days, the Nantucket fleet was leading that of Sag Harbor by a few ships. New Bedford, however, was sending out more than two hundred and fifty ships a year. American whaling boats could be found in every ocean.[1] Changes also had come in the methods used since those early days, when the hardy people of the Hamptons had sent out their Indians in open boats. Instead of creeping along the stormy waters off Fire Island Beach, the Sag Harbor whaler set out for a voyage that often encircled the globe. Sometimes, if luck was good, he came back in two years. More often, however, the time was three or more. There were many trips that resulted in failure. Whaling was, after all, a fishery, subject to all the uncertainties of that most uncertain vocation. Some voyages brought a catch worth fifty and even seventy-five thousand dollars, and such opportunities brought able men into the business. The ocean saw no better seamen nor more intelligent leaders than the captains of the whaling ships.

Although ships were constantly coming and going, the sailing of a whaling vessel was an event in the life of the little village of Sag Harbor. The crowd of friends and relatives that gathered at the wharf to wave good-bye inspected an equipment brought to the highest possible pitch of perfection. The vessel, of four hundred or five hundred tons, was rigged for seaworthiness rather than speed. Just forward of the mainmast and imbedded in brick was the huge boiler for trying out oil. Above the decks hung the curved whale boats, twenty-eight feet in length and sharp at both ends, boats rowed by four men and capable of being handled with the greatest speed and quickness. As they hung in the blocks, each of them was equipped with the harpoons and the long, deadly lances used in the chase. On the decks below could be seen the

[1] Tower, Appendix, Table ii.

captain and one or two mates supervising the departure. Here and there on the vessel worked the crew. Among these were a few specialists, a cook, a steward, a carpenter, a blacksmith, a cooper, a doctor, and one boat steerer for each of the whale boats. In addition were the common seamen, usually sufficient in number to bring the total to about thirty men. The seamen were a motley lot. There were Indians and half-breeds from the reservation in the Shinnecock Hills, and with them were many choice spirits whose loss from the village community was not lamented. When the last rope had been cast off and the ship stood out to sea no one could foretell when or under what circumstances she would return. There were enough who never came back to give to such a departure a touch of solemnity.[1]

A favorite voyage of the forties was to touch at the Azores, follow down the west coast of Africa and, rounding the Cape of Good Hope, to cross the Indian Ocean to Australia. Here the whaler turned his prow northward. Sometimes he went to the whaling grounds in the Bering Sea, sometimes to the "offshore" grounds in the central Pacific. Many times he stopped at one of the Polynesian Islands to barter with the natives for supplies. On the homeward journey, the skipper rounded Cape Horn and, a second time, turned north. It was a long trip and a dangerous one.[2] Whales were not easy to catch. Of all the pursuits of the sea none were more exciting or more exacting in the skill and intelligence required for success than the whale chase in the open ocean. When the watch sang out the alarm, "There she blows!" the work began. The whale boats were lowered and made their way cautiously and silently toward the dark, spouting mass. Not

[1] *Long Island Star,* XX (1829), no. 50; "Reminiscences of John Fordham," *Brooklyn Daily Eagle,* LX (1900), no. 263.

[2] Fordham, *Brooklyn Daily Eagle,* LX (1900), no. 263.

seldom did the chase carry the boats so far away that the distant ship was but a small spot on the horizon. When striking distance had been reached, the captain or mate in the bow threw the harpoon and "fastened" the whale to the boat. Then began the manœuvring to get into position for casting the lance that struck through to a vital spot. It was in this manœuvring that the danger lay. Perhaps the whale, maddened by pain, would rush the boat, and more than one craft proved unable to avoid the onslaught and was broken to bits between the great teeth. Perhaps, if it were a right whale, it would dart about lashing the water with its tremendous tail and flukes, a blow from which would throw the boat well into the air. There were times when lives hung upon the ability of the boat steerer in the stern. Let the danger be never so great, however, few captains would willingly let their prey escape. The prize was worth too much. When it had been killed and the ship brought alongside, the oil and bone taken out would amount in value to hundreds of dollars. The product of the catch was divided between the owners and the crew. The men who shipped for the long voyage rarely drew wages. They sailed "on the lay," each man sharing according to a prearranged plan in the profits of the trip. This was the evolutionary outgrowth of the early community fishing at the Hamptons.[1]

When the ground had been covered, the ship with the oil and bone obtained turned her prow homeward to the little village on the eastern end of Long Island. The home-coming of such a whaler was indeed an event in the life of the town. As soon as she was sighted down the bay, boats put off filled with the owners of the vessel and the families and friends of the officers, while the news of the arrival spread through the streets. Almost as one,

[1] Many thrilling tales of whale-fishing are to be found in Starbuck, who gathered most of them from the whalers of New Bedford.

the people turned out to watch the weather-beaten whaler tack up to the crowded wharf. Well might the residents of Sag Harbor come out to greet the returning whaler. It seemed as though almost every man and woman in the village, in one way or another, was interested in the voyage. There were tales to be told and experiences to relate. The money brought into the community stimulated the business of the local retail merchants. Before the vessel could again put to sea, demands would be made on the cooperages for casks and barrels, and the ship chandleries would be called upon to furnish all kinds of miscellaneous equipment. Sailmakers and ship-carpenters would find plenty of work overhauling the vessel and putting her in shape for the next cruise, while blacksmiths would be busy replacing her irons and tools. In short, the whole life of the community was centred at the dock to which the people flocked to greet the home comers.[1]

In a totally different way, however, the individuals of the community were interested in the fortunes of the returning ship. The organization of the whale fishery was an ingenious adaptation to the ever present element of chance. Whaling vessels were seldom the property of individuals. Incorporated companies owned and controlled a certain fraction of the shipping. Four of these, Howell Brothers and Hunting, Mulfred and Sleight, Charles T. Deering, and H. and S. French were the most important. The majority of the vessels, however, seem to have been owned in a different way. Some individual in the community, often a whaling captain himself, would take the initiative in the raising of money to build a ship. Stock in the vessel would be issued and sold to the people. In this way both the risks and the profits of the voyage were distributed throughout the whole population. No one need be ruined by the failure of a single ship. It was

[1] Thompson, I, 349; *Sag Harbor Express,* I (1859), no. 60.

an organization centred in the idea of insurance and, as a result, it made the whole village one great whaling concern.[1]

No less swift than its rise was the decline of Sag Harbor whaling. In 1845, fire again blackened the streets of the town. Four years later the lure of the California gold fields took many of its citizens away from the sea.[2] But in spite of these setbacks the business flourished. In 1869, however, petroleum was discovered and in the succeeding years coal oil steadily replaced whale oil. This circumstance, coupled with the gradual disappearance of the whales, brought an end to the Sag Harbor fishery. By 1860, its fleet had dwindled sadly. After 1874, no more vessels put to sea.[3] During the hard years of the decline, the population of the little village diminished by half. When the end came Sag Harbor faced annihilation. The sole foundation on which the community had rested for more than a hundred years had crumbled. With the energy which is born of necessity the village sought to save itself. A cotton manufacturing plant was induced to establish itself in the town. After years of roving life on the broad seas of the world the people of the old whaling port were forced to settle down to the earning of their living beside machines in a stuffy factory.

Since the day when the last whaler tied up to the Sag Harbor wharf, the village has changed in aspect and interests. Change also has come to East Hampton and Southampton on the other side of the narrow peninsula. These villages on whose beaches the whale fishery began are now two of the most beautiful summer places in America. To these same beaches, however, every few

1 Gordon, *Gazatteer of the State of New York* (1836), p. 715; Fordham, *Brooklyn Daily Eagle*, LX (1900), no. 263.

2 *Sag Harbor Express*, XIII (1871), no. 21.

3 Tower, p. 124.

years, a whale comes nosing in and sometimes is caught in the pounding surf. More than once the villages have been stirred by the excitement of a whale chase like those of three centuries ago. The restless ghost of the old whale fishery still haunts the familiar shores whence the earliest whalers pushed off in their primitive open boats.[1]

[1] *Brooklyn Daily Eagle,* LVIII (1898), no. 9.

CHAPTER VI

"COOTS," "WATER WITCHES," AND ENGLISH CAPITALISTS

The menhaden fishery is not much known outside the small shore communities that are directly interested. It has little of the romance of whaling and does not demand the hardihood required in the quest for cod off the Newfoundland banks. There is scant material in this business of the sea with which to stir the imagination. Yet the story of the development of the menhaden fishery is not without value. The shore is the greatest boundary line in the world and the coast area the world's greatest zone of transition. Most people think of the beach line that runs from the Gulf of Mexico to the Gulf of St. Lawrence as the eastern edge of the United States and fail to realize that it is also the western rim of the Atlantic Ocean. Perhaps this story of the development of an obscure fishery, a story in which the sea plays none of its famous rôles, the great barrier, the highway for endless commerce or the source of limitless food supply, will serve to point out one of the lesser ways by which the ocean influences the lives of the people who live on the shore, and the silent power of that influence when it has once begun to operate.

Many an older resident still lives along the shores of Peconic Bay or Great South Bay who well remembers the time when the menhaden came frequently to those sheltered arms of the sea. He can recall the sudden appearance of vast schools of these fish, sometimes hundreds of thousands of them, rushing into the shallow offshore

waters, pursued, perhaps, by their voracious enemies, the sharks or the bluefish. The coming of these menhaden, swimming just under the surface of the agitated water, presented a strange spectacle. There were times when the bays seemed full. From time immemorial, these fish have migrated in the summer months from their haunts in southern waters or in the deep sea to cast their spawn in the sheltered coves and inlets of the North Atlantic coast. Booth Bay and Cape Ann, Narragansett Bay, Long Island, the Jersey coast, Chesapeake Bay, and even Cape Hatteras are the regions to which they came. It was in these bays and estuaries that the menhaden fishery began.[1]

There is a saying among some students of society that man adapts himself to his environment, not so much as it really is, but as he thinks it is. The traveler among the coast people of New England or Long Island at almost any time during the century and a half of the colonial period would have found a striking illustration of this. To the shores on which these people lived, the vast schools of menhaden annually came and were allowed to go away again with scarcely a net drawn to catch them. The local fishermen used a few for bait, but there was little more than that in the business. The "mossbunker" was not a food fish and was, therefore, considered valueless. The beginning of the fishery must, on this account, await the time when some need should arise which the menhaden could satisfy.

By the end of the eighteenth century, scanty crops and thinning meadows had begun to tell the story of the exhaustion which had come to the farm lands of New Eng-

[1] An indispensable reference for menhaden and the menhaden fishery is Goode, *Report of the Commissioner of Fish and Fisheries*, 1877, Appendix A. The sections which are not biological are composed largely of source material, reports, letters, et cetera.

land and Long Island. Exploitative and unscientific methods had borne their inevitable fruit.[1] For a century and more, however, the means for replenishing the soil had been at hand, little used and apparently but little thought of. About the time of the opening of the nineteenth century, however, when the damage had mostly been done, farmers began to make use of the great schools of fish which frequented the coast. Ezra L'Hommedieu, one of the group of pioneer agricultural experimenters, published a long paper of conclusions based on observations of his own and of others.[2] Within the first decade of the new century, the new fertilizer became well established. The people of the shore swept the bays and Sound and "covered their fields with immense shoals of whitefish."[3] It took eight thousand to dress an acre of land. Sometimes the fish were ploughed in. Sometimes they were left on the surface to putrefy in the sun. The pungent odor which arose from the decaying soil may well have been the reason why the use of "mossbunkers" did not at once become general. Profits, however, beat down æsthetic objections and the use of "bunkers" spread. Numbers help but little in giving an idea of the steady rise of the fishery. The hundreds of thousands of fish that were caught in the early years of the nineteenth century grew to millions when the first quarter had been passed. These, in turn, became hundreds of millions as the half-century mark approached. In the rejuvenating of the impoverished soil of Long Island the long-neglected "mossbunker" played a leading part. Better farming and bigger catches went hand in hand. The menhaden fishery was dependent upon agriculture.[4]

[1] Chapter III.

[2] *Transactions,* I (1801), 65-67.

[3] Dwight, *Travels in New England and New York* (1822), III, 305.

[4] Thompson, I, 440.

The organization of the menhaden fishery during this "agricultural phase" was a simple one. The first fishermen were mainly farmers who went out in boats to take the fish when they should appear. As the demand increased, "companies" were organized, devoting their whole time during the season to the capture of "bunkers." There were the "Coots," the "Fish Hawks," the "Eagles," the "Pedoodles," the "Water Witches" and a host of other "companies" scattered here and there along the sands of Peconic Bay or the lagoons of the south shore. The most important possession of each organization was a huge seine, sometimes fully three-quarters of a mile in length. A small, weathered, board shack on the beach was called "headquarters," and in this most of the meagre equipment was stored. When the surface of the bay was rippled, as by a puff of breeze, the "company" would hastily put off in large, sharp-pointed rowboats and bend to the oars to reach the school ahead of any rival organization. Swiftly the fish would be surrounded. Each boat would drop overboard the segment of the net it carried. The pieces would be coupled together and the ends of the great seine brought to the shore as near as possible to the headquarters shack. Horses would be hitched to the net at the water's edge and the fish drawn slowly up the beach. When all was done, a heap of glistening "bunkers," perhaps a hundred thousand or more, would lie piled up on the sand. Putting away their boats, the "Fish Hawks" or the "Water Witches" would begin counting out the catch. As the news of the haul spread throughout the countryside, the farmers would come flocking to the water to load their lumber wagons with the fish. When the last of these had jolted away into the interior, the great net would be slowly wound up on a giant reel and left in the sun to dry, while the watch again began his lookout for the disturbed water above another

school. It was the simple organization of an offshore fishery.[1]

The middle of the nineteenth century brought a change to the menhaden fishery. For some years, a few people had been trying with indifferent results to extract oil from the "bunkers" by boiling them in whalers' "try-pots." In 1850, however, D. D. Wells built on the shore near Greenport, Long Island, the first menhaden oil factory ever seen on the Atlantic coast. Great success did not immediately attend this venture for the product was of a dark color and exuded a highly offensive odor. Persistent efforts, however, on the part of Mr. Wells in improving his methods and machinery, soon developed an oil that was saleable. It could be used in painting and tanning and also for the adulteration of more expensive oils. The refuse left, after the oil had been expressed, was also utilized. This "scrap," as it was called, was dried, pulverized, and made into a fertilizer of great value that sold among the farmers of the eastern states as "guano."[2] The coming of the factory put an end to the simple agricultural phase of the menhaden fishery, which was now established for the first time on a basis that would justify a man in risking his entire livelihood in the prosecution of the enterprise. The farmer of the Island, however, finding his supply of fish depleted and "guano" too expensive for general use, was forced to bestir himself to a search for other sources whence fertilizer might be obtained.

The high prices of the Civil War period brought prosperity and also many competitors to the Wells enterprise.

[1] "Reminiscences of a citizen of New Suffolk," *Long Island Traveler,* XXVII (1898), no. 22; Prime, *History of Long Island* (1845), p. 74; *Sag Harbor Express,* XIII (1872), no. 48.

[2] Statement of B. H. Sisson, Greenport, quoted by Goode, pp. 446-447; *Long Island Traveler,* XLIX (1870), no. 37; *Long Island via the Long Island Railroad* (1868), p. 25.

Crude "factories," scarcely more ambitious than the "headquarters" of the "Coots" or the "Water Witches," began to appear on out-of-the-way stretches of the beach where their inevitable odor would offend as few as possible. To the docks of these primitive establishments the fishing "companies" brought their catches.[1] The factory, on the one hand stimulating the "bringing up of a hardy race of boatmen and sailors," brought also many people to the beach to do the necessary work on shore. It was the measure of the increasing pull of the sea.

With the coming of the factory a second change began to manifest itself in the menhaden fishery. The rivalry of the fishing "companies" inevitably led to the seeking of the "bunkers" farther and farther off shore. Sloops and schooners, sometimes of twenty tons' burden, began to follow the schools on Long Island Sound, Gardiners Bay, and beyond. After the turn of the century, the occasional whaler, tacking in toward Sag Harbor, met the boats of the new fishery standing out to sea to search for "bunkers" on the broad ocean. To meet the demands of deep-sea fishing the purse net was invented. When a fishing schooner sighted a school, she veered her course and drew near. Two rowboats, each carrying half the net, would be lowered and a circle of net laid about the fish. While the upper edge of this floated on the water, the bottom would be quickly shirred together with the long ropes attached for that purpose. The "bunkers," caught in a great bag, found escape shut off on every side. The schooner then would tack alongside the circle of floating corks and, with a scoop net, transfer the catch to the great storage tank in the boat. Although some of the old seining companies remained, the day of their importance was passing, as many of their number aban-

[1] Goode, pp. 446-447; *New York State Census Report* (1855), pp. 416-430; *Sag Harbor Express*, XIII (1872), no. 29.

doned the beach for the ocean. Menhaden fishing, which had called many men to a new occupation at the water's edge, was now steadily drawing them out to the open water as the business shifted from an offshore to a deep-sea fishery.[1]

The advent of the oil factory came just at this time of change. The factory, however, was not, at first, the controlling agency in the business. The fishermen were independent and cast their seines and purse nets when and where they would. The factories, dependent upon the fishermen for their supply of fish, were forced to compete with one another in prices offered.[2] To ensure as steady and as cheap a supply of "bunkers" as possible, some owners developed what were called "floating factories," hulls of old ships remodeled and equipped with the requisite apparatus. These, towed along the shore, saved time and expense by following the movements of the fish.[3] The primitive floating factory was an adaptation to the offshore phase of the fishery. It disappeared when shallow water fishing declined. It was inevitable, under these circumstances, that factory owners should begin to chafe at their dependence upon the fishermen over whom they had no control. They began sending fishing boats of their own to sea. Within fifteen years after the founding of Wells's first establishment, a majority of the oil-making companies were sending out their own fleets. This change marked the practical disappearance of the independent fisherman. Most of his old "companies" were broken up. He still went to sea to fish for menhaden, but now merely as one of the factors in an organization steadily growing

[1] Goode, pp. 119-124.

[2] In 1873, the proprietors of the Barren Island factories formed a mutual benefit association and decided upon the price that they would pay for fish for the coming year. *Sag Harbor Express*, XIV (1873), no. 29.

[3] Goode, pp. 175-177.

more complex. The risks of the fishery were shifted from his shoulders to those of the factory owner.[1]

During the first three decades of the "factory" phase of the menhaden business, a multitude of small oil-making establishments costing from ten to forty thousand dollars appeared along the north Atlantic shore. By 1877, the coast of Maine could boast fourteen factories of sufficient importance to be represented in the Maine Oil and Guano Association. Narragansett Bay supported thirteen concerns, of which nine were located at Tiverton. Farther to the west, five more dotted the Connecticut shore. Another five prosecuted their business on the Jersey coast at Somers Point and Tuckerton. Four factories were scattered along the Chesapeake from Norfolk to Baltimore. Even at this time, however, when the business reached its greatest regional expansion, Long Island, with its multitude of shallow bays and sheltered harbors, was the most important centre. The first ten factories of the pioneers had increased to fifteen on the beaches of the east end with eight more on those of the southern shore. Although, here and there, an isolated plant could be found, nearly all of the Long Island establishments were claimed by three centres, Barren Island in Jamaica Bay, Sayville on Great South Bay, and, most important of all, Greenport and Shelter Island on Peconic Bay.[2]

During the period of multiplication of small factories, occurred a change which was destined to alter profoundly the development of the industry. A spirited competition between the fleets of rival factories sprang up. Longer and longer voyages southward were made, though the speed with which a very perishable product had to be brought to the factory from distant fishing grounds distinctly limited the usefulness of the sailing ship. As

[1] Goode, p. 189.
[2] *Ibid.*, pp. 165-169.

factories grew and competition increased, the advent of the steamer became inevitable. The new boat required a smaller crew to handle her and her greater speed enabled her to undertake longer trips than her sailing rival. The change to steam caused nothing less than a revolution in the menhaden oil business. The small manufacturer of the seventies could rarely afford to purchase and maintain a steamer which in many cases would cost more than his entire factory. He had neither the capital nor the volume of trade to warrant such an outlay. But the exigencies of competition in the deep-sea fishery could not be avoided. The steamer was forced upon him. The inevitable result was the consolidation of the small factories. By 1895, the sailing vessel had been practically driven from the water and the twenty-three Long Island factories of 1877 had been reduced to eight. These were located at two centres, Barren Island in Jamaica Bay and the treeless isthmus of Promised Land on the Montauk peninsula.[1] These larger concerns marked the beginning of a new phase of the menhaden fishery, characterized by a highly intelligent adaptation to the maritime environment. Instead of waiting for the fish to come to the shallow offshore waters, small steamers pushed their prows well to the south and scanned every stretch of water where menhaden might be found. The sea had not only drawn the fisherman out from land but had greatly changed his method of work.

