

# HISTORY OF BARNSTABLE COUNTY.

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## CHAPTER I.

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### GEOLOGY AND TOPOGRAPHY.

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Location and Boundaries.—Geological Formation.—Contour of the Coast.—Surface and Soil.—The Flora of the Cape.—Effect of the Landscape on the Character of the Cape Men.

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THE peninsula forming the southeastern extremity of Massachusetts, and embraced within the present county of Barnstable, is better known as Cape Cod. It extends easterly into the Atlantic forty miles, thence northerly thirty-five miles to its extremity in north latitude  $42^{\circ}, 4'$ .

The geographical name it bears was first applied in 1602, by Gosnold, to its most northern portion. Its position, contour and importance early earned the sobriquet of "The Right Arm of Massachusetts," which it appropriately bears, having its shoulder, elbow, wrist and hand symbolically poised over the deep, as if beckoning the dispirited pilgrims to cross over and rest safely under the palm; and pointing toward Plymouth, indicating the haven where should be planted the seeds of civil and religious liberty that should bloom to the admiration of the world. It has Plymouth county and Buzzards bay for its western boundary, Vineyard and Nantucket sounds for its southern, the ocean for the eastern, and Cape Cod bay for the northern boundary, being twenty miles in width across the shoulder, tapering to eight at the elbow, two at the wrist, and then widening to a hand.

Its geological formation has been hastily considered by scientific writers, who have recorded various and varying conclusions—perhaps facts—which may be modified by more minute researches in the future light of science; but thus far the man who, after Agassiz, knows most about the subject, says that a great interrogation point might be appropriately set against the whole topic, to denote as yet an unanswered inquiry, but it is gratifying to know that a gentleman of the United States Geological Survey spent the past year on and about the Cape, from whose reports a valuable and more conclusive opinion will

in due time be published by the government. It is, however, conceded that the Cape is wholly, or so far as yet determined, of drift; but some of the strata may prove by future research to belong to the tertiary or upper mesozoic, still there is no lithological or paleontological evidence of any claim to a position below the first division of the last glacial period. The depth of this drift was thought, by Professor Agassiz, to be forty feet; but upon the extreme north end of the Cape an artesian well was recently sunk 140 feet without touching stratified rock, yet it is possible that the point at Provincetown, where this well was sunk, may have been extended by sand deposits, and that the body of the peninsula may have a different substrata, yet undetermined as to its formation.

Another evidence of its glacial formation is seen in the well-defined moraines with which the Cape abounds, the most marked being the great central ridge. The Buzzards bay branch of the moraine commences at the Elizabeth islands and extends in a northerly direction along the east side of the bay to the town of Bourne, where it turns easterly, continuing along the northerly side of the Cape into Orleans; and Doctor Hitchcock defines the broken undulations of Truro and Wellfleet as parts of a continuous moraine of a distinctive character. From the morainic angle at Bourne, extending to the northward, is the Plymouth moraine, of which only the southern continuation pertains to this county. Between Woods Holl and Bourne the moraine presents an unbroken line of ridges, which is continued east as far as Yarmouth, then we find this morainal ridge interrupted by gaps, and in Brewster and Orleans losing the distinctive morainal characteristics by the overwashing and overriding of water and ice.

The boulders deposited along and upon the Buzzards bay and eastern moraine are further evidence of glacial formation. That of Buzzards bay has this deposit of boulders on both sides, and on the east and central they are more thickly strown on the northern face, except in the town of Dennis, where they were deposited more along the apex. Brought here in the glittering chariots of ancient icebergs—those most wonderful, uncommon carriers—these huge masses of Quincy granite, with others from perhaps north of Labrador, left their failing vehicle as it weakened under the quiet influence of the gulf stream—that other most wonderful of Nature's agencies—and so here we find them extending into Orleans and more or less along the top of the ridge the entire extent of the moraine; but the south slope is comparatively free from those of any significance. Many are deeply imbedded in the drift, and some are found within the salt marshes. Some have well rounded forms, others are split, and still others are eroded into weird shapes, bearing the seeming footprints of man and animals on their upper surfaces. A large boulder in the

west part of Brewster is called Rent rock because of its peculiar dismemberment; another in Eastham is of sufficient altitude to be of use as a landmark for seamen; and the granite boulder of the town of Barnstable has been perpetuated in history as the place of the first town meeting and church service for the Puritan settlers. The hard, blue clay vein which has been thought to underlie the upper Cape, crops out near the great swamp on the bay side of Truro, and running across that town in a northeasterly direction, forms the clay banks at the Highland Light, where the bluff shore bank of almost solid clay rises over one hundred feet above the tide.