The movement toward consolidation, fostered by the demands of the new deep-sea fishing was, however, not yet completed. On the morning of November 19, 1897, when the people of Greenport picked up their local paper, those interested in the menhaden fishery were dismayed to read the following announcement which came without

[1] Goode, pp. 114-116; *The New Long Island* (1879), p. 22; *Jamaica Farmer,* XLIX (1870), no. 31; *Brooklyn Daily Eagle,* LIV (1894), no. 313.

the slightest warning: "A syndicate composed of English capitalists is negotiating for the purchase of the menhaden business at Promised Land. It proposes to buy the factories and the entire outfit, thus securing entire control of the menhaden business on eastern Long Island, and not only does this syndicate hope to obtain control of the Promised Land works, but it has also negotiated for the purchase of the National Oil and Guano Manufacturing Company, which has an office at Maiden Lane, New York, and is regarded as one of the most influential in the business. In fact it is believed that the syndicate proposes to corner the entire menhaden business of the Atlantic coast. The capitalists have offered the owners of the factories the privilege of selling out their business to the syndicate at a fair price or else run the risk of being frozen out, as they claim this will ultimately come, in due course of time. If the owners of the factories will not sell, the capitalists will then undertake the process of freezing out the individual owners. In order to do that they will secure a desirable harbor frontage, in the vicinity of the present factories, and then proceed to business. The capitalists claim to control a patent by which they can manufacture menhaden fertilizer with one-third less expense than is incurred according to the present method. In this manner they propose to freeze out the present owners, if they will not sell."[1]

This sudden assault upon the prosperous menhaden business brought consternation to the people. Disquieting rumors ran from village to village along the coast. "Fishermen are asking who the syndicate is. Is it the Standard Oil Co., the Sugar Trust, or an English syndicate?"[2] Would the Maine and Rhode Island factories sell out? Families whose support depended upon the

[1] *Long Island Traveler,* XXVII (1897), no. 12.
[2] *Ibid,* XXVII (1897), no. 17.

business became fearful that, in the event of a change, things might not fare well with them. Deep indignation at the cold-blooded attack appeared in every quarter. Behind closed doors the factory owners considered the situation in all its aspects. They understood that they were face to face with a corporation whose capital was reported at ten millions of dollars and which was armed with an invention that would enable it to undersell the most efficient of the local manufacturers. It was intimated to them that, in the new concern, American as well as British money was involved and that the Standard Oil Company, wishing to turn certain of its waste products into a profitable lubricating grease by the addition of cheap menhaden oil, was the American firm interested.[1] From November until February the owners considered the proposal. On the twenty-fifth of the latter month, all the important concerns yielded to the inevitable and, on that day, was consummated the final transfer of their properties to the American Fisheries Company.[2] With those of Long Island went practically all the factories of the Atlantic coast. The movement toward consolidation which had begun far back in the seventies now reached its dramatic culmination.

The problem which, at the outset, confronted the American Fisheries Company was of a distinctly geographical nature. Where should the great, new factories of the concern be located? The dominant factor in the problem was the annual migration of the menhaden schools from the warm waters of the Gulf region and from the deep sea up the Atlantic coast as far as Maine, a great north-flowing river of fish running roughly parallel to the Gulf Stream. The company decided to establish four oil-mak-

[1] *Brooklyn Daily Eagle,* LVIII (1898), nos. 2, 5; *Long Island Traveler,* XXVII (1898), no. 23.

[2] *Long Island Traveler,* XXVII (1898), no. 26.

ing centres from which steamers could be sent out to tap this living river. Delaware Bay in the south, Promised Land on eastern Long Island and Tiverton on Narragansett Bay at the centre, and the coast of Maine in the north were the locations chosen. Besides these an experimental factory was to be established on the Texas coast to try the possibilities of winter fishing in the Gulf of Mexico.[1] Apparently because of its central location and its nearness to New York, Promised Land was chosen for the headquarters of the company. The winter quarters for the fleet were sometimes at Greenport and sometimes at Tiverton across the Sound. The new company abolished competition. Long voyages to outdo rivals were no longer necessary because the factories of the concern had been so arranged as to divide the river of fish into segments. When the new large steamers brought a greatly increased catch to the improved factories, adaptation to the peculiarities of the menhaden fishery was complete. The only problem that remained was whether the supply of fish could hold out in the face of such inroads.

The reasons which had led to the concentration of the menhaden oil business of Long Island in one small locality at Promised Land were significant of certain important developments in the life of the Island. In the days of the early oil factories, establishments had been scattered at irregular intervals along the whole shore from Greenport to Jamaica Bay to utilize the fish which came to all those waters. By 1890, most of these concerns had moved to Promised Land in the east or to Barren Island in the west. After the coming of the American Fisheries Company, the Barren Island factories were given up and the whole Long Island business carried on at the eastern station. There was another reason for this change aside from the shifting of the fishery to the deep sea. The odor

[1] *Long Island Traveler,* XXVIII (1898), no. 2.

of decaying fish that inevitably arose from the menhaden manufacturing establishment was exceedingly offensive. Unpleasant as this was, the factory of the early days, built on an out-of-the-way part of the beach, was allowed to stay because many of the men and women of the locality were dependent upon it for their living. When, however, the summer people of New York began to come to the beaches of Long Island in sufficient number to increase their value, the situation was changed and a struggle was precipitated between the factory owner and the innkeeper. First to feel the new influence was the beautiful Shelter Island, from whose beaches the factories were expelled as early as 1872 by the strong arm of the law acting avowedly in defense of public health.[1] The story of Shelter Island was that of the whole Long Island coast. Everywhere, health officials began closing down or driving out the factories as fast as the local inhabitants entered into the business of caring for the vacation people from the city. The question presented to the factory owner was where to go. Promised Land, a narrow bleak isthmus of sand with the sea pounding on either side, a land of no farms, no villages, and no summer people, offered a safe retreat and refuge. Attractive from its very unattractiveness, set far out upon the Montauk peninsula near which flowed the great menhaden stream, a railroad skirting its beach of sand dunes and finding a terminus a little more than half a hundred miles away in the greatest industrial centre in America, Promised Land formed the ideal location for the maker of fish oil. To this centre ultimately gravitated the whole of Long Island's great business and here the American Fisheries Company established headquarters. At least one section of the "Long Island Barrens" had come into its own.

[1] *Sag Harbor Express*, XIII (1872), no. 46.

CHAPTER VII

BLUE POINTS AND BAYMEN

Stretching along more than half the length of the south shore of Long Island is the broad lagoon, called Great South Bay enclosed by Fire Island Beach. In these quiet waters, sheltered from the storms of the Atlantic by a narrow, tenuous sand reef, oysters can live and beds of oysters find conditions suitable for growth. Here oystering began in early times and has continued through many changes until the present. Crises and conflicts have marked its progress, the same crises and conflicts that have characterized the evolution of the business in the broader waters of the North Atlantic. The history of the oyster beds of Great South Bay is, on a small scale, the story of the development of the whole industry. For this reason, it seems worth while to consider this typical case before taking up the broader phases of the problem.

He who would know when or where on Long Island the oyster industry began, when or where the red man first eked out his store of maize and game by gathering oysters from the neighboring waters must forever have his query unanswered. On the shore he may stand beside the occasional piles of weathered shells that the Indian heaped together, but shell piles have no dates. The first white men left no better records. Not until 1680, when Jasper Danckaerts toured the region around the Hudson, is a reference to be discovered: "We found good oysters in the creek inside [Coney Island] and ate some of them." At another time Danckaerts went oystering at Gawanus.[1]

[1] Jasper Danckaerts, *Journal*, pp. 172, 174.

It can scarcely be said that there was an oyster industry at this time. Although the taking of the bivalve was apparently common in some waters, it was subordinate to other forms of activity of the early settler. Throughout the eighteenth century the farmer or the artisan gathered oysters, as he would go fishing or hunting. Men living by the sea, went out to take what nature offered. The oysterman had not yet appeared.

The growth and expansion of the oyster business in the old days depended directly upon discovery. Large natural beds existed in Great South Bay, Narragansett Bay, and Long Island Sound, veritable mines of marine wealth, but they were of no service until discovery made them known. Usually the locating of these was purely a matter of accident, for there is no evidence to show systematic searching for new areas. The large bed off Blue Point in Great South Bay was one of the first big finds in the history of the Long Island business. Before the beginning of the nineteenth century this field had been opened up and was being worked. The century was not many years old when the catch from this area had obtained sufficient prominence in the markets of the time to give to a product of superior quality the name which has lasted to the present, "Blue Point" oyster. It was the discovery of this rich bed that marked the beginning of organized oyster fishing in Great South Bay.[1]

The manner of working the Blue Point field was characteristic of the methods universally employed early in the business. The industry was in its "collection stage"; men seized the wealth they found and took no thought for the future to prevent its becoming exhausted. The very slight amount of capital required for the successful prosecution of the business merely made unbridled exploitation

[1] Hopson, *An Essay on the Oyster Industry* (1885), p. 49; Thompson, I, 441.

the more easy. An open rowboat and a pair of simple "tongs," two iron-toothed rakes with long handles, were practically all the equipment necessary. The "barons" of this early business "tonged" the bottom from the magnificent vantage point of catboats or small sharpies, but even these were not unduly costly. Few men were so poor as to be unable to procure the necessary tools, and the business required little skill on the part of the workman. The result was inevitable. An ever increasing group of men appeared who depended for their subsistence upon the products of the waters of the bay. They were called "baymen." The name has remained. They were a rugged type of men who braved the weather at all seasons in open boats. For nine months they lived on the profits derived from the oyster beds, and depended for the other three upon clamming and fishing. They were poor for the most part, but independent, masters of their own time and tools. In the early hours of the day a fleet of these baymen could be seen putting off from the coves and inlets that lined the shores. During the morning, the bay would be dotted with anchored rowboats and sailboats. In each of these were men leaning over the sides, lifting by hard manual labor bushel after bushel of bivalves from the bottom. It was slow work, for the tongs were clumsy and their load was small. From time to time the boats would shift their positions as the oysters were cleaned from the areas underneath. By the middle of the afternoon these small craft, piled high with the day's catch, would move toward shore to moor along the oyster wharves, where the product was taken out and opened. The business was simple and profitable. Season after season, the number of the baymen increased and the villages of the oystermen along the shore felt the stimulus of a vigorous industry. But it did not last. The bed was small and its product limited. The closer and closer

tonging of each succeeding year brought signs of exhaustion. Not many years had passed until exploitation proved fatal. In 1824, appeared the ominous record that Blue Point in Brookhaven had formerly been noted for its oyster fisheries.[1]

The history of the exploitation of the Blue Point beds is a story quite characteristic of the American of the first half of the nineteenth century, as is also the way in which the loss of such a bed was remedied. When the Blue Point oysterman set out to win back his failing business, he found fortune ready to make amends for his lack of foresight. He began to look for new beds and found them almost at his own door. The exploring of the next forty years brought to light a great area, twenty-three miles in length, extending from Smith's Point to Nicoll's Point, which was practically one huge oyster field. As long as the oyster industry remained in this primitive collection stage, just so long the growth and expansion of the business depended directly upon the discovery of such new beds.[2]

This huge Great South Bay field was a mine of wealth indeed, the exploitation of which brought fat years to the south shore bayman. Local villages were stirred into life and population grew. The oyster centre shifted from Blue Point to Patchogue.[3] Here began to be built a large cluster of packing houses. Others were established at different points along the shore. The packing house be-

1 Spafford, *Gazatteer of the State of New York* (1824), p. 61. The standard work on the oyster is Kellogg, *Shell Fish Industries* (1910). The work is primarily biological though it contains a useful description of the present industry.

2 New York State Commissioner of Fisheries, *Report* (1885), pp. 49-57. Other natural beds in Long Island waters were found in Oyster Bay, Huntington Harbor, Hempstead Bay, Smithtown Bay, off Eaton's Neck, Shinnecock Bay, Mecox Bay, and Jamaica Bay.

3 *Long Island via the Long Island Railroad* (1868), p. 54; *Long Island and Where to Go* (1877), p. 215.

came, in fact, the very heart of the early organization of the industry. To its docks the bayman every day brought his loaded boat and sold his catch. Under its roof the oysters were "shucked" and the "meats" put in gallon and half-gallon wooden kegs. From its doors reached out the distributing system which carried the product to its markets.[1] There were two of these, New York City and the local Long Island villages and countryside. To supply the latter trade two agencies were employed. One was the peddling wagon, which not only supplied the kegs of oysters to the country stores but also stopped, like the horn-blowing fishman of the interior, at the homes of the individual consumers.[2] The other was the small sailing boat that beat its way along the shore, putting in at villages, like Sag Harbor, where oysters were not found, and selling its wares from the open boat to the housewives who came down to the shore to buy.[3] Although the local trade was important, the great market was New York City. Into this centre tons of oysters were poured, some shipped over the old main line of the Long Island Railroad, others carried by fleets of small sloops, and still others hauled overland in wagons. In the development of the packing house and its auxiliary distributing and selling systems, the organization of the oyster industry in its exploitation stage reached its culmination. This organization had hardly been brought to perfection, however, when a change came over the business bringing results of the utmost consequence.

The new factor was the invention of the dredge. Like the tongs, the dredge was simple in construction and easy

[1] *Brooklyn Daily Eagle,* LIII (1893), no. 11. For an account of the highly developed packing houses of Chesapeake Bay, see *The Oysterman,* III (1906), no. 47.

[2] *Long Island Farmer,* XV (1848), no. 42.

[3] *Sag Harbor Express,* XV (1877), no. 24.

to use. A long bag of steel rings woven together and a mouth held open by a steel frame were the essential parts. A broad iron lip, scraping along the bottom, scooped in the oysters and a cable and windlass lifted the full dredge into the boat. In principle, the new invention was merely an adaptation of the fisherman's dragnet. The important qualities of the dredge were two. Its cheapness put it within reach of practically every bayman. Its efficiency enabled its owner to gather oysters at greatly increased speed and with a minimum of manual labor. There could be but one result. Every bayman who owned a sailboat went to the slight expense of installing a windlass and dredge, while his more humble brother of the open boat planned to save enough capital to buy the necessary sailing craft and fittings. By 1860, the new tool was almost universally employed.[1]

During the decade from 1860 to 1870, the dredge brought boom times to Great South Bay. Yields hitherto undreamed of were taken from the beds, as new areas, where the water had been too deep for tonging, were opened up. The profits of the baymen grew and, naturally, their numbers increased.[2] The prospects of the bay never seemed brighter. In reality, however, the prosperity was hollow. By 1870, too many men were working the Great South Bay beds and too many oysters were being taken from them. The story of the Blue Point fields was being repeated on a vastly larger scale. Unregulated exploitation was bringing unmistakable signs of exhaustion. Natural increase could not make good the losses to the dredge. No new beds, such as those which had saved the Blue Point baymen, remained to be opened up. Expansion by discovery had come to an end. The means of

[1] *Sag Harbor Express*, I (1859), no. 14.

[2] *Long Island and Where to Go* (1877), p. 54; French, *Gazatteer of the State of New York* (1860), pp. 544, 632.

livelihood for whole communities was threatened. People interested in the oyster business cast about for a cause to explain the impending disaster. The one hit upon was the most obvious though not the most vital. It was the dredge. On April 15, 1870, an act was passed by local authorities forbidding the use of anything but tongs in the taking of oysters from the public beds of Great South Bay.[1] In an effort to check the destruction of the oyster fields the lawmakers deemed it necessary to take a step backward in the management of the business.

This partial checking of exploitation, however, held out to the bayman but an indifferent prospect. During the full years of prosperity, while he was reaping the bounty of the great natural beds, a danger had arisen that had been little heeded. A competitor to the bayman appeared in the person of the oyster planter. Year by year, after 1865, this personage had been quietly leasing and bringing under cultivation more and more bay bottom. Many of the more progressive baymen were drawn into the new business. By 1870, oyster culture on privately leased land had become firmly established.[2] The law which forbade the bayman to use the dredge on the public beds did not apply to the privately managed fields of the new planter. The bayman must give up a highly valued advantage which his rival was permitted to retain. The smaller catches and lessened income which resulted when he took up again the long unused tongs, showed him the difficulty of competing with his more powerful and better equipped rival. It touched his pride of independence to go into the contest with one hand tied. But if he refused to give up the dredge, he brought speedy and inevitable destruction to those very beds on which his living depended. He stood between Scylla and Charybdis.

[1] Hough, *Gazatteer of the State of New York* (1872), p. 634.
[2] *Sag Harbor Express*, XIII (1871), no. 23.

CHAPTER VIII

THE COST OF PROGRESS

Oysters will grow and mature in waters in which they cannot breed. Upon this characteristic of the bivalve the business of oyster planting rests. The oyster farmer gets embryo oysters, "seed" as they are called, bred where conditions are favorable, and "plants" them on his fields. These fields have been prepared by covering them thickly with oyster shells, making a hard, smooth surface to which the "seed" can attach itself when it settles to the bottom. The period of maturing lasts from two to four years. The typical oyster farm is divided into four divisions, one of which is dredged clean and planted again each year.

Oyster planting began in America in 1855. In that year, the state of New York recognized by law for the first time property rights in sea-bottom land used for the raising of oysters. No rights could be had in "natural" beds where the bivalve bred and grew of its own accord, but "unproductive" areas where no oysters were to be found could be taken up and leased. The law had hardly been placed on the statute books when the first attempts at oyster culture were made off City Island, near New York. The venture was successful and the business spread. It worked its way into New York Bay and expanded along the Connecticut shore.[1] In 1865, with the

[1] In the early days of oyster planting in Long Island Sound most of the seed was obtained from the beds of the Chesapeake. When this tract declined, the seed was secured from favorably located beds along the Connecticut shore. The planters of Great South Bay obtained their seed, at first, from Maryland and later from Connecticut.

passage of a Queens County ordinance, it entered Great South Bay. Then began the struggle between the oyster planter and the bayman, the method of cultivation and that of exploitation.

The Queens County law, as was the custom of the time, limited the planter to three acres.[1] Although he could avoid this stipulation by taking out leases in the names of his wife and children, he could not acquire holdings of any considerable size. Such a system was not conducive to the rapid growth of oyster culture for the reason that a larger farm, of one hundred or two hundred acres, could be managed to better advantage than a small one. Holdings of three, six, or nine acres were too small to occupy the full time of the oysterman or of his sloop and dredge, with the result that he, together with his equipment, had either to lie idle part of the time or be employed at other tasks. It was but natural that, when his own fields were cared for, he should join the baymen in the working of the natural beds. It was inevitable that some of the more progressive among the latter should make the easy transition and set themselves up as small planters. In this way, in spite of the handicap of the three-acre system, oyster planting steadily spread in Great South Bay. Between 1865 and 1871, twelve hundred acres of unproductive bay bottom were turned into oyster farms.[2] There were many times when these aggressive farmers were scarcely more than within the border of the law. No bay bottom where natural beds occurred could legally be leased. The new planter, however, many times staked out areas temporarily exhausted by excessive dredging, with the plea that because there were no oysters in the area it did not come under the legal definition of a natural bed. The success of this plea brought dismay to the bayman.

[1] Hough, *Gazatteer of the State of New York* (1872), p. 546.
[2] *Sag Harbor Express*, XIII (1871), no. 23.

The bayman girded up his loins for combat. In 1871, an indignation meeting was held to oppose the carrying out of the oyster-leasing law on the ground that, ignoring the poor man, it gave the business into the hands of monopolists.[1] Two years later stronger action was taken. A petition was drawn up and presented "To the Honorable the Board of Trustees of the Town of Brookhaven." The paper reads as follows: "We the oystermen and baymen of Great South Bay, petition your venerable body to cease leasing lots for planting oysters in said bay by private individuals after April 1st, 1875. Our reasons for asking this are, that the ground most prolific for the natural growth of oysters is staked in and we are deprived of the means of gaining a living for ourselves and families. If your honorable body accedes to our request, we are willing . . . to pay a toleration fee of five dollars a year after the ground now leased is open to all oystermen paying said toleration fee."[2] The petition, however, came too late. The planters had more influence with the board of trustees than did the baymen. Instead of being checked, oyster planting steadily increased. In less than a decade, the oyster farmers were claiming an output equal in amount to that of the whole community of baymen. This change brought its inevitable result. The three-acre regulation broke down. In 1879, the township of Brookhaven modified this ordinance in such a way as to permit both the leasing of large areas and the organization of incorporated companies to carry on the business.[3]

Acting under the provisions of the law of 1879, individual farmers began to build up holdings, running sometimes into hundreds of acres. Some small companies,

[1] *Jamaica Farmer*, L (1871), no. 43.

[2] *Sag Harbor Express*, XV (1873), no. 24.

[3] New York State Commissioner of Fisheries, *Report* (1885), pp. 49-57.

controlled by local capital, came into existence, but these were neither large nor numerous. If the decade from 1850 to 1860 had been marked by the almost exclusive control of the oyster business by the bayman, that from 1880 to 1890 was characterized by the predominance of the individual planter. By 1890, twenty-five packing houses were to be found scattered along the south shore. The principal shipping points on the bay were Babylon, Bay Shore, Oakdale, Sayville, and Patchogue. Out of these villages between sixty and seventy thousand barrels of oysters were shipped every year, forty thousand to the New York market and the rest to supply the new and growing trade with Europe. Nothing in the old days of exploitation could surpass such an output. Oyster planting had come to stay.[1]

Such success attracted attention. The growth of the new business was watched. By the beginning of the nineties, interested parties were convinced that large corporations could be made profitable in Great South Bay. The economy which large-scale organizations would effect was important. The producing branch of the business could be united with the packing and distributing branch. Formerly the bayman and, later, the oyster farmer had sold to the packing company. If the packing company and the planter should become one, the middleman's profit would be saved. The scheme had already been successful on the Connecticut shore, where corporations had erected large "shucking houses" and had established regular markets for their products. In 1891, three large companies, supposed to be backed by New York capital, made their appearance in Great South Bay. Two thousand acres were at once leased outright. Oystering in southern Long

[1] *Brooklyn Daily Eagle*, LI (1891), no. 261; LIII (1893), nos. 11, 321; New York State Commissioner of Fisheries, *Report* (1885), pp. 49-57.

Island waters entered upon the last phase of its development.[1]

The new companies promptly introduced the most important improvement in the oyster business subsequent to the dredge. The rowboat of the early tongers had developed into the small sloop with a single drag attached. This sailing craft had grown in size until two dredges were dropped over the sides and a considerable crew was required for the handling. The sailboat, however, was at the mercy of calm and storm and, moreover, wasted much time in coming about, a manœuvre frequently necessary in dredging fields with fixed boundaries. In 1894, the first oyster steamer made its appearance on Great South Bay. *The Curiosity* was its name but the hostile baymen dubbed it *Hell's Wagon. The Curiosity* was a vessel sixty feet long, eighteen feet wide, and four feet deep and was built at a cost of five thousand dollars. It used six dredges and was manned by a crew consisting of a captain and four men. Its owners estimated that the new boat would do in a day six times the work of an ordinary sailing boat. Significantly enough the first large corporation and the first oyster steamer appeared on Great South Bay at almost the same time. It is also significant that the baymen named the new boat *Hell's Wagon*. This name measured the competition they were compelled to face.[2]

With the appearance of the large corporation in Great South Bay, the troubles which had long beset the path of the bayman reached their climax. Between the competition of the planter, on the one hand, and the growing exhaustion of his beds, on the other, he fought a losing fight. In 1883, when a crisis seemed imminent, he appealed to the ballot and won. A board of "free bay" trustees was

[1] *Brooklyn Daily Eagle,* LI (1891), no. 261.

[2] *Ibid.,* LIV (1894), no. 329.

elected in the township of Brookhaven. These men, acting in the interests of their constituents, passed at once an ordinance forbidding the further granting of oyster leases in Great South Bay.[1] The victory, however, was short-lived. It seems that the trustees had exceeded their power. Within a year, they were forced to rescind the measure. After such a setback, the bayman stood powerless before his enemies. In 1891, the rumor ran up and down the south shore that the new corporation had obtained options on about eight thousand acres of bay-bottom, including some of the best natural beds that were left. The bayman's answer was immediate. A protective league was formed to resist the aggression. William Underwood of Patchogue seems to have been the leader in the movement.[2] The legality of the leases obtained by the corporation was uncertain on account of a conflict over the title to the bay-bottom. Underwood, followed by others, trespassed on the land claimed by the companies and stood trial in defense of his rights. Feeling ran high and the court rooms were packed. The baymen stoutly maintained that, no matter what were the uncertainties of the title, the "oyster barons" had no legal or moral right to lease beds where oysters naturally grew. After five years of litigation, the New York State Court of Appeals handed down a decision in favor of Underwood.[3] Although the victory saved the beds for the future, in reality, it came too late. In 1893, the natural oyster fields gave out. For three years there was practically no catch.[4] The crisis, long impending, had, at last, arrived. A numerous population found itself without its customary means of support. The result was inevitable.

1 New York Commissioner of Fisheries, *Report* (1885), pp. 55-57.

2 *Brooklyn Daily Eagle,* LI (1891), no. 261; LII (1892), nos. 135, 261; LIII (1893), no. 358.

3 *Ibid.,* LVI (1896), no. 51.

4 *Ibid.,* LVII (1897), no. 210.

A lawless and irresponsible group among the defeated baymen made use of the last resort. In the year 1893, piracy, for the first time, raised its head in Great South Bay. "Down at Sayville on the Great South Bay armed men are patrolling the shore and a cannon is held in readiness to blow out of the water the first piratical craft that appears. Although three battles have already occurred, the first on Sunday night, the second on Tuesday, and the third on Wednesday, the pirates are as bold as ever. . . . One incident of the Wednesday night attack is especially noteworthy. Near midnight five sloops appeared on the beds . . . and notwithstanding the outcry from the shore, went to work dredging. The watchmen gathered together and fired volley upon volley at the pirates, but to no purpose. Finally a steam launch was brought into play. Lights were lowered and at full speed the launch was driven at the nearest sloop. But the damage was trifling, and the poachers with their pistols made the atmosphere so warm that the steam craft was compelled to beat an ignominious retreat. . . . [The watchmen] realized that it would be folly to attempt to board one of the piratical sloops, for they are well provided with shotguns and revolvers and, moreover, the crews are expert in the use of the oyster knife. . . . Thousands of bushels have been taken under cover of the night. . . . The pirates are said to live in the neighborhood of Patchogue and Blue Point."[1]

The planters at once pooled a thousand dollars to discover the authors of the violence. They aroused the fierce resentment of the community by trying to implicate Underwood, the baymen's leader. Detectives were retained and information sought. No culprits, however, were found and nothing important was accomplished. Gradually the trouble blew over. The pirates seem never to

[1] *Brooklyn Daily Eagle*, LIII (1893), no. 352.

have returned to threaten again the property of Great South Bay. Well might the oyster planter rest content to let the wrongdoers go unpunished. The most desperate among the baymen had made their last stand and had lost. Although men continued to take oysters from the natural oyster beds, the importance of the bayman was gone. Organized industry, as must inevitably be the case, had won. But, how costly in human struggle and suffering had the victory been! Progress, as always, had abandoned the man who could not maintain the pace.

The story of oystering in Great South Bay is, in miniature, that of the whole Atlantic coast. This general regional development can be sketched in a few words. Since the business began, two great oystering centres have existed, one in Chesapeake Bay and the waters of the Virginia estuaries, and the other in Long Island Sound and neighboring harbors. The business of Great South Bay was, in reality, a part of that of this northern area. The history of the two regions has, in many ways, been different, but the same principles have underlain the development of each.

In the beginning the Chesapeake beds were the larger and the richer of the two areas. The broad estuary at the mouth of the Potomac boasted some of the finest and most extensive natural beds in the world. "Oyster bars" they were called. Hundreds and thousands of baymen, equipped with tongs or with dredges, supported themselves by the catch obtained from these waters. In 1840, Maryland alone produced eight hundred thousand bushels. In 1870, the figure had risen to nine millions, and in 1884 the culmination was reached in the unparalleled figure of fifteen million bushels. This output was the product of the same methods of exploitation that had characterized the early years of the Great South Bay fields. So rich and so inexhaustible did the beds appear

to be, that oyster farming could not seem to gain a foothold.[1]

Exploitation, however, brought its inevitable reward and exhaustion began to appear. By 1890, the output had fallen from fifteen to ten million bushels. In 1900, the decline had reached the five million mark, and four years later it was still smaller. Many solutions for so serious a situation were proposed, prominent among them being anti-dredge laws like those tried years before in Great South Bay. But the Maryland legislators looked deeper than the surface. They sought to remove the disorder at its very root. In 1906, the Haman-Seth law was enacted, providing for the establishment of oyster culture. In 1912, acting under the provisions of this statute, Maryland began a detailed survey of all the waters of the state which was to be made the basis for the allotment of oyster leases. Even in the famous beds of the Chesapeake, therefore, cultivation had at last superseded exploitation.[2]

The story of the Long Island Sound development was a very different one. In these waters the natural beds, compared with those in Maryland, were small. If the industry were to grow here, the amount of oyster land must be artificially increased. This necessity gave rise to the planting method and forced that method to its greatest possible efficiency. Individual planters and small companies made an early appearance. As the Connecticut shore fields presented the best opportunities, the oyster companies of that region came to be the strongest. By 1890, Norwalk, Bridgeport, and New Haven had become the most important oyster centres in the North Atlantic. In each of these cities appeared one or more great companies, head and shoulders above the rest, cor-

[1] United States Coast Geodetic Survey, *Summary of Surveys of the Oyster Bars of Maryland* (1909-1912), plate facing page 9.

[2] *Ibid,* pp. 9-10; *The Oysterman,* III (1906), no. 30.

porations employing ten or a dozen large steamers and controlling thousands of acres. Gradually, these large concerns, imitated to a less extent by their smaller competitors, pushed their way into other waters. Narragansett Bay was invaded. The north shore of Long Island, Oyster Bay, Hempstead Bay, Northport harbor, and the rest began also to feel the Connecticut influence. Plants subsidiary to those across the Sound appeared upon Long Island shores, and shipping stations for the Connecticut products were established in Long Island villages.[1]

Great South Bay was far enough away to be at first comparatively free from this influence. In fact, companies of that region after they had settled the competition of the baymen, began a campaign of expansion and conquest into other waters. When, in 1899, it became known that Peconic Bay, with its large unoccupied area, could be turned into successful oyster land, a sharp competition arose between Connecticut interests and those of Great South Bay for the purpose of acquiring the best bottom in that region.[2] But the struggle could not be long, for the Connecticut corporations were larger and more powerful. Their expansion continued until, in 1910, one of the largest among them made its appearance in Great South Bay itself.

Although the bayman and the small oyster farmer still exist both in Connecticut and Long Island, consolidation and expansion have put the controlling influence into the hands of the great companies. These, with few exceptions, have their headquarters on the southern New England shore. Important as it is, the Long Island industry has, to a large extent, become an adjunct to that of Connecticut.

[1] *The Oysterman*, III (1905), nos. 3, 4.

[2] *Long Island Traveler*, XXVIII (1899), no. 38; *The Oysterman*, III (1905), nos. 4, 17, 18, 21.

CHAPTER IX

"SCALLOPERS" AND FISHERMEN

One who chances to stroll along the sandy beaches of Peconic Bay may pick up many a round, convex shell with a beautiful system of grooves radiating from the hinge at the side. It is the shell of one of the smaller bivalves that lives in shallow, offshore waters and is known as the scallop. The organism is relatively rare. The oyster and the plebeian clam can be found in small quantities almost anywhere along the coast, but with the scallop it is different. A few beaches on the coast of Maine, the Cape Cod hook, Buzzards Bay, Narragansett Bay, the northern shore of Long Island, and Peconic Bay are the regions where scallop beds exist.[1] Even these are not large. There are, in fact, no great scallop fields to compare with the vast areas of natural oyster beds which once were found so commonly along the Atlantic coast. Consequently, the scallop has never become, like the oyster, a great food staple. Its consumption has largely been limited to the villages and cities of the coast. For this reason the industry is obscure and the term, "scalloper," heard so much at the eastern end of Long Island, conveys little meaning a score of miles inland.

The beginnings of scalloping, like the beginnings of oystering, are lost in the obscurity of the past. Certainly, as long ago as the latter years of the eighteenth century, this bivalve was caught and used in America.[2] But no one

[1] Kellogg, pp. 336, 339.

[2] *Smithtown Records*, 136.

knows how much earlier the industry may have appeared. The earliest records give a picture not of origins but of a fishery fully developed. With this the enquirer must be content. The story of the Maine coast beds is a tale of fluctuation and irregular output. The unexpected finding of a bed, the flocking of baymen from far and near to share the profits, and the speedy exhaustion of the area form the greater part of the history of Maine scalloping.[1] The record of the beds of Cape Cod and of Rhode Island is much the same. But for the sheltered waters at the east end of the Island the story is quite different. Here, in Peconic Bay, is to be found one of the largest and most productive of the scallop areas of the North Atlantic.

The account of the finding of the Peconic scallop field has come down to us in the form of a local legend. Perhaps it was 1857, perhaps in the sixties, that one day a lone, mysterious schooner appeared on the waters of the bay off New Suffolk. The small craft began to beat slowly back and forth across the bay, dredging. Curiosity seized the people of the little village and boats put off to learn for what the stranger was searching. He showed a catch of scallops and, in answer to further questions, said that he was from Connecticut. Coming in he taught the people to open the valves and to take out and throw away the soft visceral parts of the organism, leaving only the great flexor muscle to be used for food. With the imparting of this information, he seems to have sailed away and left the villagers to profit by his discovery. Not long after this event, an ex-whaler of New Suffolk, left without a livelihood by the decline of the whale fishery, became interested in the possibilities of the find and dredged some scallops, which he sent to a commission merchant in New York City. In a few days the merchant wrote back that

[1] *The Oysterman and Fisherman*, XIII (1915), no. 1.

the product had spoiled because no one would buy the new article. He asked the ex-whaler, however, to send down some more for which he would try to create a demand. In this way scalloping in Peconic Bay began.[1]

At first the new business grew slowly, for it had to offer sufficient profit to divert men from other occupations. But as the possibilities for marketing the product increased it expanded. Farmers from the neighboring countryside began to spend some of the fall and winter days dredging the beds. During the height of the season, local fishermen often left their nets for a time to take a hand in the work. A few ex-whalers from Sag Harbor, in search of something to do, drifted into scalloping. The beds were rich and the number of dredgers increased. In 1873, a local paper informed its readers that "over 5000 bushels of scallops have been taken in Peconic Bay during the fall season," a catch that enabled the "scallopers" to coin "the almighty dollars by the hundreds."[2] Even at this early time the centre of the industry was at the little village of New Suffolk where "scallops and cauliflowers reign supreme." The lean years were relatively few, and more and more men became interested. Boats began to come to the fields from Greenport, East Marion, Shelter Island, Orient, Sag Harbor, and, at a later time, from Jamesport and Riverhead. "Eastern scallopers," probably from Maine or Massachusetts, migrating to Greenport, had, by 1894, swelled the number of vessels from that locality to thirty. Besides the men from the east, there came also, in the nineties, a number of baymen from Great South Bay seeking a means for making a livelihood which would take the place of that lost by the exhaustion of the public oyster fields of that region. By 1895, the

[1] Reminiscences of George I. Tuthill, *Brooklyn Daily Eagle,* LX (1900), no. 277.

[2] *Sag Harbor Express,* XV (1873), no. 23.

scallop fleet had grown until, during the height of the season, two hundred boats worked, day after day, back and forth across the fields. "The bay presents a lively appearance at times as white-winged craft from all sections roam over the beds."[1]

Long before the close of the nineteenth century, the simple organization of the primitive scallop industry had been completely developed. It bore a close resemblance to the oyster business in its early exploitation stage. In both cases there was an open and a closed season; in both industries the dredge was used. Most of the small catboats and sloops that made up the scallop fleet had originally been built for the baymen of Great South Bay, and, having been discarded by them on account of the exhaustion of their oyster fields, had been sold to the "scallopers" of Peconic Bay. The two industries were alike, moreover, in the actual method of conducting the fishery. Long before sunrise, during the busy days of the season, the boats of the scallop fleet could be seen shoving off from their small docks and putting down the bay to the beds. Each little craft carried two dredges, and was manned, usually, by two men who worked as partners. During the hours of the morning, the boats beat slowly back and forth over the field with both dredges over the side. These were dragged one just before the other, the first to clear away the seaweed from the bottom and the second to gather up the shellfish. Before noon, most of the craft returned to dock with the day's catch, which sometimes amounted to a hundred and fifty bushels. On the beach could be found clusters of small, weather-beaten sheds, the "scallop houses." No one of them was more than twelve or fifteen feet on a side. Each had a little pier at which, about noon, the scallop boat drew up to turn

[1] *Long Island Traveler,* XXIII (1893), no. 5; XXIV (1894), no. 4; XXVI (1897), no. 36; *Brooklyn Daily Eagle,* LIV (1894), no. 299.

the catch over to the "openers." A shed was used by a particular boat and the building was either owned or rented by the two partners who ran the boat. Standing in this structure before a broad shelf piled high with scallops, were to be seen the men, women, and children who were opening the shells. With incredible swiftness and dexterity they would force apart the valves, clear away the soft viscera and cut the great muscle from its hold. A few cents a gallon for the "meats" was the usual pay to the "opener," and, at this rate, a swift girl, during the busy season, could make good wages. The "meats" were packed in tubs and shipped to New York or the coast towns of New England.

For twenty-five years and more this organization has undergone no material change. The reason for this is a simple one. The oyster is sedentary and will stay where placed, but the scallop is not so dependable. Slowly and laboriously this organism can swim in a zigzag sort of way by the sudden forcing out of water resulting from a quick closing of the shells. "Jet propulsion," the biologists call it. By such a crude method of locomotion whole beds can migrate and will change their location from year to year. Until, therefore, some cheap and practicable scheme for enclosing a scallop field can be devised that winter storms will not tear down, planting, comparable to oyster planting, will be impossible, and the business must remain a simple, exploitative industry.

The scalloper, himself, is as picturesque a shore figure as any to be found on the coast. His business is a precarious one and the stakes of the gamble are the support of himself and the welfare of his home. Even though he take thought, he cannot predict from one year to another how large the scallop crop will be. If the fields chance to be fruitful, his life is easy and his pockets well lined, but, if fortune does not smile, he is plunged into want. Accus-

tomed to the risks of the sea in an open boat, he faces the risks of his calling with equanimity. The joys and cares of each day are sufficient and each morrow must look out for itself. As money comes easy, when the season is good, so easy it goes when the season is done. Often it happens that, by the time the beds are worked out, the wolf is again at the door. But the pride of his departed wealth still lingers. Known to have made many dollars a day on the water, he will rarely stoop to labor for a few paltry shillings on land. So it happens that when the lean months follow the months of plenty the scalloper still puts out to sea. Sometimes he turns to digging clams or catching crabs by way of occupation. More often, however, he goes off in his small sloop to spend his days in dredging "jingle shells." On the beach he heaps together great piles of these and sells them for a few cents a bushel to the oyster planters, who spread them over their beds to give a hard, smooth surface on which the tiny "seed" oysters may settle. Dredging scallops and "jingle shells," with a little clamming and fishing, makes up the round of life for this denizen of the shore. Poor but independent, living from hand to mouth, rugged and weather-beaten, the scalloper of Peconic Bay is still with us. Long may his beds remain fruitful!

There are few things about the sea that have appealed more to the imagination than the fisherman. The risks and the uncertainties which are the sport of the angler are the very foundations upon which he builds his life. The storms which, year by year, alter the beach line bring also changes to his villages. To the shores of Long Island the rich waters of the north Atlantic have drawn many people who spend their lives gathering the products of the ocean. The stories of many of these fisheries have already been told. There remains, however, the tale of the men with hand lines in dories or smacks.