The contour of the Cape presents various indentations by bays and harbors, with their intervening bars and points, which are more or less changing yearly. Accompanied by the reader, let us pass around its perimeter, commencing at the head of Buzzards bay. Nothing of note is discernable here at the head of the bay, but two miles south we find the mouth of Monument river, where the Dutch trading vessels visited the post of the pilgrims; and around a point just below is Back River harbor—one terminus of the proposed ship canal. Wenaumet neck is a prominent peninsula extending into the bay, giving protection to Red Brook harbor on its south, which opens into Cataumet harbor, between Bourne and Falmouth. The indentations along the Falmouth coast on the bay are Wild harbor on the north and Hog island two miles below. Quisset harbor is north of Woods Holl, from which the coast runs irregularly southwest, terminating in Long neck, enclosing Great harbor. The coast from the head of the bay to Woods Holl is fringed with salt marshes of more or less extent, the Falmouth shore being bold and sandy, with a distribution of boulders.

In our course along the Vineyard sound coast we find Little harbor south of Woods Holl, where the buoy depot of the government is located, and here we also find the boldest portion of the south shore of the Cape. The various ponds and bays of the Falmouth coast running far into the town, have not sufficient depth at their mouths to form harbors until we reach Waquoit bay which, in high tide, is used by vessels of light draught. Eastward, around the sandy shore of Mashpee, is Popponeset bay, the dividing line between that town and Barnstable—a bay used for small shipping and enclosing Little and Great necks of Mashpee. Around the neck comprising that part of Barnstable known as Cotuit we find on the east side, Cotuit bay, enclosing Oyster island and opening into Great bay, which is further inland. New harbor, Squaw island and Hyannis harbor complete the south coast of Barnstable in its circuitous course easterly, the latter harbor opening into Lewis bay, which is safe and commodious, with Point Gammon for its protection on the south. This coast is low and sandy, undergoing frequent change, and Dog-fish bar has formed,

extending several miles eastward to opposite the Bass River harbor, between Yarmouth and Dennis. The bays and coves of Bass river form anchorage for fishing vessels, and the harbor at its mouth is important. The bays along the coast of Dennis and Harwich are inconsiderable, yet by the southward bend of Harding's beach on the Chatham coast and the southwestern extension of Monomoy point these towns have ample anchorage. East of the beach named is Stage harbor, spreading its arms into the town of Chatham, all of which have safe anchorage inside when the bar across the mouth is safely passed at high water.

The elbow of the Cape, at Chatham, is perhaps subjected to more changes from shifting sands than other points. New shores and bars form and disappear by the action of the waters of the ocean and sound, which are here at right angles. Monomoy, extending several miles toward Nantucket, has been greatly enlarged by the filling of the salt marsh along its western edge, and the southern extremity is gradually extending by these accumulations, this beach now being several miles in length and one-half mile or more in width. Through this beach, in 1807, when the first light was erected in Chatham, was an entrance for vessels to a safe anchorage within, which has been since practically destroyed. The *Yarmouth Register* of November 7, 1874, speaks of the ravages of old ocean here as removing three-fourths of a mile in length from Nauset beach, of its washing away in 1872 two hundred feet in length of the government landing, and of further ravages in 1873, which necessitated the removal of government buildings and private residences. The shore of Chatham is a sandy bluff on the Atlantic coast until we reach Old harbor at North Chatham, where, about the middle of the century, the sea broke through the outer beach, reopened a former navigable channel, which, after a very few years, was again filled with sand. The mouth of Pleasant bay, between Chatham and Orleans, formerly admitted large vessels, which now its shallowness precludes. Continuing north we pass the high, unbroken, sandy beach of Orleans, arriving at Nauset harbor, where navigation is also now impeded by drifting sands. Here was carried far inland by storm the English vessel to whose passengers the people of Plymouth gave aid. From this harbor northward along the east shore of Wellfleet, Truro and Provincetown the bold, sandy shore is unbroken by bays until we reach Race Point neck. Passing the islands and doubling Long Point neck, we find a harbor gradually filling with sand, although the government has made liberal appropriations for its preservation, and the commonwealth has enacted penal laws for the protection of the trees that lessen the ravages. In 1850 the legislature of the state called the attention of congress to the continual drifting of the sand and the gradual abrasion of the