This activity began with the first Long Island people. In the days when fishing must, of necessity, be a most important part in the frontiersman's struggle for existence, it was but natural that the fishing rights in the creeks and bays near the hamlets of the pioneers should be most carefully guarded. At such times, an interloper must be prepared to meet a brusque reception. East Hampton forbade any stranger taking eels or clams in the waters controlled by the town. Huntington added to an ordinance, prohibiting both fowling and fishing, a section warning off outsiders from clamming on the beaches owned on Great South Bay. The people of Jamaica were so much troubled that they sent a commission to the governor of the province of New York "for to represent to His Lordship the right that this Towne hath to the fishing of and in the creeks, broken marshes and bay within the bounds of the patent of the sd Towne for the preventing of strangers from coming to fish here." The interests of the amphibious hamlets of the Long Island frontiersman were as much bound up in their fishing as in their farming. Before the time of differentiation each supplemented the other.[1]

It is impossible to trace here the various steps in the emergence of the business of fishing with the net and the hand line. On Long Island, in the early part of the nineteenth century, it was almost always overshadowed by other fisheries, whaling at Sag Harbor, menhaden seining in Peconic Bay, or oystering in Great South Bay. Long Island, however, lay at the southern border of the area in which, for centuries, the great food fisheries of the north Atlantic have been carried on. It was inevitable that Long Island people should turn the resources of this area

[1] *N. Y. Col. Docts.*, I, 268; *Huntington Records*, II, 434, 436, 484; *Jamaica Records*, II, 79; *East Hampton Records*, IV, 266, 330.

to profit. Since that distant spring, in 1669, when "Try-alls" were made "with very good success," when several good fishing banks were found off Sandy Hook and the southern Long Island shore and a vessel was sent to Newfoundland "to gett fishermen lines hookes and other necessaries," cod fishing has played an important part in the life of the Island.[1] The Island smacks have never brought to port great catches such as those from the famous banks farther to the north. They have, however, done a creditable business. In 1830, boats engaged in cod-fishing registered an aggregate of eight hundred and fifty-nine tons. Even this small tonnage, however, declined by more than half during the decade of the forties when whaling was at the zenith of its prosperity. But fifty years later, after bluefish had begun to be caught to meet a growing demand, the boats of the Long Island fishermen registered nearly six thousand tons and were steadily increasing in number. Many a whaler, as his business went to wreck, turned from the harpoon to the hand line and the trawl. In the nineties, Greenport alone had twenty smacks that swept the waters off the Long Island and New Jersey coasts in summer for bluefish and in winter braved the rough waters of the same seas in the dangerous business of taking cod. There were usually three men aboard each of these boats and the load brought home, if the luck was good, was from five thousand to six thousand fish. These eastern fishermen, however, did not monopolize the business. Their colleagues of the Great South Bay worked the grounds outside of Fire Island Beach and often cast their lines inside the bay itself. Nor has the business ceased. The fish have not disappeared and the New York market has grown steadily more voracious. Many a family lives today along the shores of the Island, whose

[1] *N. Y. Col. Docts.*, III, 182-183.

ups and downs of fortune are determined by the running of the cod and the bluefish.[1]

Nor do bluefish and cod comprise the whole of the Long Island catch. Sea bass, weakfish, flatfish, eels, and mackerel are only the more important in a long list, with which must be ranked clams, crabs, and lobsters. It is a varied catch and the methods of taking are no less varied. If one were to stroll along the beach of Fort Pond Bay, on the north side of the Montauk peninsula, or on the inside of Fire Island Beach, near the inlet, he would see, during the season, long rows of stakes connected by nets protruding from the shallow water. These are the great fish traps, "pounds" as they are sometimes called, in which the offshore fishermen make their hauls. In 1901, there were one hundred of these along the shores of Montauk. Sometimes a small school of menhaden will run into the trap, followed by their enemies the bluefish, "the wolves of the ocean." The "bunkers" will be sold to the fishermen for bait or, if there are too many, to the oil factories or the farmers. At other times, the "pounds" will be crowded with weakfish, mackerel, or even cod. During certain seasons of the year, fykes are set on the bottom of Great South Bay. Sometimes, in the same region, eels are speared through the ice in the winter. This is a profitable business for the bayman when his work on the oyster beds has been checked by the cold. In the shallow tide-water creeks that empty into Moriches Bay and Great South Bay, the business of catching crabs has grown up and become extensive. A little sailing skiff or power boat, a heavy line two hundred yards or thereabouts in length, a small dip-net and several barrels are all the equipment needed for the occupation of "crab-

[1] McFarland, *History of New England Fisheries,* p. 17; Reeves, *Bicentennial of Suffolk County,* p. 96; *Brooklyn Daily Eagle,* LV (1895), no. 40; LVI (1896), no. 301; *Long Island Traveler,* XXVII (1897), no. 10.

bing." The line is held in place by two stakes in mid-channel and is weighted until it lies close to the bottom. Every yard or so is a piece of bait, usually a bit of salted eel. The "crabber," during the early hours of the morning, sails up and down the line, lifting it and taking off the crabs with his dip-net. It is a simple business.[1]

In fact, all fishing seems a simple business. Yet it is a work requiring skill, knowledge, and judgment. It cannot be mastered in a day or in a week. The fisherman must know the tides, the currents, and the winds. He must be familiar with the sea bottom where he sets his traps, and must know the habits of the fish he seeks. To brave the winter waters of the Atlantic in a small boat he must be a sailor of skill and daring. The results of the efforts of these fishermen are the tons and tons of edible fish that pour every week into the New York markets, from which they are distributed throughout the interior. Bred in the little shore villages, reared on the beach and on the sea, these fishermen of Long Island are worthy of note. Their contribution to the life of the Island and of the hinterland is not inconsiderable.

[1] *Brooklyn Daily Eagle*, LV (1895), no. 56; LVII (1897), no. 26; LVIII (1898), no. 295; LXI (1901), no. 293; *The Oysterman and Fisherman*, XIII (1915), no. 9.

CHAPTER X

PIRATES, SMUGGLERS, AND THE NAVIGATION ACTS

"Few interests have exerted a more marked influence upon the history of the United States than that of the fisheries. Aside from the value they have had in a commercial point of view, they have always been found to be the nurseries of a hardy, daring, and indefatigable race of seamen, such as scarcely any other pursuit could have trained." These seamen of Long Island, many of them brought up on the fishing smacks or trained on the whaling ships that left no sea unvisited, have played their part in the development of their native coast. It would be profitless to trace in detail the history of Long Island shipping and shipbuilders. The broad phases of the evolution, however, have their significance not only for the story of Long Island but for that of the whole Atlantic seaboard.

The three small villages of Southold, Southampton, and East Hampton, set between forest and sea at the eastern end of the Island, were isolated. Miles of water and of forest separated them from the nearest white people. The sea had brought the occupants of these hamlets to the storm-swept peninsulas on which they had built their cabins, and the sea was the only path that led back to the world they had left. They were self-reliant, these adventurous settlers who were gambling their lives and fortunes that they might wrest a living from the unknown country to which they had come. After the manner of

pioneers they were forced to supply with their own hands practically all the needs of their families. The "people of L. Island are very poor and labor only to get bread and clothing, without hopes of ever seeing a penny of monies."[1] Yet there were some things that must be brought from the outer world and some things that the local communities could not consume. A trade exchange was inevitable. The only highway that offered was the ocean.

The little settlements in the eastern townships lay between two important centres, Boston to the east and north and the Manhattan trading post to the west. Coming from the same Puritan stock, it was but natural that the Long Islanders should turn their prows toward Boston and avoid the Dutch at New Amsterdam or their British successors of the Duke of York's colony, although the latter claimed jurisdiction over the entire Island. When to make the trip down the Sound from Peconic Bay to the New York docks sometimes took six days, it is not strange that the New York officers of the law found it practically impossible to hold the trade of eastern Long Island to the post at the mouth of the Hudson. "Most part of the people of the Island, especially toward the east end, are of the same stamp with those of New England, refractory and very loath to have any commerce with this place [New York] to the great detriment of the revenue and the ruin of our merchants."[2] The trade which the western merchants wanted was in whale oil, which the people of the Hamptons spent much of their time and energy in obtaining. The Dutch were unable to coerce these outlying inhabitants of the domain they claimed and the English inherited an unsolved problem. The New York

[1] *N. Y. Col. Docts.*, III, 106.

[2] *Documentary History of New York*, I, 166-167; Smith, *History of New York* (1762), I, 273.

assembly passed an act imposing a ten per cent duty on certain trade exchanges with neighboring colonies. It was intended to prevent the people of the eastern settlements "carrying their oyle to Boston and bringing goods from thence into this government."[1] The troubles of Dongan, governor of the New York province, in enforcing this act can be told in no better words than his own in his report of 1687. "They thought it a hardship to be obliged to come to this city to enter & clear and on their application were allowed to have a port. . . . Notwithstanding the desire of theirs was readily granted they refused to take our merchants money or goods and carried away their oyle privately to Boston and brought back goods from thence privately as formerly. Therefore with the advice of the Council . . . I have bought a Bark that cruiseth there with a master, two seamen, a sergeant & six soldiers from the garrison."[2] The governor's display of force does not seem to have been so overwhelming as to frighten seriously the hardy seamen of the eastern villages. The forbidden exchange was not stamped out.

The illegal trade which Dongan set out to check was not, however, confined to that with Boston. In 1660, the British government began its long attempt to direct artificially the flow of commerce between Great Britain and its colonial dependencies. But though it was an easy thing to pass navigation acts at Westminster it was quite a different matter to enforce them on the long, sparsely settled American coast. As early as 1671, a ketch, owned partly in Southampton and partly in Southold, was trading between those villages and Barbados in the West Indies.[3] The latter were the great storehouses of wealth in the old colonial days, and quite as often as not traders

[1] *Documentary History of New York*, I, 166-167.

[2] *Ibid.*

[3] *Southold Records*, I, 293.

from New England or New York passed by the British colonies in the Caribbean and risked a visit to the forbidden French or Dutch islands. Smuggling offered an opportunity for profit that the energetic colonists on the shores of America were not long in seizing. Of all the stretches of the Atlantic coast north of Chesapeake Bay, Long Island offered the best opportunities for this traffic. To uphold the majesty of the law in the isolated settlements of Peconic Bay was practically impossible, and even farther to the west, near New York, it was found "very difficult to discover the frauds & cunning practices wch may be used by the Merchants, Importers or Exporters by reason there are soe many Islands & by-places from wch they may soe easily convey in and out without being discovered."[1] Huntington was the scene of at least one raid. The great centres of the business were "Sitaket, Oyster Bay and Musketo Cove."[2] The energetic Governor Bellomont endeavored to meet the situation by a vigorous enforcement of the law. Among other things, about 1699, he "constituted one John Townsend a customs house officer" for the region beyond the East River. Townsend undertook the task cheerfully enough, "but within a month he and his securities . . . came and begged he might resign his commission, telling me that most of that town [Oyster Bay] were his near relations and several of them of his name, yet he was threatened by them to be knocked on the head, and he had already suffered many abuses, in so much as he was in fear of his life."[3] Bellomont estimated at this time that the "Excise of Nassaw Island if duely collected would amount to £12000 per Ann: which is twelve times as much as I doubt it will be let for this year." The eighteenth

[1] *N. Y. Col. Docts.*, III, 305.
[2] *Ibid.*, IV, 516-517.
[3] *Ibid.*

century opened and grew old with the departments and officials of England still working at an unsolved problem. The cumbrous British administrative system was never able really to enforce the trade laws. Various expedients were resorted to from time to time but with little real success. More than once the suggestion was made that a ship be kept cruising at the entrance of the Sound to prevent smugglers from running in, but the suggestions never seem to have resulted in any permanent accomplishment. In 1764, the year before Grenville began his ill-fated policy to enforce the Navigation Acts, the report was still current that hardy and skillful adventurers were using the north shore of Long Island for circumventing the trade regulations of the British Empire.[1] Distance from the seat of authority, nearness to a growing centre of trade and exchange, and a sheltered coast, indented with numerous harbors, all conspired to make Long Island one of the great American centres for eighteenth-century smuggling. The traders were far more skillful than the lawmakers in adapting themselves to the peculiarities of the western environment.

The people of the eastern villages early found another means of gain, and one hardly to have been expected of the worthy Puritans who set out from old and New England to build their homes and to worship God in the wilderness. They were, however, subject to a strong temptation. Long Island stretched its narrow length far to the eastward of New York. Scores of miles of almost trackless forest separated the people of Peconic Bay from those at the mouth of the Hudson. For the villagers even of Southold the Connecticut shore was but a hazy line on the northern horizon. In the days at the close of the seventeenth century, when piracy was at its height, Long Island had an important part in piratical ventures. "I

[1] *N. Y. Col. Docts.*, VII, 666.

understand," wrote Bellomont in 1699, "that about 30 pirates came lately in the east end of Nassau Island and have a great deal of money with them; but so cherished are they by the inhabitants that not a man of them is taken up. Several of them I hear came with Shelly from Madagascar. . . . I too hear that Captain Kidd dropp'd some pirates in that Island. . . . They write from New York that Arabian gold is in great plenty there."[1] "Arabian gold"! These days were, indeed, far removed from those when the people of Long Island labored "only to get bread and clothing, without hopes of ever seeing a penny of monies." It is not strange that the gentlemen who had brought about the change came to be known, not as "pirates," but as "privateers."

We, of a later generation, have come to look back upon the days of these freebooters of the sea as a period of romance. From the Red Sea south around the Cape of Good Hope and past the West Indies, to New England stretched a vast extent of ocean that saw the activities of these adventurous buccaneers of old. The picturesque Captain Kidd who, in 1691, sailed away in the *Adventure,* armed with thirty-four threatening guns, to put an end to piracy, only to become, himself, the greatest among the pirates, is but one of the many adventurers who wandered from the paths of convention. To the energetic Earl of Bellomont, governor of the province of New York, it was hard work, trying to clean out the pirates' nest at the eastern end of the Island. His letters to his superiors in England were full of the difficulties of his task, yet each of them was ample for a stirring tale of the sea. One of these letters tells of the connivance of his predecessor with the freebooters that threatened the commerce of the ocean. Another recounts that Rayner, later to be apprehended by Bellomont himself, had landed at the eastern

[1] *N. Y. Col. Docts.,* IV, 532.

end of Long Island with a chest of treasure "valued at fifteen hundred pounds," but had been seized by the sheriff. This unpleasant circumstance made it necessary to approach the governor with the persuasion of a "considerable reward," a manœuvre crowned with complete success. In 1699, after Bellomont had became governor, a pirate ship from the East Indies was brought to the east end of Long Island and sunk between that Island and Block Island. Its treasure, concealed on the latter, was recovered and confiscated by the governor of Rhode Island. In one letter Bellomont lays bare the skeleton in the closet of the chief justice of the colony, who owned an extensive grant on Long Island. "I confess that I cannot have a good opinion of Colonel Smith; he knows what pressing orders I have from England to suppress piracy, and if he were honest and did his duty, there would not a pirate dare show his head in the east end of Nassau Island, he is so seated toward that end of the Island that he could disturb and seize them as he pleased, and yet that end of the Island is at present their rendezvous and sanctuary." Those were indeed stirring times. They were, however, soon to pass. In 1699, the great Kidd was apprehended in New England and sent home to face a jury and the gallows. Bellomont secured possession of one of Kidd's crew who had been aboard the pirate's sloop at the east end of Long Island and who had carried off treasure to the value of about £5000. He was sent to England with his chief. During the winter of the following year, the successful earl had the satisfaction of hearing that a pirate ship was hovering cautiously off the familiar eastern beaches until the disposition of the governor had been learned. When the scouts who had gone to New York had returned, the boat and its black flag disappeared. The eighteenth century was not many years old when the period of romance for "Nassaw

Island'' came to an end. The people of the ''pirate's nest'' at the eastern end, save for a little smuggling, settled down to the prosaic business of earning an honest living.[1]

[1] *N. Y. Col. Docts.*, IV, 31, 256, 274, 303, 304, 307, 308, 327, 508, 512, 532, 535, 595, 710.

CHAPTER XI

SEA TRADE AND SHIPBUILDING

The years of the eighteenth century saw the beginnings of a new development in the history of Long Island sea trading. The country was filling up with people, and a narrow band of settlements along the north shore was beginning to make a connection between the eastern and western ends. Most important of all, the trading post at the lower end of Manhattan Island was rapidly becoming a city, and its markets an attraction for the produce of the country to the east. The "North Country Road" and the "Middle Country Road" were laid out to meet the needs of the times. Country highways of the type known in colonial days were, however, far from being capable of handling any considerable trade exchange. Snow and ruts in winter and mud in spring made transportation difficult almost to the point of impossibility. It was but natural, therefore, that Long Island people should still rely upon the ocean. From the beginning, the eastern villages used the sea to communicate with their trading centre in Boston. Now, however, the increasing markets at New York proved more potent than Governor Dongan's "sergeant & six soldiers from the garrison." The beginning of the breakdown of the Boston monopoly of the trade of Peconic Bay was at hand.

The changes of the eighteenth century were slow but steady. In the thirties and forties, "landings" were being established in the bays and harbors of the north shore. "Blydenberg's Landing," put in use at Smith-

town in 1736, was one of the first of these. Wood and farm produce were carried from these landing places to New York and to the ports of the Sound.[1] By 1765, the local trade along the north shore of Long Island had become of sufficient importance to warrant the establishment of a regular ferry from Huntington to Norwalk.[2] The tiny stream of Long Island trade was growing larger, and because the Sound presented easy and cheap communication, the northern part of the Island was filling up with villages and farms. The battered wrecks that lined the beach on the Atlantic side, still deterred the seamen of Southampton and East Hampton from attempting the dangerous ocean route to New York.

After the interruption caused by the war of the Revolution, the local coastwise traffic grew as the population of the Island increased. Back and forth along the sheltered Sound coast sailed a steadily increasing fleet of small sloops and schooners. On the westward trip they carried wood and the produce of the farm, and on the return brought back merchandise, ashes, or manure as the case might be. The number of landings grew, and cross-island highways brought the inland farmer to the water's edge. The north coast, however, was not alone in feeling the change. By the beginning of the nineteenth century, settlements were extended far along the southern shore. With the increase of people came also, in spite of the danger, water communication with New York. By 1815, the vessels plied back and forth for nearly the whole year between Great South Bay and the mouth of the Hudson. The increase in shipping was a measure of the growth of the Island. As the century progressed, this coasting business grew. In 1824, it was estimated that the township of Brookhaven employed one hundred vessels of from thirty

[1] *Smithtown Records,* pp. 89, 350, 431.
[2] *Huntington Records,* II, 484.

to one hundred tons' burden in the trade with New York. Not many years later, one little village, Stony Brook, was giving business to one brig, eight schooners, and fifteen sloops, in the transportation of more than four thousand cords of wood annually, together with return voyages bringing twenty thousand bushels of ashes, one thousand bushels of bone, and three hundred loads of other manure. The landings, like crossroads stores of the interior, were community centres where producer, trader, and consumer met, dealt, and gossiped. The names of many of these landings have persisted into a generation which knows little of the life that once bustled about them.[1]

The rise of the local coast trade, aided by the growth of whaling, brought the shipbuilder to Long Island. The coasts of that region saw "some of the earliest boat and sloop building in the country. . . . This Island had the advantage of some good timber, the best and longest growth of locust being found here and there beside some good oak."[2] On the sheltered beaches of the Long Island shores the ship-carpenter found conditions right for the carrying on of his trade. In more than one place, by the opening of the nineteenth century, he had laid his marine railway and built the small shack for his tools and equipment. Working on the very edge of the land, the volume of the product he turned out was the measure of the pull of the sea. The hill-locked harbors of Port Jefferson and Stony Brook were among the first to feel the new enterprise. Small boats for fishermen and larger ones for the whalers or the captains who carried on the coast trade slipped every year from the ways into the water. The

[1] *Long Island Star*, I (1810), no. 36; IV (1813), nos. 190, 199; Spafford, *Gazatteer of the State of New York* (1824), p. 60; Thompson, I, 391, 432, 433, 434, 474; *American Agriculturist*, XIX, 229; French, *Gazatteer of the State of New York* (1860), p. 639.

[2] Hall, "Ship Building Industry of the United States," *United States Census* (1880), VIII, 119.

shipbuilder was dependent for his business upon the development of other callings.

In the middle years of the nineteenth century, from 1840 to 1860, the development of the American merchant marine reached its spectacular culmination. The white sails of the square-rigged and schooner-rigged sailing craft of the United States dotted every sea. It was the era of the clipper ship when the Yankee sailor knew no superior and when much of the world's carrying trade was in American hands. The quiet coast of Long Island reflected the development of the broad Atlantic. In places where population had grown, the primitive landing gave place to the wharf erected by the specially incorporated wharf company. To these new docks were moored, not only the desultory coasting sloop that put in from time to time, but the packet sailing on a regular schedule. Weekly and, sometimes, semi-weekly boats plied between New York and the villages of both the north and south Long Island shores. These vessels were built for speed and their captains were ordered to make trips regularly regardless of wind, weather, or boat. Rivalries were keen and jealousies great. Many a race streaked the waters of the Sound with foam.[1]

It was during these years that the shipbuilder came into his own. Whaling was forging rapidly ahead to the point of its greatest development, and whale oil and bone were being carried by an ever increasing fleet of boats from Sag Harbor to Boston and New York. The menhaden business was shifting from an offshore to a deep-sea fishery. On Great South Bay the oyster industry had left the worn-out Blue Point beds and was spreading out over the great area of the newly discovered fields to the west. At the same time the oystermen of the north shore

[1] *Long Island Farmer*, IX (1829), no. 5; "Reminiscences of Captain Oliver Doxey," *Brooklyn Daily Eagle*, LV (1895), no. 319.

were opening up great beds in the shallow waters of the Sound. Boats were needed, not only for dredging, but for carrying to market the tons and tons of oysters secured every year. The fishermen were increasing in number. They needed smacks and sharpies as well as transportation. It was also the time on Long Island when the old, inefficient general farming was giving place to a new and specialized profession. More and more wagons came to the landings or the wharves to ship away the products of the fields or to load with manure from the city. Beside the landings were great piles of cordwood waiting to be taken by boat to New York to be used as fuel.

The supplying of boats for these varied and extensive demands kept the hammers of the ship-carpenters always busy. By 1840, shipyards and marine railways were to be found in almost every shore village. In that year, it was estimated that Suffolk County had practically seventy thousand dollars invested in the business. Fifteen years later, at the zenith of its development, the county boasted no less than twenty-five shipyards. Catboats, fishing-smacks, sloops, schooners, brigs, and barks in all stages of construction stood in the stocks of the Long Island beaches. The heavier vessels were built on the fiords of the north shore and the smaller craft on the southern bays. The *H. S. Marlow* was typical of the best boats the Long Island builders turned out. When, in 1869, this double-decked, three-masted schooner slipped from the ways at Port Jefferson, she measured in the keel one hundred and ten feet, with twenty-three feet in the beam, and sixteen feet in depth.[1] During the busy years of the fifties, when there were ten and twelve yards in this harbor,

[1] Thompson, I, 432, 434, 436; *Long Island Farmer*, XIX (1851), no. 27; French, *Gazatteer of the State of New York* (1860), pp. 549, 633, 634, 636, 639; *New York State Census* (1855), pp. 416-430, (1865), 498-511; Reeves, *Bicentennial of Suffolk County* (1883), pp. 62, 64, 121-123; Hall, *op. cit.*, pp. 17, 18, 23, 25, 117-118, 119-120.

there were times when as many as seventeen boats, many of them of the class of the *H. S. Marlow,* stood on the stocks at once. These were days when the pull of the sea was felt throughout the length and breadth of America, when American boats were fastest and American seamanship ablest. It is not surprising that Long Island, whose people had been reared for generations within smell of the salt water, and whose wooded hills and quiet harbors lay so close to the great commercial centre of New York, should feel to the full the dominant trend of the times and should make use of almost every available cove and beach in furthering the great national development.

In the middle years of the nineteenth century, the American merchant marine reached the culmination of its development and passed to a swift decline. During its rise, the development of the competing steamboat had been steadily under way. In 1814, seven years after Fulton's *Clermont* had puffed for the first time up the Hudson, a clumsy steamer, the *Nassau,* was making little excursion trips out of Brooklyn. It was a novelty, like the first excursion aeroplanes a century later. By 1820, a regular steamboat line had been established between New York and Flushing. Fifteen years later, side-wheelers were churning the waters considerably farther to the east. In 1844, the main line of the Long Island Railroad was built to Greenport. At once a steamer was put on to ply between that terminal and Stonington, in order to complete the route between New York and Boston. With the opening of the railroad the eastern villages were invigorated with new life. A demand for steamer transportation appeared. Sag Harbor needed a boat to ply across Peconic Bay to make a connection with the railroad. Before many years, the steamer to Stonington was given up and in its place a boat made regular trips between Hart-

ford, New London, Greenport, and Sag Harbor. The next step in the development was a steamer sailing between the eastern villages and New York. By 1860, two boats, the *Massachusetts* and the *Cataline,* were making regular trips from the eastern ports to the New York docks. Thirteen years later, a ferry between Port Jefferson and Bridgeport on the Connecticut shore established regular and easy communication across Long Island Sound. Since that time, there have been but few important changes in this transportation system built up in the years immediately following the decline of the merchant marine of wooden sailing vessels.[1]

The changing life of Long Island was reflected nowhere better than in its shipyards. After the turn of the century, the whale fishery came to a speedy end. No longer was there any call for whaling ships and boats. At the same time the steamer was supplanting the sailing craft in the taking of both menhaden and oysters. Sometimes the Long Island yards built these but, more often, the work of these yards was confined to repairing. The covering of the Island with a network of railroads and the improving of the highways caused a great falling off of the farm products carried by water. The coastwise-carrying fleet sank into insignificance, the steamboats doing most of the business. In spite of the changes in the fisheries and the farms, however, the shipbuilder and the marine railway did not cease to exist. In the latter years of the century, the shores of the Island came to be covered with summer people. The demand for pleasure boats steadily

[1] *Long Island Star,* VI (1814), 268; XX (1829), no. 46; *Long Island Farmer,* XVI (1848), no. 31; Thompson, I, 436; *Sag Harbor Express,* I (1860), nos. 22, 49; XXI (1880), nos. 33, 42; *Long Island Traveler,* XV (1885), nos. 7, 14; XX (1892), nos. 3, 5, 14; XXIX (1900), no. 42; *Long Island* (1900), p. 41; *Summer Homes on Long Island* (1900), p. 6; *Brooklyn Daily Eagle,* LXI (1901), no. 74; *Long Island, Illustrated* (1905), pp. 141-142; *Home Builder on Long Island* (1907), map.

grew. Where, years before, the sturdy sloop had plied back and forth along the shore, now could be seen the trim lines of a yacht scudding before the wind. The building and repairing of these kept the old ship-carpenter at his work.

Through the changing times came further manifestations of the pull of the sea, which has lost none of its power. It influences the life of the Island even more than in the days of Captain Kidd. It is true that the carrying trade has declined, and that the ocean has not been able to stand against the competition of the railroad and the automobile. Yet the steamboat and the sailing vessel still persist. Only weathering skeletons on the beach and the tales of old men can serve to recall the days that have gone.

CHAPTER XII

WARS AND RUMORS OF WARS

The railway era came to Long Island early. In 1828, near Baltimore, "the venerable signer of the Declaration of Independence, Charles Carroll of Carrollton, placed the foundation stone to commemorate the commencement of the Baltimore and Ohio Railroad, first of the iron bands between the east and the west." Four years later, the Brooklyn and Jamaica Railroad was chartered and construction almost immediately begun. With a caution that reflected the uncertain ideas of the times, the legislature of New York introduced into the charter a significant limiting clause which would enable the state after a certain specified time to buy up the corporation and turn it into a state-owned utility.[1]

The railroad, however, did not come to Long Island primarily for the sake of the Island itself. The year 1832 was an important one in early railroad building. Projects of some magnitude were in the air. In this year, Philadelphia was attempting to increase its hold on Pennsylvania by means of the Philadelphia, Germantown, and Morristown Railroad. At the same time, New York was pushing toward Albany and the Mohawk with the New York and Harlem, and was reaching toward Philadelphia itself with the Camden and Amboy.[2] All these projects were small in realization but large in prospect. In the same class was the Brooklyn and Jamaica. The

[1] Hinsdale, *History of the Long Island Railroad* (1898), p. 1.

[2] Dunbar, *A History of Travel in America*, III, 976-986.

opening of the route to Philadelphia stimulated the men of that time to believe that still greater feats were possible. A rail route to Boston was dreamed of, though the rough hill country and broad rivers of New England were believed to render forever impossible an all-rail route between Massachusetts Bay and the mouth of the Hudson River. A road from Boston to Stonington, the Boston and Providence, had already been put under way. A road from Brooklyn to eastern Long Island where passengers and freight could be ferried across to the New England line seemed the ideal solution for the problem of communication between Boston and New York. The feasibility of the project was set forth by the promoters of the scheme. "The public mind is quite familiar with speeds of twenty to thirty miles per hour and numerous locomotives in various parts of our country are wheeling daily over their respective tracks, at these rates, without a murmur of alarm or disapprobation, I think it not unreasonable therefore to assume *five hours* as a fair average trip from Brooklyn to Greenport. . . . The Ferry will then occupy *two hours,* but by making the Ferry Boat a convenient Hotel, with proper arrangements for rest and refreshments, this will prove only an agreeable and profitable relaxation. The remainder of the trip [from Stonington] to Boston will be performed easily in *four hours and a half,* so that only *eleven hours and a half* will be required for the entire journey from New York, or Brooklyn, to Boston."[1] It was a large project for those early railway days. The Long Island Railroad was one of the great ventures of its time.

With minds fixed upon the requirements of the Boston trade, the promoters of the railroad considered possibilities for the location of the road. At the outset the claims of Sag Harbor, the largest of the eastern villages, to be-

[1] *Engineer's Report to the Long Island Railroad* (1834), p. 10.

come the terminus of the road were rejected. In its stead the tiny hamlet of Greenport on the other side of Peconic Bay was chosen. "The maritime position of Greenport, its convenience as a harbour, unobstructed at all seasons of the year, and the facility with which it can be made by ships coming on the coast in certain states of wind, these and other considerations of a like kind, give it an interesting relation to the city of New York as an outpost and harbour of safety."[1] The great consideration, however, was the fact that the ferry to the New England coast would be materially shorter from Greenport than from the more southerly Sag Harbor, a vital point in the laying out of a route to Boston.

For the Island itself three possibilities were considered. The first was an extreme northern location which would touch the villages on the harbors of the north coast. The second was a more central route to follow the top of the ridge which extends the length of the Island. This location would have kept the tracks very close to the Middle Country Road, and would have taken them through a productive farming country. The third or "southern" route, to be laid out five or six miles north of the south shore, would pass through the "unimproved pine plain country." It would follow the northern edge of that smooth apron of glacial outwash that slopes gradually from the hills of the terminal moraine to the sea. Of all the routes the last was the cheapest and most easy to build. The handicap of passing through an unsettled region would be more than counterbalanced by the increased speed that could be developed by fast trains in passing over a flat country with neither hills nor rivers to obstruct. The route to Boston was the dominant consideration. Faced with these three possibilities, the first managers of the railroad made a choice which was pro-

[1] *Engineer's Report to the Long Island Railroad* (1834), p. 11.

foundly to affect the destinies of the Island. Subordinating the needs of the region itself and adapting their road to an environment in which Boston and New York were the controlling factors, the directors of the Long Island Railroad chose the "southern" route through the pine plains country. This "main line" of the Long Island Railroad still exists, a monument to the shortsightedness of the founders of the company.

In 1844, the year of its completion, the Long Island Railroad was one of the largest and best-equipped roads in the state of New York. It had ninety-six miles of track in operation, and a rolling stock which consisted of eleven locomotives, twenty-two passenger cars and sixty-three freight cars. The road possessed more locomotives than any other in the state save the Utica and Schenectady, and more freight cars save any but the Mohawk and Hudson. Although the road was not open to Greenport until July twenty-second, the income for the year 1844 totaled $143,300 from passenger traffic, and $10,154 from freight.[1] It was a large undertaking, and the beginning was auspicious. Difficulties, however, lay immediately ahead.

Into the antiquated villages of the secluded eastern townships the railroad suddenly came, in the year 1844, bringing with it the beginnings of a veritable social revolution. Since the earliest settlements these people had been isolated. "True, the facilities of traveling by water have been considerable; but this has always been attended with a great expense of time, and with a degree of danger, that renders it formidable to many. . . . Seclusion from distant parts, instead of making them restless, seems to have confirmed the habit of staying at home." Into such quiet, old-fashioned communities puffed the little locomotives of the new railway. "The inhabitants

[1] "Annual Report of the Secretary of State Relative to Railway Statistics," *New York State Assembly Documents* (1845), no. 129.

have scarcely yet recovered from the consternation produced by the actual opening of this Road. Though during its construction, its future facilities were often foretold, multitudes regarded them as the vagaries of a disordered brain; or, more frequently, the wilful misrepresentations of *interested* individuals, who wished to obtain a passage through their stunted pines and sandy plains for a *mere song*. But, until they beheld with their own eyes the cumbrous train of cars, drawn by an iron horse, spouting forth smoke and steam, passing like a steed of lightning through their forests and fields, with such velocity that they could not tell whether the countenances of the passengers were human, celestial or infernal, they would not believe that a Rail Road had power almost to annihilate both space and time."[1] Until 1844, New York City had been three days away from these people. It was now five hours.

The first reaction of the people of eastern Long Island to the noisy innovation was distinctly hostile. "When the road was completed to Hicksville, and gradually extended, into Suffolk, it was made for years a regular Sabbath breaking concern. . . . The good people of the eastern towns, instead of rejoicing in the secular benefits . . . began to . . . pour out bitter lamentations in view of the moral desolations that were to set in upon them. But a brighter prospect is presented. The Rail Road has been completed, and throughout its entire length, not a car moves on the Sabbath-day."[2] By this "important concession to correct sentiment" the diplomatic managers of the new road succeeded in avoiding the first of their difficulties.

More serious, however, were the great fires, kindled by sparks from the unscreened locomotives. These swept

[1] Prime, *History of Long Island* (1845), pp. 55-57.

[2] *Ibid.*, p. 58.

over vast regions of the forested country in the central part of the Island, leaving black desolation behind. Lumber and wood in huge quantities were destroyed and the game of the region perished. "Under these circumstances, the great excitement among the people of Suffolk county, is certainly no matter of surprise. . . . Had there not been a strong . . . influence predominating in the community, it is impossible to say what outrages would not have been perpetrated."[1] "A correspondent of the *Evening Post* says that the Long Island Railroad, having been indicated as a nuisance, the rails thereof may be taken up, and the tracks destroyed and the company can only bring an action of trespass, it being no crime to destroy a nuisance. He intimates very plainly that the tracks will be torn up unless the railroad company come to some agreement in relation to the property destroyed by fire from the locomotives."[2] Faced with such a situation the road took vigorous measures to put an end to the evil. In two years the situation was fairly well in hand, but not, however, until many square miles of valuable timber-land had been devastated.

The protests of the pious, outraged at the morals of the road, and the threats of the irate owners of the burned forests were, however, as nothing compared to the calamity which was about to fall. In 1848, the impossible happened. In December of that year, an "all-rail route" was opened up between New York and Boston.[3] Only four years after its completion, the Long Island Railroad lost irretrievably the business which had called it into being, and which had determined the location of its tracks. The managers of the road turned to the people and to the resources of the Island. It was then, for the first time,

[1] Prime, p. 59.
[2] *Long Island Farmer,* XV (1845), no. 7.
[3] Dunbar, III, 1005.

that they discovered the seriousness of their initial blunder. There was scarcely a village of consequence on the road beyond Jamaica. Sag Harbor, the metropolis of the eastern townships, had only water connection with the railway across Peconic Bay. Greenport, Southold, and Riverhead could together scarcely equal the business of the vigorous whaling port then at the acme of its development. Farther to the west the situation was little better. The farmers and the villagers of the north and the south sides were compelled to drive to the interior from six to ten miles over sandy forest roads to reach the stations of the railroad. It is not strange that many preferred the slower but cheaper transportation offered by the lines of coasting vessels. The Long Island Railroad, thrown back upon the Island for support, found not only that it was ill adjusted to the region, but that the economic development of the area it served did not warrant so extensive an improvement. In such a situation the inevitable occurred. With the Boston trade gone, passenger receipts fell and, with the loss in income, stocks dropped. In 1850, only six years after the completion of its main line, the road went into the hands of a receiver.[1]

It was obvious at this point that strong measures had to be taken. A new policy was adopted, one which should have been adopted at the beginning, of developing the resources of the Island. For a few years there was a struggle to obtain a sound financial footing. Then came a period of cautious expansion. In 1854, tracks were laid from Hicksville northeast to Syosset in the heart of a rich farming country. This branch tapped the trade of a considerable part of the north shore, and, for many years, Syosset remained an important centre for collection and distribution. In 1860, a line was pushed through from Jamaica to Hunter's Point, located on the East

[1] *Long Island Farmer*, XVIII (1850), no. 18; Hinsdale, p. 5.

River just north of Brooklyn. This move gave a second terminus at the New York end of the line. In this same year, 1860, the Long Island Railroad began its long campaign to demonstrate the fertility of the "Pine Barrens" and its attempt to fill the region with settlers. All things considered, the new policy brought results. In 1852, the passenger earnings amounted to $142,741. By 1863, this figure had risen to $227,000. During these eleven years freight receipts increased from $58,000 to $121,000. The future began to brighten.[1]

The year 1863 marks a turning point, not only in the history of the Long Island Railroad, but in that of the Island itself. In that year Oliver Charlick was elected president of the L. I. R. R. Charlick represents an interesting American type. He was born in poverty on Long Island. His boyhood was spent at farmwork on some of the less desirable land of the region and in the cutting of wood in its forests. Like many another poor boy of his day he went to New York to seek his fortune. Here, it is said, he "made his start" by engaging in the "groggery business in Coentrus Slip." As with the boy heroes of the storybooks, fortune smiled upon him and he became a man of wealth and power. Moreover, as the successful hero should do, he returned to the land of his youth. Charlick came back with the destinies of the Long Island Railroad in his hands at the formative period in the history of the Island. His power for good or evil was almost boundless.[2]

With the advent of Charlick came an abrupt change in the policy of the railroad. The farsighted plan for the improving and upbuilding of the Island was discontinued and a policy of exploitation inaugurated. The road was turned into a purely money-making venture, a change full

[1] New York State, *Railroad Reports* (1852), p. 64; (1863), pp. 265-270.
[2] *Sag Harbor Express*, XII (1871), no. 46; Hinsdale, p. 7.

of consequences, both for the railroad and for the people. The Charlick policy did not mean that expansion had come to an end. Branch lines were built where profit seemed to offer. Unlike the previous decade, however, when the people of the favored locality coöperated in the building, there was now too often wrangling and misunderstanding. In 1867, a line was extended to Northport, but it would have nothing to do with the locally owned Port Jefferson and Smithtown Railway. Two years later tracks were laid from Manor to Sag Harbor, opening for the first time the Hamptons to direct rail communication. In spite of these important improvements, however, the murmurs of discontent grew loud. President Charlick was attacked. His alleged refusals to accommodate patrons of the road were severely, sometimes coarsely, criticised. Whole localities became aggrieved, as was the case with Sag Harbor. Animosity toward the railroad grew until the situation became unbearable.[1]

"This is the period of railway agitation, of roads and rumors of roads. Some plans are put forth to counterbalance other roads. Some are merely to affect stocks." This remark of the *Sag Harbor Express* in 1871 was a statement of a situation which had obtained in Long Island for a half dozen of years or more. Exasperated by the Long Island Railroad and prompted also by a desire for profit, Long Island people began to take matters into their own hands. In 1866, the building of the South Side Railroad began. It was the project of the citizens of the villages along the south shore who refused longer to drive to the middle of the Island for their railway facilities. The road was quickly completed to Patchogue, and at once drew away from the Long Island Railroad the business of a large area. Negotiations were entered into with

[1] *Long Island Farmer,* XLIX (1870), no. 15; *Sag Harbor Express,* XII (1870), nos. 45, 46; XIII (1871), nos. 1, 11, 16; Hinsdale, p. 11.

the L. I. R. R. to receive the cars of the new company at Jamaica, but President Charlick refused. The managers of the South Side Railroad, therefore, pushed their tracks through Bushwick to Brooklyn. From the vantage of a terminus of their own on the East River, they began a bitter war with their older and better intrenched rival. It was of a kind with the wars that filled this period of American railway history.[1]

The South Side Railroad, however, was not alone in its struggle with the old Long Island Railroad. The people of the north shore were also entering the lists. During the sixties, a system was built up with its East River terminus at Hunter's Point, and its centre at Flushing, whence radiated roads to College Point, Whitestone, and Great Neck. A most important part of the system was the Stewart Road which, cutting diagonally across the Island from Flushing to Babylon, tapped both the other competing roads. Small though they were, the Flushing lines cared for the most populous part of Long Island and as a consequence presented a serious menace to the company over which Mr. Charlick presided.[2]

During the first years of the decade from 1870 to 1880, therefore, three well-developed railway systems carried on a ruthless competition for the business of Long Island. It was an impossible situation. President Charlick was forced to withdraw, and a new management changed the policy of the Long Island Railroad. The fight, however, still continued until, in 1874, it bore its inevitable fruit. In that year, just eight years after its founding, the South Side Railroad became bankrupt, and on September sixteenth was sold under foreclosure.[3]

[1] New York State, *Railroad Reports* (1868), p. 508, (1869), p. 636, (1870), p. 751; Hinsdale, pp. 12-13.

[2] *Long Island Farmer*, XLIX (1870), nos. 4, 49; New York State, *Railroad Reports* (1875), p. 412, (1880), pp. 205, 568.

[3] New York State, *Railroad Reports* (1874), p. 770.

Two years after this failure came the first steps toward bringing to an end an evil situation. In 1876, Conrad Poppenhusen acquired a controlling interest in each of the three competing systems and united them by lease. His attempt, however, came too late. Years of competition had corroded too deeply. In spite of all his efforts, Poppenhusen could not avert disaster. In 1877, scarcely a year after the merger, came the general collapse, and the combined railroads of Long Island were put into the hands of a receiver. It was the same cycle that was harrying the whole nation during the same years—cutthroat competition, bankruptcy, and consolidation.[1]

In 1878, the receiver, T. R. Sharp, pressed vigorously the old policy of the upbuilding and developing of the Island, which had already been begun so many times. This time the emphasis was most heavily laid on the possibilities of the region for summer recreation. A veritable campaign was inaugurated to bring to the attention of the world the beauties of Long Island's bays and harbors. Just as the new management was getting under way, however, Austin Corbin, the owner of the great hotel at Manhattan Beach, bought a controlling interest in the combined systems and replaced Sharp as receiver. Corbin set out to continue and complete the policy of development. To Hinsdale, the road's attorney, was given a tangled legal complex out of which he brought, by 1892, a completely consolidated system; redundant lines were abandoned and where necessary new branches were built. In 1880, the south shore division was extended to Eastport. In 1892, the north shore branch was pushed on from Port Jefferson to Wading River. In 1893, the line going southeast from Manor was extended from Bridgehampton to Fort Pond Bay on the Montauk peninsula. By 1895, the Long Island Railroad system was practically

[1] Hinsdale, pp. 24, 25.

complete. The old main line cuts through the central part of the Island from Jamaica to Riverhead and extends out the north branch. Parallel to this and connecting with it at frequent intervals, are divisions stretching the length of either shore. It is an arrangement strikingly parallel to the system of highways begun far back in the eighteenth century.[1]

With the practical completion of railroad building on the Island, one great problem remained. By 1900, the business of Long Island had grown to such a volume that the connection with New York City offered by ferries and by the Brooklyn Bridge had become inadequate. On April 29, 1899, the legislature of the state of New York passed the act giving to the Long Island Railroad the right to build a subway under Atlantic Avenue in Brooklyn, to tunnel under the East River, and to erect a terminal station in New York. One year later, the independent existence of the Long Island Railroad came to an end when it became a part of the Pennsylvania system. In 1907, the Pennsylvania management published the plans for the great New York Terminal. A part of the scheme was a connection with the Long Island Railroad system through four single track tubes under East River.[2]

For passengers Long Island had ceased to be an island. For freight however, the ferry boat was still a constant necessity. In November, 1914, with the commencement of the Hell Gate Arch Bridge, the longest arch in the world, the last step in joining Long Island to the mainland was begun. The completion on March 1, 1917, of this span, one thousand and sixteen feet in length, provided a four-track connection between the Long Island Railroad and the New York, New Haven and Hartford system. The cost of the huge steel structure, was more than six-

[1] Hinsdale, pp. 27-33.