beach, which, if allowed to continue, must effectually destroy the harbor.

The only considerable opening along the west coast of Truro is East harbor, in the north part of that town, as we commence our survey southward on the west shore. In the south part, near Truro village, at the mouth of Pamet river is a small harbor, and along the coast of Wellfleet we find Duck harbor, but not until we have passed the islands outside of Wellfleet harbor do we find anchorage for vessels of any tonnage, and here in a land-locked haven. Wellfleet harbor is the largest on the bay side of the Cape, having Duck and Black-fish creeks emptying into it, both forming other harbors of lesser capacity. Along the coast of Eastham we find some salt marsh around the mouth of Herring river and to the southward, but no harbors of importance. The short stretch of Orleans situate on the bay has very small openings at Rock harbor and Namskaket and a wide, sandy beach, which is continued along the north coast of Brewster, with high uplands a short distance inland. The mouth of another Herring brook near Quivet creek presents the only indentation along the Brewster shore beyond the small curvatures. Sesuet harbor and Nobscusset being passed on the Dennis coast, we arrive at Bass hole, where, with a small harbor, commences the salt marsh which fringes the short shore line of Yarmouth, extending along the south side of Barnstable harbor and terminating in the Great marshes. Sandy neck extends easterly from Scorton, in Sandwich, nearly across the town of Barnstable, terminating about one mile from the coast of Yarmouth, between which points we find the mouth of the harbor. Along the only sea coast of Sandwich we find Scorton neck, Scorton harbor, Spring hill, Sandwich and Scusset harbors, with a low, marshy beach. Passing along the short extent of beach belonging to the town of Bourne, which has no indentations, we reach Peaked cliff, the northern terminus of the boundary line between Plymouth and Barnstable counties, which line passes southwesterly across the foot of Herring pond to the point from whence began our journey of observation.

The peculiar position of the Cape, extending far out from the general line of the Atlantic coast, greatly impedes and endangers navigation, and this fact is intensified by the drifting sands which are so constantly changing and re-forming shoals. Notwithstanding the several lighthouses on its points, lightships on the outer bars, the many carefully placed buoys and the constant vigils of the government officials, the Cape and its vicinity, more than any other on the Atlantic coast, is the dread of the mariner.

The consideration of the surface and soil of the county, than which no physical features have been more changed, would naturally conclude this chapter. The condition of the Cape when first seen by

Gosnold in 1602, was sandy shores, bluffs inland and thickly wooded. The pilgrims, after anchoring in Cape Cod harbor, found "it was compassed about to the very sea with oaks, pines, juniper, sassafras and other sweet wood." Here are the huge stumps whose trees a century and a half ago gave reason for the locality name—Wood End, and along the bay coast of Dennis and far out in the receding sands may be seen the stumps and the remains of fallen trunks of giant trees, black with decay; and no one knows how long they have been preserved by the saline qualities of the water, or when or how they were felled. The coasts of other towns, to a greater or less degree, reveal a similar condition of the primeval forests. That the entire Cape was once a noble forest there can be little or no question.