[2] *Brooklyn Daily Eagle*, LIX (1899), no. 118; LX (1900), no. 124.

teen times the estimated expense of the whole railroad and its equipment in the days when the first tracks were being laid from Jamaica to Greenport. With the completion of the Hell Gate Arch Bridge, Long Island has entered upon a new phase. Five bridges span the East River and five tunnels pass under it. Long Island as an island exists no longer. It has become a peninsula.

The railroad brought to Long Island the same changes that it did elsewhere. With the laying of the tracks the old environment was fundamentally altered. Men accustomed to think in terms of horse-drawn and seagoing transportation were compelled to adjust themselves to new conditions. Time and distance were profoundly affected. For Long Island the most important change was the multiplication of the power of the city of New York. This great population centre, now only a few hours away, filled Long Island with a life that it had never known before. In a sense, the railroad brought to an end the separate existence of Long Island and made it a dependency of New York City. Through the influence of that city every hamlet on the Island felt the giant power of the hinterland. Yet the railroad did not diminish the influence of the sea over the lives of the people. To be sure the coast trade sank into insignificance. This, however, was all. Every maritime industry save whaling, about to disappear, was invigorated. Furthermore, the sea appeared in a new rôle when the railroad began to bring trainloads of campers and pleasure seekers to the beaches. If the influence of New York City and the hinterland was augmented, so also was that of the ocean.

CHAPTER XIII

THE PASSING OF MUD

In writing the story of a people it has too often been the habit to omit any but the slightest reference to the highways. Yet, as Charles Sumner once remarked, "The road and the schoolhouse are the two most important agents in advancing civilization." Highways are the arteries for the life of the community. Good roads and bad roads have invariably given an unmistakable cast to the regions which they served. Although the canal and the railroad appeared to solve special problems in transportation, the true function of the highway has not been altered nor has its unique importance been impaired. Perhaps, for this reason, it may not be without value to tell the story of the Long Island roads. The problems which the people of this region met differed little from those faced elsewhere in the nation. The phases in the road development on Long Island suggest the phases in the evolution in the larger area.

The village streets in the tiny frontier hamlets were the first American highways. From them, as field after field was cleared, were pushed paths to connect the cabins with the farms outside the stockades. "Ordered that there shall be a highway between Thomas Baker's and William Mulford's lots"; "Ordered that there shall be a highway in the vacant lot by Gardiner Price's straight to the swamp"; "Ordered that a cartway be built over the swamp to the plains." So they were pushed farther and farther on as the village grew. These cartways seem to

have met only the needs of the particular hamlets they served. There was almost no effort to connect one village with its neighbors. Such travel must be by the sea. The first "highways," therefore, represented the simplest of direct adaptations to a primitive environment.[1]

It must not be believed that these "highways" were, in any way, comparable to the roads of a later time. They were little more than paths set aside for the common use. Along them the village herdsman drove the cattle and sheep of the community and men walked to and from their fields. A few carts jolted over them, but roughhewn sledges were probably more common. Roads which carried such simple traffic needed neither improvements nor uniformity. Some were three "poles" and some five "poles" wide. Some were rented out to local husbandmen and others were kept open for use. These were pioneer days, not only in farming and fishing but in road making.[2]

The year 1724 seems to have marked the beginning of a new epoch in Long Island road building. By that time the number of people and of villages had so increased that the plan for a local road system serving only its immediate community was proving inadequate. Highways to break down the isolation of the villages were becoming essential. In 1724, the general assembly of the province of New York passed an act providing for the laying out of roads in Suffolk County and the appointing of commissioners to take charge of the work.[3] The first work of the new officials was to revise the local road systems. Old highways were abandoned and new ones laid out. The newly surveyed roads numbered, in East Hampton, thir-

[1] *East Hampton Records,* I, 32, 59, 60; *Huntington Records,* I, 259; *Hempstead Records,* I, 74; *Documentary History of New York,* I, 161.

[2] *Southold Records,* p. 188; *East Hampton Records,* III, 448.

[3] *East Hampton Records,* III, 440.

teen, and, in Smithtown, seventeen.[1] The policy of laying out highways merely to meet local needs was abandoned. In its place was inaugurated the plan of developing a road system for the Island. At this point the geographic characteristics of the region came sharply into play. The people who were filling the Island were concentrated mainly at the eastern and western ends. Connecting these areas was a small fringe of settlements along the north shore. The problem was to establish communication between the two main population centres. About 1733, three trunk roads were laid out to be completed many years later. The "North Country Road" was surveyed to pass from the head of one harbor to another along the north shore of the Island. The "South Country Road" was to follow the southern beaches. Between these, and roughly parallel to them was the "Middle Country Road," laid out along the crest of the morainic ridge that runs through the centre of the Island. It was a road system that has persisted without fundamental change to the present time.[2]

The nineteenth century had not yet opened when a new era in American road building was ushered in. The problem of the pioneers was to lay out the roads. That of the new generation was quite different. By the end of the eighteenth century, cities had sprung up. Transportation, not only between one urban centre and another, but between the city and the farm, became essential. The use of wheeled vehicles for freight and passenger transport was spreading with great rapidity. The Conestoga wagon and the other improved conveyances of the day made the development of better roads inevitable. The colonial road without improvement and with hardly any bridges had become a drag on progress. In 1792, the Lancaster Turn-

[1] *East Hampton Records*, III, 440; *Smithtown Records*, pp. 87-88.

[2] French, *Gazatteer of the State of New York* (1860), p. 632.

pike Company was incorporated by the state of Pennsylvania. It was an epoch-marking event. This road was the first of the turnpikes, which themselves were the first manifestations of a craze for internal improvements. The new road, moreover, marked the emergence of private capital as the dominant factor in highway improvement in the more settled communities. From this time on for many years, the best roads in America were privately owned, managed, and maintained. No man was free to travel without paying his toll. The traveler, therefore, and not the taxpayer was the ultimate source whence the money for building and maintaining the new roadways was obtained. The states, occupied in pushing improvements into the undeveloped West, seem to have been quite willing to leave improvement in the East to private enterprise. It is also more than probable that the "fascinating project of speculating in turnpike stock" did not act as a deterrent to the spread of the "spirit of turnpiking."[1]

In 1801, with the incorporation of the Flushing and Newtown Bridge and Turnpike Company, the good roads movement came to Long Island. The first important stimulus to improvement, however, was the result of the demand of fashion. One of the great watering places of the time was at Far Rockaway. Every day, during the summer season, great numbers of gigs, carriages, and coaches bearing the polite society of New York, could be seen crossing the ferry to Brooklyn to make the drive to the shore. These people demanded better roads and, in 1806, work on the Jamaica and Rockaway turnpike was begun. Three years later, the improved route to the shore was made complete by the incorporation of the Brooklyn, Jamaica, and Flatbush Turnpike Company.

[1] New York Society for the Promotion of Arts, Agriculture and Manufactures, *Transactions*, II (1807), 196-198.

Society from the city could now enjoy a smooth "pike" all the way to the beach.[1]

In 1807, the state of New York, with nine hundred miles of turnpike roads completed and three thousand more projected, passed its first general turnpike law for the standardizing of the regulations governing the new type of road.[2] From this point the development of Long Island turnpikes was mainly in the interest of the farmer. Wherever the turnpike came, rural isolation began to break down. Decade after decade, in the first half of the nineteenth century, saw the pushing of good roads eastward. In the forties, the development came practically to an end, when the Long Island Railroad completed its line to Greenport. By that time, however, the system was extensive. The two East River terminals were Brooklyn and Williamsburg. From each of these cities extended a turnpike to Jamaica, the most important highway centre in the western part of the Island. From this place branched the trunk roads, the Middle Country and the South Country roads. By 1845, the South Country Road had been turnpiked through Hempstead to Babylon, and the Middle Country Road east as far as Jericho. Along the north shore, however, stretched the greatest turnpike of all. Beginning at Williamsburg, the North Country Road stretched its improved surface eastward through Flushing, Oyster Bay, and Huntington to its terminus at Smithtown.[3] Year after year, longer and longer caravans of farmers' wagons rolled over these new highways to the markets of New York. It must be remembered, however, that, although in other parts of the United States the turnpike had practically no competitor until the coming

[1] *Long Island Star*, I (1809), no. 26; VI (1814), no. 261; VIII (1816), nos. 376, 395.

[2] *Ibid.*, VIII (1816), no. 395.

[3] *Long Island Farmer*, IX (1829), no. 5; VI (N. S.) (1837), no. 37; X (1840), no. 10; Thompson, I, 300.

of canals or railroads, on Long Island the small sailing boats that plied in steadily increasing numbers along both shores were competitors of serious importance. The rivalry of the turnpike and the sea continued until both were temporarily checked by the building of the railroad in 1844.

The value of these turnpikes, however, was not limited to the users of the roads. The promoters of ventures received their return. Within three years of its incorporation, the Brooklyn, Flatbush, and Jamaica Turnpike Company declared a dividend of seventy-five cents per share. Two years later, in 1814, the dividend was eighty-five cents per share. Nor did the profits decrease with the passing years. In 1837, the value of the North Country Road was suggested by the six hundred and fifty-three dollars which comprised the year's income for the short piece of road from Flushing east to North Hempstead. Seven years later the annual tolls had passed the mark of thirteen hundred dollars. The turnpike builders of these early days had their reward.[1]

At the very culmination of the turnpike era, and after the first reaction resulting from the building of the railroad had passed, came a small movement looking toward a still further improvement of highways. On March 16, 1850, the legislature of the state of New York passed a general plank road act, and, on May 4 of the same year, books were opened to plank the highway from Brooklyn to Jamaica. The movement seems to have sprung up suddenly in Long Island. With the development of the sawmill, the use of planks on highways appeared in many places in America. In the years 1850 and 1851, proposals for no less than ten different plank roads were being discussed in the villages of western Long Island. The net

[1] *Long Island Star*, VI (1814), no. 261; XX (1829), no. 48; *Long Island Farmer*, XIV (1846), no. 11.

result of the agitation, however, was to lay planks on the turnpike from Brooklyn east to Hempstead, and from Williamsburg to Flushing. If the turnpike in its day had solved in part the question of bridges and of grades, the plank road was one of the first serious attempts at a solution of the problem of mud. To construct a highway with a surface permanently smooth and hard had become the vision of the road builders of the middle years of the nineteenth century. The plank road experiment, however, proved void of permanent result. Lumber became too expensive, and the road was not as desirable as had been hoped for. By 1870, failure was evident, and the planks were removed from the turnpike between Jamaica and Hempstead. Nine years later, the planks were cleared from the whole length of the road. But the experiment was not entirely in vain. Wood, it is true, could not be used, but the idea of a permanent hard surface had come to stay.[1]

During the height of the plank road experiments a change of attitude toward improved roads appeared among the people of Long Island. In 1869, a significant note was sounded in one of the local papers. "For years past the people of Queens County have been agitating the subject of abolishing toll gates that flood almost every road in the county. The time had been when it was necessary to give encouragement to the building of roads by allowing the builders a remuneration for their investments in this particular. But toll gates have become so numerous that they are positively becoming a drawback to our prosperity, and a nuisance to the increasing multitude of travelers. It will be seen by the call in another place, that the agitations against toll gates and toll

1 *Long Island Farmer*, XVIII (1850), no. 1; *Brooklyn Daily Eagle*, LIII (1893), no. 329; LVII (1897), no. 252. In 1850, there were 2100 miles of plank road in New York State. *Long Island Farmer*, XVIII (1851), no. 46.

bridges are taking shape, and that the people are on the eve of inaugurating a movement that is likely to lead in due time to the abolition on just principles to all concerned, of the numerous franchises that are so inimical to the prosperity of the county.'"[1] The improvement of one generation had become a drag on the next. The agitation continued and grew in volume. By 1892, it had borne its fruits. In that year the board of supervisors of Queens County began the expenditure of several hundred thousand dollars in the macadamizing of the main roads of the region. The day of private ownership of highways had passed, and that of public management supported by taxation was ushered in.[2]

The coming of this last movement for improved roads was contemporaneous with an important development in American life. About 1876, the old style, high-wheeled bicycle was first introduced into the United States from England. In May, 1880, the League of American Wheelmen, the "L. A. W." as it came to be called, was founded at Newport. On June 27, 1887, the "Liberty Bill," which gave to wheelmen the right of highway, became a part of the law of New York State. About 1890, the "safety" bicycle began to supplant the earlier model, and the pneumatic tire displaced its hard rubber predecessor. The advent of the bicycle marks a turning point in the history of American highways. A new class of urban people became interested in better roads. The significance of the change is well set forth in an official statement printed by the "L. A. W." in 1895. "Within the last year our State Division has distributed ten thousand illustrated pamphlets, describing the best methods of making and maintaining country roads; it has secured the passage of a law for the erection of guide boards at country road crossings;

1 *Long Island Farmer*, XLVIII (1869), no. 36.

2 *Brooklyn Daily Eagle*, LII (1892), no. 334.

it has aided in the raising of funds for the construction of the cycle path from Prospect Park [Brooklyn] to Coney Island [the first highway in America wholly devoted to wheelmen]; it has successfully opposed the obnoxious bills introduced in the legislature at Albany for the unfair curtailment of wheelmen's rights on the public highways and streets; . . . and has issued five thousand tour books for the use of wheelmen and horsemen describing the most delightful and popular tours in the United States." To the influence of the organized "L. A. W." was added that of every individual wheel owner in the state. The result was inevitable. Better highways were demanded and these must have a surface permanently smooth and hard. The dream of the plank road builders of a former day was about to be realized.[1]

In its inception this movement for improved highways presented two distinct phases. In the counties of Kings and Queens, close to the growing city of New York, public authorities in the last decade of the nineteenth century began the construction of a complete system of macadam roads. Suffolk County, however, with its vast extent of "Pine Barrens," was too far removed from the city to be affected at once. The people of this county were not ready to expend for "county roads" the vast sums which were being laid out in Kings and Queens. On the other hand, the demand of the multitude of local cyclists was insistent. As a consequence, in Suffolk a compromise was effected. If the devotees of the "wheel" desired smooth highways, they must defray the cost of the improvement. Every bicycle was compelled to have a license, and the license tag must be carried on the machine. The money thus obtained was turned over to a "Side Path Commission," by whom it was expended in the construction of smooth, hard bicycle paths along the sides of the main

[1] *Munsey's Magazine*, May, 1896, pp. 136-156.

thoroughfares. By 1900, a continuous path stretched along the south shore from Amityville to Amagansett, and on the north side from Greenport to Riverhead, and again from Port Jefferson west to the macadam at Smithtown. Besides these main lines, many cross paths made the Island a veritable gridiron.[1]

The coming of the automobile with the opening of the twentieth century carried forward the movement inaugurated by the introduction of the bicycle. In the business of constructing improved roads, the county which had initiated the improvement gave place to the state, and the "state road," built and maintained by the state, came into being. Among favored sections of the Empire State, Long Island has been one of the most fortunate. Roads have been improved to such an extent that at the present time from Brooklyn to Orient or Montauk points, the Island is covered, as few areas in America are, with a network of the best of modern highways. The new roads and the new vehicles have vitally affected every Long Island industry. The truckloads of poultry and produce rolling into Brooklyn and New York are evidence of the revolution that has come to agriculture. The long night trip to market has been shortened and the farmers of the eastern end have shaken off their dependence upon both sea and railroad. Moreover, other industries have felt the change. Motor trucks can now handle the catches of the fishermen and the oystermen. Perhaps most important of all, the new roads and the automobile have brought the beaches of Long Island close to the homes of a great city and have made the camper a familiar figure. Nowhere more clearly than on Long Island have prosperity and highway improvement gone steadily hand in hand.

In looking back over the long years of development of

[1] *Long Island Traveler*, XXIX (1899), nos. 4, 5; *Brooklyn Daily Eagle*, LX (1900), no. 284.

Long Island transportation, the ocean appears as the first highway for the people of that region. Not only did it connect them with distant places, but, in the beginning, furnished practically the only means of communication among the little frontier villages themselves. For a century and a half, the sea retained an ascendency that amounted almost to a monopoly. With the building of turnpikes, however, in the first half of the nineteenth century, the development of an artificial, man-made environment began. The growth of the industries of the region was so great that both sea trade and road traffic steadily increased. The advent of the railroad in the middle years of the century brought great changes. From that time on, the coast trade declined until it sank into relative insignificance. As the trip from Montauk to New York shrunk from a long to a short haul, the sea as a highway was forced to give place, in large measure, to other more efficient forms of transportation. Although the railroad checked for a time the good roads movement, it did not bring it to an end. The old turnpike movement merged into the plank road craze. This, in turn, gave place to the county and state road movements which began in the closing decade of the nineteenth century. Along with the highways, the railroads were developed as soon as it became clear that neither the road nor the railroad could perform the other's function. The development of these two has completed the "artificializing" of the Long Island environment.

CHAPTER XIV

THE "PINE BARRENS"

The greatest enigma in Long Island history is the existence in the centre of the Island of an area several miles in width and scores of miles in length that is uninhabited and uncultivated. The markets of the great city of New York have grown to huge proportions. The railroad and the macadamized highway have made these accessible to every Long Islander. The gardener has covered both the western and eastern ends of the Island with his farms. He has surrounded but not penetrated the forested region in the centre. Almost from the beginning, ill report has dogged the progress of the central plains of Long Island. Concerning this apron of glacial outwash, covered with "scrub oak," much that is evil and little that is good has been said. It is a veritable *terra incognita,* concerning which speculations have been many and disputes sharp. To tell the story of a controversy fought for more than half a century over this region and to describe the battle of words between those who have defended it and those who have detracted from it seems worth while, for the "Barrens" are yet unsettled and the problem which they present to the people of Long Island is yet unsolved.

The ill repute of the central plains seems to have had its beginning almost in the days of the first settlers. As early as the year 1691, a governor of the province of New York stated in a formal report to the Board of Trade that "The middle of the Island is altogether barren."[1] Three-

[1] *N. Y. Col. Docts.,* III, 797.

quarters of a century later, on the eve of the war of the Revolution, another royal governor reported that practically all the land on the Island which could be improved had been taken up and was being tilled.[1] "Altogether barren," yet the region was covered with forest as were the other parts of the new country. This is the enigma of the "Pine Barrens."

Paradoxical though it may seem, the "Barrens" early began to produce a revenue. At first isolated cabins and, later, little settlements of woodchoppers appeared in the forests. The product, laboriously worked up for the fireplaces of New York City, was hauled over almost indistinguishable wood-roads to the "landings" which dotted both north and south shores. Here it was picked up by the many sloops and schooners engaged in the wood business and transported to the dealers on Manhattan Island. At the time of the second war with Great Britain, Brookhaven township was estimated to be exporting annually no less than one hundred thousand cords of wood. The business grew as the market at the mouth of the Hudson grew. The mosquito fleet of wood-boats became more and more numerous and the "landings" plied a steadily busier trade. By the middle of the century, cordwood had become one of the important resources of the Island.[2]

A serious reversal, however, occurred, when, in 1844, the Long Island Railroad pushed its right of way through the heart of the wooded country. Unprecedented forest fires followed in its wake. "The extent of these conflagrations," wrote a local observer, "can scarcely be conceived of without ocular examination. To talk of thousands of acres, is scarcely an approximation to the reality. In

[1] *N. Y. Col. Docts.*, VIII, 441.

[2] Dwight, *Travels in New England and New York* (1822), III, 302-303; Spafford, *Gazatteer of the State of New York* (1813), p. 282; *New York State Census* (1865), p. 414.

several places entire forests for eight or ten miles in length and from two to four in breadth have been completely swept over by the devouring element.''[1] The name, ''Barrens,'' took on a new and sinister meaning.

Great as was the devastation, the industry did not disappear. As late as the close of the Civil War, Suffolk remained the first wood-cutting county in the state. But the latter years of the nineteenth century saw a decline. The fleet of small wood-boats gave way before the competition of the railroad, and the woodchoppers in the ''scrub oak'' became less numerous. They never disappeared altogether and, today, piles of wood, still found at the sidings of the little Suffolk County stations, bespeak an industry that still exists to turn one of the products of the ''Pine Barrens'' into revenue.

About the middle of the century, a few years subsequent to the ravages of the forest fires, began the controversy as to whether the lands of the ''scrub oak'' could or could not be cultivated with profit. Men interested in the region proclaimed its inherent fertility. Others were sceptical. The *Sag Harbor Express,* at the eastern end of the Island, had been watching, during the few preceding years, an effort which was being publicly made to spread the report that the ''Pine Barrens'' could be made productive. In 1850, Mr. Starr, editor of the *New York Farmer and Mechanic,* visited the wild lands about Lakeville and pronounced them fertile and tillable. Other men began to assume the same attitude. It seemed time to give the public the facts in the case as viewed by farmers who had been brought up within sight of the ''Barrens'' and who had shot many a squirrel and partridge in its fastnesses. The *Express,* therefore, in an elaborate article summed up its conclusions as follows: ''Much has been said of late years concerning the adaptability of these

[1] Prime, p. 59.

waste lands for agricultural purposes; many bitter disappointments and heavy pecuniary losses have resulted from incorrect or partial information on this matter, furnished chiefly by those who were pecuniarily interested. The truth of the matter is this: the soil is very variable even in the same neighborhood, some portions being a deep loam, while at no great distance it may be thin, gravelly and poor. The labor necessary to clear it is very great, $30 per acre being the lowest sum at which it can be done, so that if purchased as low as $5 per acre, by the time it is fit for cultivation and inclosed, it will have cost [more] than good tillable land can be obtained for elsewhere. . . . That farms can be made from these waste lands is certain, as the thing *has been done* . . . but the thing *won't pay* at present."[1]

In the following year, no less a paper than the widely read farm journal, *The American Agriculturist*, entered the Long Island controversy and exposed, for the benefit of its readers, what it considered a serious real estate fraud. "For some years past there have been extensive efforts to bring into favorable notice certain tracts situated on Long Island. These efforts have consisted of advertisements in distant agricultural and other newspapers . . . the good qualities of a majority of the magnificent farming lands advertised there . . . are on paper."[2] Apparently the "Pine Barrens" were not always fortunate in their early promoters. Such attacks as these of the *Agriculturist* and the *Express* did not tend to diminish the odium which already rested upon the region.

In the same year that the *Agriculturist* issued its warning against real estate "sharpers," appeared the first in a considerable list of earnest and able defenders of the

[1] I (1859), no. 14.
[2] XIX (1860), p. 134.

wild country. In that year, 1860, W. C. Watson, owner of a farm in the "scrub oak," published a pamphlet entitled *The Plains of Long Island.* It breathed an optimism like that of land booms on a western frontier. Within "a few years a new epoch seems to have opened upon the scene. . . . Productive farms and highly cultivated gardens are springing into existence and beam amid these wilds like oases in a desert." Watson, pointing to the "Hempstead Plains," once considered infertile and now covered with farms, urged men to come to the central plains and bring about the same transformation there. Here was a sharp reply to the opinions of the sceptics.

About the time of the appearance of the Watson pamphlet, the management of the Long Island Railroad, just entering upon a policy of developing the resources of the Island, began to consider the possibility of filling the extensive area of the "Pine Barrens" with settlers. A committee, sent into the region, reported that the lands between Farmingdale and Yaphank, "particularly those between Deer Park and Lakeland, are superior in natural soil to any lands now under cultivation on the south country road or through the old settlements south of the middle country road . . . and that with the same amount of tillage and manuring the yield would be equally as great if not superior."[1]

This first effort of the railroad seems to have been productive of little result besides the report itself. Nineteen years went by and the "Barrens" still remained unoccupied. Again the road, under a new management, made an effort to advertise the possibilities of the "scrub oak" country. An elaborate pamphlet, *The New Long Island,* picturing the opportunities offered by the central plains,

[1] Long Island Railroad Committee on the Wild Lands of Long Island, *Report* (1860), p. 11.

was distributed far and wide. The railroad offered free transportation and a fifty per cent freight reduction on east bound traffic to all new settlers coming into the region. The road seems to have gone so far as to try to interest financiers of New York and Brooklyn in a project for utilizing the waste lands for villages for mechanics and laborers who would commute into the metropolis. In spite of all efforts, however, the second attempt bore little more fruit than the first.

By the year 1880, the discussion concerning the availability of the "Pine Barrens" had become of sufficient importance to attract the attention of a prominent eastern agriculturist, D. D. T. Moore, editor of *Moore's Rural New Yorker*. He felt that lands lying so near the New York City markets should be developed, if possible. Two or three times he visited the area, making careful examinations of the soil. He "did not discover an acre that was not susceptible of production." He did find, however, that public opinion was "strongly against the lands." "Rarely have I spoken with a native of the island or to a New York or Brooklyn man who has not denounced the lands in the most unmeasured terms." Moore determined to take part in the controversy and, on August 24, 1882, published in the *Brooklyn Daily Eagle* not only an account of his investigations but other facts which seemed to him conclusive proof of the productivity of the region. He referred to the heavy crops raised with little fertilizer on the Suffolk County Poor Farm, in the heart of the wild country, and he pointed out the significance of the appearance of a chain of eleven villages which had sprung up along the main line of the Long Island Railroad in the centre of the "Barrens." This seemed to him sufficient evidence that the "scrub oak" area was fertile and productive. To all appearances, however, the effort was use-

less. The scepticism of the local farmer remained unbroken and the enigma of the "Pine Barrens" unsolved.

The nineteenth century passed into the twentieth with the central plains still undeveloped. Of prospects for an immediate change there were none. For the third time the Long Island Railroad bestirred itself to effort. "When Mr. Ralph Peters became [its] President . . . , his inspection tours of the Island showed him much to be done, and most forcibly brought before him the fact that the vast acreage of idle land . . . must be developed for its own sake and for that of its railroad. . . . As practical demonstration is vastly superior to written statements, the President determined to establish Experimental Stations at various points on the Island and to give the public the results of the work." The development of these demonstration farms was given into the hands of H. B. Fullerton. "Early in August, 1905, the following message came from Mr. Peters 'Find the worst 10 acres on the North Shore upon which to establish Experimental Station No. 1.' "[1]

The first farm was located near Wading River and the second at Medford. In less than half a dozen years each was changed from a "scrub oak" waste to a garden covered luxuriously with every kind of fruit and vegetable that Long Island afforded. In the raising of three hundred and eighty varieties of plant growth on the Wading River farm during the first year after it was cleared the fertilizers used were limited to stable manure, wood ashes, and a rye cover crop. And this was in the heart of the "Barrens." In 1906, Edith Loring Fullerton published *The Lure of the Land, A Call to Long Island,* which gave an account of the undertaking. Three years later the little volume went into a second edition. Moreover, for a time the work of the experiment stations was made

[1] Fullerton, *The Lure of the Land* (1906), pp. 9-11.

known to the farmers of Long Island and to any others interested, through a small publication known as *The Long Island Agronomist.* Attracted by the publicity thus given to the demonstration and by interest in a controversy more than half a century old, hundreds of visitors came to the farms to examine them. The undertaking seemed from every angle a success.

To the observer from the outside it would seem that Fullerton had proved the case for the productivity of the "Pine Barrens." The fact remains, however, that, although more than a decade has passed since the founding to the Wading River station, the "Pine Barrens" still exist, a great expanse of practically unoccupied forest. Although the case is proved, it may be that the problem is yet unsolved. An analysis of the forces at work at the present time in the "scrub oak" country may serve to clarify somewhat the difficulties in the way of solving this problem of its development.

The one great factor which dominates the future of the "Pine Barrens," as it does so many phases of Long Island life, is the steady eastward growth of the giant city of New York. During the last fifty years, it has overrun Kings County and extended its buildings and pavements far into Queens. In front of the advancing city has been driven an ever increasing multitude of truckmen and gardeners, whose land is constantly becoming too valuable for agricultural use. These men have been crowded into the narrow strips of farming country that fringe the two sides of the Island and in great numbers have been pushed against the western end of the "Barrens" themselves. The result has been the shoving back of the border of the "scrub oak" country, a little at the north and south and several miles on the west. Relatively few of these dispossessed farmers have been bold enough to venture into the interior of the wild country. The move-

ment has been directed, in the main, against the periphery. In this way, pressing economic necessity has, for the first time, begun to play an important part in the history of the "Pine Barrens."

In the interior of the central plains the growth of New York City has had a somewhat different result from that at the outer edge. On the wooded acres of the "scrub oak" country, "cities," broadly laid out and attractively named, have made their appearance. In 1896, Hyde's *Map of Long Island* showed six such ventures, but in its edition of 1915 no less than thirty-eight "cities," "manors," and "parks," could be counted between Ronkonkoma and Riverhead. The effect of this increase in real-estate speculation has been immediate. Large areas of the most desirably placed land, which might otherwise have been turned into farms, can now be purchased only as "city" lots at an inflated valuation. Although the actual area occupied by these projects is large, their influence is even greater. The inflated valuation of the "city" property has communicated itself to adjoining lands, until almost imperceptibly the selling price of the greater part of the "Pine Barrens" has been artificially raised. This increase in the initial investment presents a serious obstacle to the agricultural settler, who desires to establish his home on a little farm which he must clear himself. Not only does it hinder agricultural development, but the questionable character of so many of the real-estate ventures tends to keep alive the ill repute of the region and to act as a further deterrent to settlement. Not all of the real-estate projects are the schemes of unprincipled "sharpers." Some of these "cities" have already built houses for their people. A few of these projects are bound to be profoundly affected, as the villages of Queens County have been, by the eastward growth of New York. It is this uncertainty as to the future of the real-estate

program that makes the problem of the "Pine Barrens" so complex.

Leaving out of consideration the new element introduced by the establishment of Camp Upton at Yaphank, it may be said that two antithetical forces have appeared in the "scrub oak" region. One is the real-estate speculator in the interior and the other the garden farmer at the outer border. The eastward advance of New York City is a powerful stimulus to each. That, in time, the "Pine Barrens" are doomed to succumb seems indisputable. Only the future can reveal which of these two factors or what sort of combination of both will conquer that broad stretch of plains country now under the dominion of the "scrub oak."

CHAPTER XV

THE DISCOVERY OF THE OUT OF DOORS

THERE is a phase in the development of Long Island life that is full of significance for one who desires to understand Americans of the present. We are today a people of games, sports, and out-of-door pleasures. The tension and strain of a hurried life is relieved on the golf links, in the trout brook, or on the diamond. We have learned to play. In this respect, however, there is a striking contrast between the common man of the twentieth century and his forefathers of a hundred years ago, a contrast not without meaning for the present generation. In a peculiar sense, play has come to be an important part of Long Island life. Lying at the doors of the American metropolis, the Island has become the playground of New York. The story of how the people of this great centre of life and civilization came out on it for pleasure differs but little from the larger story of how the whole nation came out to play. The details vary with the peculiarities of the locality, but the main phases of the Long Island and the national movements are the same. Many volumes on our shelves record the long and complex history of the methods by which the people of our country have got a living. Few men, however, have had time to tell the story of the evolution of fun. Perhaps it will not be out of place to pause for a moment to trace some of the phases in a development which, some day, will be recognized as one of the great revolutions in American life.

The Revolutionary War left the American people

young in national life and buoyant in national hope. Tasks of almost limitless extent lay before them as they chopped away the forests of the Atlantic seaboard and blazed trails through the valleys and passes of the Appalachians. They were, in the main, a farmer and a seagoing folk with little wealth, little social intercourse, and practically no leisure. There was little play because there was no time for it and, also, because the austere creed of New England openly frowned upon it. Men's lives were spent in making a living, as they battled with a primitive environment. Only in relatively few instances did they acquire sufficient capital to secure opportunity for breathing spells. Such a life, barren of the lighter things, must not, however, be misunderstood. Tasks and standards differed then from those of a later time. There were parties and assemblies. There were training days and festivals. In the larger towns could be found an occasional show place. There were, however, practically no sports and no organized games. Life itself was the great game and success the prize it offered. Perhaps it was inevitable that across such an existence, unrelieved by the vicarious joy and suffering of the world of sport, should be cast the dark shadow of excess. Drinking was a fundamental part of the social fabric. In the gray barrenness of this life, however, were bright spots, here and there. The nineteenth century had scarcely begun, when, among Long Island people, appeared three distinct developments that were destined to lay the foundation for the evolution to come.

One of these was the turf, that sport which has quickened men's blood and lightened men's purses since the time of the Romans. On Long Island, horse-racing was born before the end of the seventeenth century. The worthy burghers of New York were wont to repair to a plain "toward the middle of Long Island . . . 16 miles

long and 4 broad, where you shall find neither stick nor stone to hinder horses heels, or endanger them in their races." During the eighteenth century the people of New York, like the gentlemen planters of the southern colonies, established racing on a secure footing. There were annual racing events first on the Hempstead Plains and later at Beaver Pond in Jamaica. The silver cup of the early days was replaced by purses which sometimes amounted to as much as one hundred pounds sterling. The gentlemen and ladies of the small city at the southern end of Manhattan Island, traveling on horseback or in chairs and chaises, came in what seemed prodigious numbers to view the spectacles. Two or three thousand persons were large crowds for those primitive days.[1]

It may well be said, however, that the first quarter of the nineteenth century saw the turf become the national sport of the young United States. The planters of the cotton country, the gentlemen of the new state of Kentucky, and many men of the commercial Middle States aided in its advancement with a generous expenditure of time, money, and interest. "In his old age Diomed, who had won the initial Derby at Epsom Downs in 1780, came to America to breed a great family of racing horses on a Virginia stock farm." With the passing years, two types of horses began to appear. The South bred for speed and the North for "bottom." Mason and Dixon's line took on a new significance. Sectionalism appeared and led inevitably to an "irrepressable conflict." March 27, 1823, saw the first trial of strength between the North and the South. On the aptly named Union Course at Jamaica, Long Island, the sporting world was "gratified with the greatest match race ever run in the United States. The

[1] Quotations from the *New York Post Boy*, June 4, 1750, the *New York Mercury*, October 9, 1764, and the *New York Journal*, August 8, 1794, all found in *The History of Queens County* (1882), pp. 57-59.

stakes were $20,000 each side, making $40,000 dependent on the issue, independent of private betting, which was great. The assemblage on the ground was immense, and we understand strangers from very distant parts of the Union had come to witness the sport. Van Ranst's horse, 'Eclipse,' who stood, as a racer, the highest in the country, was matched by Long's horse, 'Henry,' the pride of the southern sportsmen." Rufus King, the statesman of the Empire State, and the fiery John Randolph of Virginia, sitting side by side "under the big tree on high seats," looked down upon a crowd of forty thousand people that cheered "Eclipse" to victory. A nation before the days of the telegraph awaited the news of the outcome with some of the excitement that attends the decision of a world series. The sporting blood of America was beginning to stir.[1]

Once begun, the rivalry between the sections increased. Two more meets were held on courses outside of Long Island. Interest grew apace. It reached a climax in the greatest race of all held again on Union Course, May 13, 1845. "Peytona," of the South, before a crowd of seventy thousand persons, met and vanquished "Fashion," the pride of the North. "The shout that rent the welkin was the signal for the transfer of at least one hundred thousand dollars from the pockets of the North to the pockets of the South." "Peytona" won not only the race but the series.[2]

It was the last contest. A different form of the rivalry between the sections was taking a sinister turn. Polk had been elected president in the previous autumn on a pro-Texas platform. The ugly possibility of a war with Mexico for the purpose of conquering more slave territory was daily becoming more apparent. There were

[1] *Long Island Star,* XIII (1823), no. 721.

[2] *New York Tribune,* May 14, 1845.

recriminations and heartburnings in both North and South. It became difficult for gentlemen from the two regions to meet any longer in friendly contest. With the severance of turf relations between the estranged sections, the rôle of horse-racing as the national sport came to an end. It had, however, served its purpose. It had stirred the souls of rich and poor alike, and had driven street urchin and statesman into an abandon of joy or grief as the idol of his fancy won or lost. Although horse-racing was to continue and even increase, it played its most significant part in the first half of the nineteenth century. In those years it aroused an interest in sport which was to be the foundation of the games that were to come after the Civil War was over.

To believe that the term "age of sports" adequately describes the revolution that was to come to American life in the latter part of the nineteenth century is to misunderstand the whole movement. The increase in games and sports was only a part of a greater development. This was nothing less than a discovery of the out of doors. Americans, from the beginning of their history, have been an out-of-door people, living and working in the open air. Originally a nation of farmers and seamen, they knew little of the restrictions of indoor life. With the first years of the nineteenth century, however, a change appeared. Industrialism began to make itself felt and the young United States groped its way toward economic self-sufficiency.

The large city, a factor hitherto almost unknown in American life, made its appearance. The factory worker and the office man became familiar types. A large and rapidly increasing group in a people, born and bred to the open, were finding the out of doors a luxury. The new urban environment, moreover, was often far from attractive. The arts of city-making and city-managing were

being learned by costly experience. New York City was little different from the rest. Its cobblestone streets were lighted only at infrequent intervals by dim and flickering lamps. Its closely huddled structures of wood had only the most primitive fire protection. The water supply came mainly from the householders' wells. These early cities were breeding places for disease. Within such an environment the movement back to the out of doors began. So far as Long Island was concerned this movement had two quite distinct phases, represented, on the one hand, by the man who went into the woods to hunt and, on the other, by the society that sought the watering places.

Few areas in the East were better adapted for shooting and angling than Long Island in the first half of the nineteenth century. The unbroken forest which stretched for more than fifty miles through the heart of the region was full of game of all varieties. The tale is told by a local rhymster.

"The grouse, the pheasant and the quail
In turn we take by changes,
Or hunt the buck with flippant tail
As through the wood he ranges.

"Sometimes the tim'rous trout we wait
Along the streamlet's border,
With well dissembled fly or bait,
And tackle in good order.

"Or catch the huge enormous bass,
Be his course e'er so drastic
While sitting on the verdant grass,
Close by the groves at Mastic."

Mastic, however, was famous for more than bass. Together with the whole south shore, it was the haunt, at

certain seasons of the year, of numberless wild fowl. The geese, brant, and ducks which collected in great flocks along the marshy shores of the southern bays offered sport to hundreds of men and boys.

To the woods and streams of Long Island came in great numbers hunters and fishermen. Some of them were local farmers, bred to the rod and gun since pioneer days. Others were merchants and office men from the rapidly growing city at the mouth of the Hudson. The hunting or fishing excursion into Long Island was as familiar in those times as the trip to the north woods is today. These men who came out of the stuffy city were simply reasserting the natural instincts of an out-of-door people. They were the advance guard of that army of pleasure seekers that one day was to invade the region. In the forties, however, the movement came to an end. Forest fires swept the game life from the Island, except the wild fowl which came to the south shore. The hunter was forced to seek his prey in other haunts, but he had done his work; he had brought back to the early city a point of view and a body of information that was to aid in the stimulating of the later camping movement.

Not all of the people of New York who were interested in the out of doors, desired to go into the woods with a gun. There were some who sought the shore where the surf of the Atlantic fringed the sloping sands with white. The first of these were of the very small leisure class of the city that was beginning to appear as wealth increased. Far Rockaway Beach was neither so far from the city as to be inaccessible nor so near as to be overrun by the commonalty. Far Rockaway became one of the earliest watering places of New York and of America. Before 1810, a turnpike connected Brooklyn with the beach. Over this "Appian Way" rolled the carriages and cantered the horses of New York's *élite*. Beautiful ladies and

polished gentlemen met and met again as they flitted along the turnpike to and from the fashionable resort. By 1811, stages were making regular trips and were advertising special accommodations for the convenience of the week-end visitor. In those days, when it was five hours from the ferry to the beach, "by far the greatest portion of the genteel company from New York and elsewhere chose this watering place in preference to any other in the United States."[1]

Greatness, however, still lay in the future. The beach developed with the city. As the fame of New York was noised abroad, so, also, was that of Far Rockaway. During the thirties, when crowds of the "best" people were seeking the little peninsula to enjoy the "sublimity of the situation," Far Rockaway reached the dazzling climax of a career of splendor. On the first day of June, 1833, was laid, "with appropriate ceremonies," the corner stone of the Marine Pavilion, soon to become a name to conjure with. It was a spacious structure, "built by an association of between 70 and 80 of the most distinguished families in the city of New York." For nearly a decade and a half, this "splendid edifice" symbolized the glory of Far Rockaway and the magnificence of its society. Then, of a sudden, it burned. From the smoking ruins the devotees of yesterday turned away as courtiers from fallen greatness. Far Rockaway, an object of pride no longer, slipped back, unnoticed, into the commonplace.[2] The *élite*, more interested in fashions than in nature, worshiped new sublimities. The Far Rockaway episode was, after all, but a bit of froth on a great stream. It served to show, however, which way the current was running. The

[1] *Long Island Star*, II (1811), no. 102; Mitchell, *The Picture of New York* (1818), p. 325.

[2] Thompson, II, 44; *Long Island via the Long Island Railroad* (1868), pp. 45-46.

people of the cities were beginning to grow restive under the limitations of urban life. Although society at first insisted upon artificiality, the time for the wholesome appreciation of the out of doors was not far distant.

The decade of the forties saw a distinct turning point in the play-life of Long Island. During those years, the Marine Pavilion, with all its splendor burned. The conflagrations, lighted by the locomotives, swept the game life from the forests. And the last of the great races between the North and the South was run. These three Long Island developments of the first half of the nineteenth century, hunting and fishing, horse-racing, and the fashionable watering place, were, however, the first important steps away from a life in which there were few games and little play. They were the beacons lighting the way for the changes to come.