The surface is diversified with undulations of varied heights and depths—the uplands mostly covered with small pines and oaks, and the depressions with ponds of fresh water, of which but few have a visible inlet or outlet. It is estimated that the area of the Cape ponds exceeds thirty-seven thousand acres. The 174 more important ones, containing over fifteen square miles, or about one-fourth the total pond area, are noticed by name in the town chapters following. Of these Bourne has fifteen, covering 356 acres; Sandwich seven, of 616 acres; Falmouth sixteen, 688; Mashpee six, 1,420; Barnstable twenty-seven, 1,706; Yarmouth fifteen, 564; Dennis twelve, 441; Brewster twenty-five, 2,093; Harwich ten, 435; Chatham thirteen, 280; Orleans five, 213; Eastham five, 223; Wellfleet six, 225; Truro five, 108; and Provincetown seven ponds, aggregating 255 acres. The salt ponds connected with the extensive line of coast, together with the bays, the coves, and the small fresh water ponds without name and almost without number, would greatly increase the area. Salt marshes fringe the coasts, the largest being the great marshes of Barnstable. The reclamation of these has been advocated and the experiment tried in every generation; and more than once has the legislature granted corporate powers to those who thought the result attainable. These marshes are flooded twice a day at high tide, and when fairly green are as beautiful as a well-kept lawn. In time, as the marshes gather, the soil becomes higher and firmer, the grass finer, and the product is highly valued for the cattle, as salt hay. Of these salt meadows a considerable portion has been converted to the production of English hay by the generations of this century.

Even the surface of the Cape has undergone changes that hardly seem credible. Captain Southack in 1717, who, as a government agent, was sent out to search for the pirate ship *Whida*, wrecked on the back side of the Cape, made a map of a channel across from sea to sea as it then existed nearly on the line between Orleans and Eastham; and on this channel he marked a whaleboat with this note:

"The place where I came through with a whaleboat, being ordered by ye government to look after ye pirate ship *Whida*, Bellame commander, cast away ye 26th of April 1717, where I buried one hundred and two men drowned." It is generally accepted that this channel was made by that gale, and the early records show that it required a general turnout of the people and great labor to close it. Other low and narrow places have been similarly changed by great storms. During the severe storm of 1872, not only was a deep, wide channel cut through the outer beach opposite the Chatham light, but the government property was washed out ninety feet inland to a depth of thirty feet, unearthing a peat bog in which, around a large stump, were the tracks of six human beings. George Eldridge, the hydrographer, described these tracks as of different sizes and says that tufts of coarse animal hair had been impressed into the clayey surface of the soil near the stump, upon which were other tufts where the animal had rubbed. The spot was soon again covered with drifting sands.

Of the fifteen towns comprising the county, Chatham and Provincetown are the most affected by the sands from wind and wave; but Orleans, Eastham, Wellfleet and Truro experience more or less of these changes, and the upper towns are not entirely free from them. The denuded knolls that generations ago were well timbered, have been exposed to the ravages of heavy winds, blowing the finer and better soil into the bogs and depressions, or into the salt marshes and harbors, thus perceptibly changing the surface. To save the harbors and retain the soil, public and private efforts have been turned to planting the uplands with forest trees, which labor is being crowned with success.

The soil is diversified with portions alluvial and others diluvial, and once the surface was richly covered with vegetable mould; but the sand, cut adrift from its fibrous moorings and the long cultivation of the virgin soil without the return of an honest equivalent, has greatly reduced its fertility. It is still largely productive in every way by later and better methods of compensating in some way for the depreciation caused by successive crops, as is now practised in every county where agriculture is successful. The upper towns of the Cape have more or less loam and clay in their soils, which are consequently stronger, while the lower towns have a lighter soil but as productive under proper cultivation. About the creeks, marshes and swamps are found rich deposits sufficient to make the entire county more productive than are some so-called agricultural counties of the Commonwealth. The later generations have learned this, and to a greater or less extent are availing themselves of these superior advantages. Hundreds of acres of valuable cranberry bogs, fine vegetable gardens, and luxurious meadows have been redeemed within the last half cen-

tury, and hundreds more are resting in their native sloughs, waiting for utilization by the application of the adjoining sand bank. These improvements have only commenced, and the Cape, with its thousands of acres of valuable lowlands and millions of tons of virgin sand, is susceptible of still further development.

The clay vein of Truro, running across the Cape and cropping out on the bay side near the Great swamp, is an exception to the general character of the soil. The bank there is filled with pounds in which the water lodges and is held by the firm clay.

The peninsular character of the Cape has distinguished it during all historic time; but it is entirely plausible that in geologic time it had a more continental character. Off the south shore of Barnstable, where is now a channel two miles wide, separating Bishop and Clerk's light from the land, was once a sheep pasture through which only a small creek flowed, and within the period of our own colonial history the Nantucket farmers cut fencing on an island seven miles off Chatham, where now the rushing, restless tide has undisputed sway. Ram island, where many of the present residents of Chatham have repaired for frolic and berries, has gone down in the unequal strife and the sullen sea sweeps over a spot where the Vikings dwelt eight centuries ago—the spot which was still inhabitable when in 1620 Sir Humphrey Gilbert noted it as Nauset island. If the physical character of this peninsula has been thus modified by the Titanic war which old ocean—so old and so busy—has forever waged upon it, not less important upon its animal and vegetable life has been the effect of what Michalet, in his *La Mer*, calls the tyranny of the sea.\*

Every Cape woodland shows the effect of this strife, and whole forests have been bent by the prevailing winds. This fact, to wit, an incessant struggle of elements, is the best type of the Cape life as it has been and is, and is what has colored the Cape character.

The botany of the Cape is as unique as its geology. Here again the sea has been master—yet also a conveyancer of beauty and fate to the flowers. We may not pause here to divide the imported flowers from those indigenous to our soil. The pilgrims were Englishmen and long remained so. They, or their wives, brought here many of the old English flowers: holley, Canterbury bells, lilacs, Aaron's rod, box, bouncing Bettys', and above all "the Pilgrim rose," which after all our modern horticulture, still abides as the peer of the best; for the sea heightens color in the rose's petals as well as the maid's cheek. But the sea has brought here more flower seeds than ever the *Mayflower* and her sister ships since the landing at Plymouth.

\*The remainder of this chapter is contributed by the Rev. N. H. Chamberlain of Bourne, a native of the Cape, who has delivered a very popular lecture on the topic here briefly considered.—Ed.

It may be stated in the rough, that the Cape flora is divided by its central hill range into two great divisions; that the flowers on the south side are more intimately connected with those in the latitude of Norfolk, Va., than with their neighbors across the ridge, and that the same or equal intimacy exists between the flora of the Cape, north side, and that of the Bay of Fundy. The sea currents did it. Of course the trailing arbutus or "May flower," as our people call it, is the local flower of the Cape. This flower is found indeed, widely scattered over the temperate zone, but here and in the Plymouth woods it attains its maximum of purity and grace. For all fat garden flowers necessarily lower their colors in these respects, to the wild ones. They differ very much as a vestal does from an ordinary woman of fashion. For if flowers be the smile of the good God, that smile in flowers must be the noblest, which best symbolizes the loftiest virtues. Every traveler who had eyes to see, has remarked the very delicate and spiritualized look and structure of nearly all the flowers of the upper Alps; as if their very struggle for life with their adverse circumstance had given them a higher life and form of beauty. What the glacier and snow peaks are to the Swiss flowers, that, as water also, the sea is to the Cape flowers. They have also the strife for life and they too are made perfect through suffering. The Cape Codder in his travels may pick "May flowers" in their season, in almost any wood of our zone, but he will miss not a little of the Cape virginity and above all the circumstance of the Cape flower itself—the grey mosses holding up its flower clusters a little toward the sun—mosses which seem the fringe and raiment of eternity over the eternal breast of Earth, mother of flowers and men—the cold sea chill of the wind on shore; and as he holds her flowers to look at them, his eyes cannot but wander far off to the Cape sea, grey, turbulent, white crested, which like the voice of "the other world" breaks in its mighty monotone upon the desolate shore.