CHAPTER XVI

THE NEW CIVILIZATION

The appropriation of the wild country of America has awaited two things. There could be no considerable development of mountains, lakes, or seashore until a large percentage of the people of the nation lived in cities. Furthermore, there could be no development until the wild country was made accessible to the urban centres by quick and cheap transportation. It would be reasonable to expect, therefore, that the out-of-door movement would begin in the sixties and the seventies, for it was in those years that America began building up with such tremendous rapidity that great business and industrial organization which called the monster city into being. In those years, also, thousands of miles of rails were being laid and the railroad fragments which had existed before the Civil War were being consolidated into great systems. One of the very factors that was causing the growth of the indoor population in America was at the same time giving those people a chance to escape from their new environment. The reason that the Far Rockaway development came so early is to be found in the fact that New York City was one of the first big population centres and Far Rockaway was near enough to its cobblestone streets to be readily accessible by way of the turnpike.

The first real manifestation of the new era in Long Island life was the country home. Back in the days of Robert Livingston and Ezra L'Hommedieu the gentry of America had been to a large extent a landed aristocracy.

As the years of the nineteenth century passed, wealth shifted from the farm to the city. With the shift came the captains of industry and the giant fortunes. There were some among these men who chose to signalize their success by acquiring estates and building country homes. They wished to combine the advantages of the city with the beauty and wholesomeness of the country, but could not do so until the railroad had made the country home accessible from the office. As soon as the tracks of the early roads were laid, the villages to the east of Brooklyn felt the stir of the new life. In Jamaica and Hempstead, but more particularly in Flushing and the towns of the north shore, homes of the wealthy began to appear. The Civil War was barely over when the beautiful hills of Shelter Island, topped with a great-armed windmill, began to be covered with exquisite gardens and houses. As the unsightly menhaden factory disappeared from the beach, this ancient refuge for the oppressed Quakers started upon its career of greatness. The completion to Greenport of the old main line of the Long Island Railroad made the change possible.[1]

Branches running to other parts of the Island brought further development. From the escarpment of the north shore many a villa looked out over the Sound, just as the home of many a country gentleman of England looks down upon the Channel from the shoulder of the chalk cliffs. Other estates hid their gardens and buildings in the wooded country that borders the South Country Road near the quiet waters of Great South Bay. Perhaps the finest of all were the Hamptons. East Hampton, the home of Payne and "Home Sweet Home," began to feel the change in the seventies.[2] Southampton was quick to fol-

[1] Spafford, *Gazatteer of the State of New York* (1824), p. 177; Thompson, I, 473; Hough, *Gazatteer of the State of New York* (1872), p. 547.

[2] *Sag Harbor Express*, XIII (1871), no. 11; XIV (1872), no. 10; XXI (1880), no. 30.

low. The ancient villages of fishermen and farmers underwent a change seldom found outside the *Arabian Nights*. With what amazement would the early settler have beheld the cabin-fringed streets of their frontier hamlets now bordered by all the beauty that wealth and good taste could create. These country homes which are to be found everywhere on the Island are some of the most beautiful in America. In reality they are part of the great city at the mouth of the Hudson. Primitive Long Island has ceased to exist.

But wealth has not usurped the whole of the beautiful Island, which is famous for its poor as well as its rich. The same out-of-door movement which created the country estate brought into being Coney Island. The significance of Coney Island is great, not only for New York, but for the nation. It is the forerunner and originator of the American White City. The story of this pioneer amusement park is not without its value.

When the Marine Pavilion at Far Rockaway was yet a blaze of glory, and the development of country homes had not yet begun, Coney Island was "a place of great resort for strangers in the summer season." Year after year, picnickers and bathers came in greater and greater numbers. The shifty sand dunes of the little island began to be covered with decrepit bathhouses, and the stunted bay bushes of the region to "bloom out riotously during the summer months with bathing outfits hung upon them to dry." The Coney of the sixties and the seventies was a curious and picturesque rendezvous for the less attractive people of the great city. "At the lower end of the island there is a wharf to which the steam boats come, and when one of them has disgorged its contents, very motley is the crowd that winds its way along the rush-laid path that leads to the beach. The women and children usually outnumber the men, and, as is generally the case

in New York assemblages that do not rally round the standards of fashion, the German element is largely represented in the throng. . . . Holiday attire, not gay, but of the picnic kind is the rule. . . . Several flashy men are to be seen in the crowd; men with velvet coats, and having Alaska diamonds stuck in the breasts of their filagree shirts, men curled and oiled within an inch of their wild lives. These are gamblers from New York, though they usually describe themselves as 'sports,' and they do a stroke of business at the island in more ways than one. . . . Out of the bathing houses come tumbling indiscriminately, men, women and children. . . . The women flap about in the water and scream like fowls to which that element is natural. . . . Numbers of the men lie wallowing for hours in the sand, in which they roll like wild beasts, rubbing it madly into their hair and plastering themselves all over with it. . . . The scene upon the beach and in the water alike is a very rough one."[1] So went the day until the late boats took the merrymakers back to the tenements of the Bowery and the East Side. The reputation of the beach was such that a trip to the island was an adventure not to be related in polite society.

In 1874, the "development" of Coney Island began. The surf, the beach, and the fresh salt air proved insufficient to meet the demands of the jaded throngs who came out to play. Sensations and the glare of lights must supplement nature. So it happened that, in 1874, Coney Island took the lead in the development of cheap and gaudy amusement—a place which it has maintained to this day. In that year, when its reputation was so foul that his best friends prophesied failure, Mr. Culver began laying the tracks of the Prospect Park and Coney Island Railroad. Two years later, he acquired the great steel tower which had been one of the features of the Philadelphia Centen-

[1] Shanley, *Atlantic Monthly*, XXXIV (1874), 310 ff.

nial of 1876. This was the first of the entertainment features that, within a few years, brought revolution to Coney. By the middle of the eighties, the new Coney Island was well on its way to fame. The scraggly sand dunes were covered with a city of amusements. There were shooting galleries and spaces marked off for archery practice. At the beach an "Aquarium" was built. Near it were the flaring posters and hoarse barkers of a "Museum of Living Wonders" and a "Sea Side Museum." Above the welter of eating places, dancing pavilions, and dram shops rose the steel tower of the observatory from which also sublimities could be seen. Greatest, however, among the marvels was the famous "Camera Obscura." It was a black, boxlike room into which the light was admitted through a narrow slit and images cast on a screen opposite. It was a veritable pinhole camera in which a dozen or so people could sit and, on the screen, watch the "moving pictures" of beach and boulevard. "To particularize the wonderful variety of 'side shows,' games, minstrelsies, 'cheap Johns,' and entertainment of every sort . . . would be impossible. It is a veritable Vanity Fair."[1]

After the completion of the "Culver Road," the rise of Coney was rapid. In 1877, a company was formed for the erection of a steel pier for the landing of steamers. In 1883, the Iron Steamboat Company advertised its boats. During the nineties, new roads were planned and built. New York City belched forth its multitudes to swarm over the island in unrestrained search for new and greater sensations. In these later years, Coney changed with the changing times. The "Camera Obscura" has given place to the "movie"; the great tower has been superseded by the roller-coaster, the last word in the manufacture of thrills. But the bathhouses, the shooting galleries, the

[1] Collner's *Coney Island Pictorial*, I (1881), no. 2; Stillwell, "History of Coney Island," in Stiles's *History of Kings County* (1884), I, 196, 203, 204.

merry-go-rounds, and the dancing pavilions have remained and multiplied. Externals have been altered, but through all the years of evolution Coney has, at heart, remained the same; cheap, gaudy, rough, sensational, and, withal, a fraud.

"They used to talk of Bedlam and they used to talk of Babel
In allusion to confusion of exaggerated style.
But in all the fact and fable, since the days of Cain and Abel,
No metaphor is better for the same than is an isle
That I wot of, that I got of late so generous a lot of
That I recollect the style and charavari of that island
With a smile and shall do so for a while."

The "Coneyizing" of the southern shore has continued until the multitudes flock to the beaches as far east as Rockaway. Bizarre, indeed, has been this result of the out-of-door movement. But neither the amusement park nor the country estate has been the centre of the great development. They represent the extremes. The out-of-door revolution did not really come until the ordinary, humdrum citizen of the city began to send his family away from the hot streets in the summer months. As early as the fifties and sixties, city people began coming to the bays and coves of Long Island. The sea was entering the lives of multitudes whose business was not on the ocean.

At first the people came as "boarders" and filled the inns and many of the private houses of the shore villages. Ambitious wives of farmers and fishermen found an opportunity to increase the family income. Many a bayman himself found it profitable to turn entertainer in the summer months and to spend his time taking out the summer people in his boat for fishing or pleasure trips. As railroad facilities increased, the summer hotel came into

existence. On Fire Island Beach, near the inlet, one of the most fashionable was built. Not only was there a splendid surf but the waters off this beach offered the best bluefishing of the southern shore. After the pioneer "boarder" had blazed the way, the cottager came to appropriate the more attractive corners of the beach. Then many a tent began to brighten the dull sand with its spot of white. The men and women of the city were reasserting the fundamental out-of-door instincts.[1]

The Long Island Railroad, during the last quarter of the nineteenth century, made many efforts to bring to the attention of urban people the opportunities for camping that Long Island offered. These attempts were crowned with undeniable success, though it was not the railroad that played the leading part in the advertising of the region. About 1890, the new "safety bicycle" began rapidly to replace the high-wheeled type that had been used for a decade and more. The new bicycle became the craze of the day. Men, women, and children, the old and the young, took to the highway with one accord. The almost immediate result was better roads or "cycle paths." Bicycle clubs were formed, not only in New York and Brooklyn, but in practically every village on the Island. Patchogue became a great rendezvous for cycling parties from the cities and the small towns. The bicycle carnival held every year at that place during the latter part of the nineties was an event long to be remembered. Almost every hamlet on Long Island contained an "official" hotel of the League of American Wheelmen as well as a "consul" to look after the interests of members of that organization. The bicycle, as nothing before had done, took the people of America out of doors. Cycle

[1] *Long Island via the Long Island Railroad* (1868), pp. 19-53; French, *Gazatteer of the State of New York* (1860), pp. 547-632; *Sag Harbor Express*, III (1861), no. 14.

parties left few corners of Long Island unexplored. After men and women, coming on their "wheels," had actually seen the attractions, it was but a small step to the cottage and the summer camp.[1]

With the coming of the twentieth century, the automobile has eclipsed the bicycle, though its function is the same as that of its predecessor. By means of it the camp and the countinghouse are but a few minutes apart and the exploring excursion of a day or a week is within the reach of everyone. Consequently there are few beaches in the whole Long Island shore that do not have their summer hotels or their campers. And with the rest, has come the last development in the movement, the boys' and the girls' camps where children are trained, not only to appreciate the out of doors, but to live, work, and play in the wild country. A civilization which has developed a highly artificial environment is, instinctively, returning to the roughness and simplicity from which it came.

The campers, however, were but one phase of the great out-of-door movement that changed American life in the last quarter of the nineteenth century. During those years, the people of America, for the first time in their history, really learned how to play. After the close of the Civil War, game after game was introduced or developed. Long Island, at the outskirts of New York, was quick to feel the new spirit. There is no space here for details. The seventies saw the rise of walking and of track sports. With these came roller-skating and the establishment, on a nation-wide basis, of the national game, baseball. In the early eighties croquet spread over the country to be followed quickly by lawn tennis. In the

[1] *Munsey Magazine*, May, 1896, 146 ff; *Long Island Traveler*, XXVI (1897), no. 41; XXVIII (1899), nos. 42, 43; *Brooklyn Daily Eagle*, LIV (1894), no. 100; LVI (1896), no. 161; New York State Division of the League of American Wheelmen, *Fifty Miles Around Brooklyn* (1896).

resorts of Long Island the new games were among the earliest played. With these sports came another, limited, in the main, to the people of the coast. In 1871, Long Island had two yacht clubs, one at Flushing and the other at Oyster Bay, the Seawanhaka Yacht Club, that later offered the Seawanhaka Cup for international races by small yachts. From these beginnings the sport grew until, by the end of the century, there was scarcely a bay or harbor along the shore that did not have its organization. Last of all the important sports was golf. In 1891, at Southampton, the Shinnecock Golf Club was incorporated, the first on the Island and one of the first in America. Within nine years, the number of links on the Island grew to twenty-four. The sport developed until nearly every village had its club. In 1906, the zenith of the Long Island development was reached when plans were started for the construction in the Shinnecock Hills of the famous links of the National Golf Club. The sports that have been mentioned are only the more important in that development of organized play which came side by side with the camping movement. The people of Long Island and of the great city of New York have been profoundly affected. And the development is yet going on. What the end is to be only the future can tell.[1]

It is indeed a new civilization that has come to Long Island since those days when its people labored "only to get bread and clothing, without hopes of ever seeing a penny of monies." During the years in which Ruskin was trying to point out to his English countrymen the beauties of untouched nature, people in America were, here and there, awaking to the value of the out of doors. They began to go to the mountains, the lakes, and the sea-

[1] Mott, *Yachts and Yachtsmen of America* (1894), I, 671-674; *Brooklyn Daily Eagle*, LVII (1897), nos. 162, 163, 174, 233, 261; *Southampton Magazine*, II (1913), no. 2; *Summer Homes on Long Island* (1900), pp. 12-13.

shore. After work, they left their offices for the golf links, the tennis courts, or the baseball park. Nature and sport entered into the warp and woof of life. There can be little doubt that this great development has introduced a sanity and wholesomeness into our thoughts and point of view which was beginning to be sadly needed. The story of Long Island, which has become in these later years one great playground, may not be typical of the whole country. In its development, however, are to be found the important phases of the revolution which is renewing in the nation a clear brain and a sound heart.

THE GAMESTERS

So they have played the game from the beginning, the land and the sea. The people of the Island have believed that they were working out their own destinies. They have been mistaken. They could not resist the call of the ocean to work and later to play. Nor could they prevent the creation, by the broad hinterland, of the great city at their very doors. Canute could as easily hold back the tide as they could exclude these two influences from their lives. As their development has gone on, the sea has, in the main, been the factor stimulating the variations which are an inevitable part of any evolution. One after another new vocations have appeared, whaling, fishing, oystering, scalloping, caring for the summer visitors, and the rest, almost all of them the result of the pull of the ocean. On the other hand, the hinterland, acting through the city of New York, has been the selective factor, choosing from among the variations those which should continue and those which should disappear. It has been the hinterland, moreover, that has stimulated the conquest of the old, primitive environment and the creation of the new, man-made environment of the railroad, the macadamized high-

way, and the city. It is easy to look back at the simple days of old and see these two great forces playing with the men and women who struggled almost barehanded to wrest a living from their primeval surroundings. It is not so easy to realize, in the complexity and artificiality of modern days, when man is raised on a scaffolding of civilization far above the primitive struggle for existence, that the same natural forces are still playing the same game. Yet, can anyone doubt that the sea, which brought the first sturdy adventures to Long Island shores, has lost any of its power in these latter days of the wealthy, incorporated fishing company, the oyster and menhaden steamer, or the hundreds of summer cottages that line the beach? Can anyone look at the sky line of New York City and believe that the great hinterland has lost its potency?

Long Island lies on the eastern frontier of one of the world's two areas of most advanced civilization. Across the ever narrowing Atlantic, Europe faces America. Within sight of the shifting sand dunes of the southern beaches pass countless ships in the most important of the sea lanes that bind the old world to the new. Far out toward the eastern peninsulas stand the towers of a gigantic radio station making yet more easy communication across the ocean barrier. Long Island is of the flesh and blood of America, yet its destinies are inextricably intertwined with those of Europe. Two continents with their mountains, their plains, and their teeming millions, when taken together, form one of the two giant gamesters—land. The broad Atlantic with its waste of water, its ships, and its multitude of living organisms makes up the other—sea.

There have been strong men who have played large parts in the history of Long Island; but they have been pigmies beside the two giants that dominate the region. These mighty gamesters are still playing as they have

played since the time when Long Island was but a bit of sediment on the ocean bottom. They will continue to play, no man can possibly think how long—the game is yet young. Perhaps it has been worth while to pause for a moment to watch their sport. Perhaps, also, it is not amiss to wonder when the game will be over and what will have been accomplished when it is done.

BIBLIOGRAPHICAL NOTE

The published literature dealing with Long Island is very extensive. There are two convenient bibliographies (both incomplete): one in Martha B. Flint, *Early Long Island,* New York, 1896, and the other in Gabriel Furnam, *Antiquities of Long Island,* New York, 1875, the latter compiled by Henry Onderdonk, the most prolific of Long Island historians.

The most important general account of the Island is B. F. Thompson, *A History of Long Island,* New York, 1st edition, 1839, 2d edition, 2 vols., 1843, 3d edition, edited with critical notes, 1918, 3 vols. The work is important for its historical material, particularly when supplemented by the notes of the third edition. Its chief value, however, as is the case with N. S. Prime, *History of Long Island,* New York, 1845, is as source material for the period of date of publication. Both works give extensive descriptions of the Island at that time. Martha B. Flint, *Early Long Island,* New York, 1896, and Gabriel Furnam, *Antiquities of Long Island,* are of little value to the modern scholar. The most important of the special accounts is R. M. Bayles, *Historical and Descriptive Sketches of Suffolk County,* Port Jefferson, 1874. Long Island Historical Society, *Memoirs,* Brooklyn, 1867-1889, 4 vols., have valuable special material.

The more important descriptions of the Island by travelers and others are: *The Journal of Jasper Danckaerts,* 1679-1680, edited by B. B. James and J. F. Jameson, New York, 1913; Timothy Dwight, *Travels in New York and New England,* New Haven, 1821-1822, 4 vols.; and William Cobbett, *A Year's Residence in the United States of America,* New York, 1818-1819, 3 vols. S. L. Mitchell, *The Picture of New York,* New York, 1807; H. G. Spafford, *Gazatteer of the State of New York,* Albany, 1813; T. F. Gordon, *Gazatteer of the State of New York,* Philadelphia, 1836; and R. S. Tarr, *The Physical Geography of New York State,* New York, 1902, are all useful.

Of the greatest importance in getting at the life of the people are the newspapers. A list of the more important of those which are to be found in the library of the Long Island Historical Society is here appended.

Babylon:

South Side Signal, 1884-present.
Suffolk Democrat, 1859-1865.

Brooklyn:

Brooklyn Advance (afterwards *Monthly Advance*), 1882-1886.
Brooklyn Citizen, 1866-present.
Brooklyn Daily Advertiser, 1844-1853.
Brooklyn Daily Eagle, 1841-1848, 1856-present.
Brooklyn Daily Times, 1866-1873, 1876-1878, 1881-1917.
Brooklyn Daily Union (now *Brooklyn Standard Union*), 1863-present.
Long Island Courier, 1800, 1801, 1802 (odd numbers).
Long Island Star (after 1841 *Brooklyn Evening Star*), 1809-1863.

Flushing:

Long Island Times, 1864-1882.

Greenport:

Republican Watchman, 1864-1917.

Hempstead:

Hempstead Inquirer, 1851-present.

Jamaica:

Long Island Farmer and Queens County Advertiser, 1821-1823, 1826, 1831-1833, 1835-1836, 1840-1847, 1850-1872.

Southold:

Long Island Traveler, 1885-present.

Sag Harbor:

Sag Harbor Corrector, 1822-1841 (imperfect).
Sag Harbor Express, 1859-present.
Suffolk Gazette, 1806-1809, 1811.
Suffolk County Herald, 1802-1803.

The pamphlet literature of the region is voluminous and contains much valuable material, particularly concerning the development of the Island as a pleasure resort. The best collections are to be found in the New York Public Library and the library of the Long Island Historical Society. Those which have been used in this work are referred to in the footnotes.

The most important manuscript material is the collection of Onderdonk manuscripts deposited in the library of the Long Island Historical Society. Its greatest value, however, is to the genealogist and the historian of the Quakers.

Suggestions as to the more important material for special topics follow. Geologic history: M. L. Fuller, *The Geology of Long Island,* Professional paper 82, Washington, 1914; A. C. Veatch, Isaiah Bowman, and others, *Underground Water Resources of Long Island, New York,* Washington, 1906, each of which contains a number of excellent maps. Colonial history: E. B. O'Callaghan, editor, *Documents Relating to the Colonial History of the State of New York,* Albany, 1857-1887, 15 vols.; E. B. O'Callaghan, *Documentary History of the State of New York,* Albany, 1849-1851, 4 vols.; and records of the local townships, most of which have been printed. Agriculture: L. H. Bailey, editor, *Cyclopaedia of American Agriculture,* New York, 1907-1910, 4 vols.; New York Society for the Promoting of Arts, Agriculture and Manufactures, *Transactions,* New York, 1792, Albany, 1794-1819; E. L. Fullerton, *The Lure of the Land,* New York, 1906. Fisheries: E. G. Blackford, New York State Commissioner of Fisheries (in charge of the oyster investigation), first and second *Reports,* Albany, 1885, 1887, 2 vols.; G. Brown Goode, "A History of the Menhaden," *Report of the United States Commissioner of Fish and Fisheries,* Washington, 1879; J. L. Kellogg, *The Shell Fish Industries,* New York, 1910; and W. S. Tower, *A History of the American Whale Fishery,* Philadelphia, 1907. Shipbuilding: Henry Hall, "Shipbuilding Industry in the United States," *United States Census,* 1880. Transportation: E. B. Hinsdale, *History of the Long Island Railroad Company,* New York, 1898.

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