Here lie the secret ties, which often unknown to him bind many a Cape man to his province; sharp contrasts in scenery everywhere; the sea in storm, and the inland lakes and ponds among the hills, with their white strands circling their placid waters, where the sea birds rest in their spring or autumn passage, north and south; the rude and boisterous wind, and to-morrow the gentlest sunshine on the south hill slope where the first violets and anemones appear; the ever changing tides and the fixed hills, with the forest watching as a sentinel who never leaves his post; and two forms of solitude—the solitude of the sea shore and of the wilderness, so diverse at least in form and yet both ministrants, in a religious way, to a sensitive nature. He may enter the one only for seaweed and the other for a load of cord wood, but his circumstance remains unique, whether he knows it

or not. This is why the Cape man abroad misses somewhat out of the landscape. The rose is not the same elsewhere. The spring in the Rocky mountains may show water as pellucid as any at a hill foot here and the sand through which it throbs may be as white, but the mosses at the brim and the ferns which mirror their fragility in those "living waters" will not be there. It may be provincial for the Ice-lander, the Switzer and the Cape Codder to hold, each, that his own land is the fairest on which the sun shines, yet they each hold to it and for much the same reasons. Their land is very much unlike any other.

The scenery of the Cape is both unique and full of variety, circled by the sea and the forest, for after all the sea is the great master mechanic of the Cape landscape. It is hardly too much to say that it has determined very largely the manners and the occupations, at least of the old Cape Cod. "Life," says Emerson, "is by water courses." It may be ventured to say that liberty is by the sea. Great distances enfranchise; great altitudes enslave. "The Alps," says Longfellow, "are a poor place for a sad heart to go to." At Grindelwald or Lauterbrunnen one feels in the grey prison house of Eternity and as naught. For two hundred and fifty years or so the sea has lain open here to the venture of any man who dared it, and was and is, a highway for him to the ends of the world. The majestic orbit of its horizon has been ever tempting him to try what was beyond—to come out of himself and become a greater self at sea or on shore. Of stock which has no servile blood in it, the Cape man of the genuine breed has become one of the most independent men on earth. His own will runs even into a private burying ground for him and his.

As one face of this same independence is the man's curious self-reliance. He will undertake, if the wages satisfy, to carve a bust of Jupiter or oversee a factory where they manufacture moonshine. Only he will be thrifty enough not to take any stock. He respects the sea with which he struggles, and himself as well. He thinks he knows how to rig and sail a boat and is a very careful pilot at the helm. If his wagon was in the mire he would never pray to Hercules to help, until he had put his best shoulder to the wheel. But if there was no start and he a religious man, he would then pray as lustily as the best, and if he were not religious he would probably sit down under a tree and smoke his pipe, revolving whether there was any God or whether it would pay him to buy another cart.

Here lies the reason why so many Cape men have been successful business men. Their youth was a struggle with the soil and with the sea. They toughened with the toil, Spartan and frugal. When they went among other men they were well armed with frugality and self-reliance, and inferior men became as clay to their foresight and dominancy.

In much then that is formative in human character the Cape landscape has lent itself to make the Cape man free, self-reliant, frugal and indomitable. It has bred in him pluck and luck. The obligation he is under to his native province he is apt to fulfill by his life-long affection for the Cape. The Cape colors him all his life, the root and fiber of him. He may get beyond but he never gets over the Cape. Make him a merchant at Manilla or Calcutta, a whaler at the North Pole, a mate in Australian waters, a millionaire on Fifth avenue, a farmer in Minnesota, and the Cape sticks to him still. He will feel in odd hours to his life's end, the creek tide on which he floated ashore as a boy, the hunger of the salt marsh in haying time, the cold splash of the sea spray at the harbor's mouth, the spring of the boat over the bar where he came home from fishing with the wind rising on shore out of the grey night clouds seaward, the blast of the wet northeaster in the September morning, when under the dripping branches he picked up the windfall of golden and crimson apples, the big flaked snow of the December night when he beaded his first sweetheart home from singing school; and he will see in dreams, perhaps, the trailing arbutus among its grey mosses, on the thin edge of a spring snow bank, the bubbling spring at the hill foot near tide water, the fat crimson roses under his mother's window, with a clump of Aaron's rod or lilac for background; the yellow dawn of an October morning across his misty moors, and the fog of the chill pond among the pine trees, and above all the blue sea within its headlands, on which go the white winged ships to that great far off world which the boy has heard of and the grown man knows so well.