

How Danbury Got To Be What It Is

Geography and Geology



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How Danbury Got to Be What It Is

Geography and Geology

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To those who lived in the community, however, its exact location and the specific boundaries were of minor consequence compared to the unique combination of geological formations, hills and valleys, streams and ponds, plant and animal life, climate and weather, to which they had to adjust. Those geographic realities did not determine inevitably how they lived, however, but instead set limits as to what was feasible in terms of the skills and knowledge which the residents possessed at a given time.

Thus, the historical geography encompasses much more than the basic geography itself. It is an account of how the inhabitants coped with the environment of the place where they lived. Throughout the years the inhabitants' interaction with the geography changed as either the setting itself changed or as the people acquired different technologies. They responded to the setting in two ways: they adapted or adjusted to its potentialities and limitations; and they altered the setting itself in order to make it more responsive to their needs.

In a geographic sense it is impossible to define a functioning community solely by political boundaries. Streams flow from one settled area to another. A valley or a mountain ridge does not stop where a line on a map marks the beginning of another town. Animals migrate irrespective of borders. Wind currents carry pollutants great distances. Needed resources not available locally are sought elsewhere. Residents of one town work in another. Inhabitants combine, formally and informally, with others outside the immediate vicinity for regional action. They build economic, political and social ties with others in more distant areas.

Consequently, even from its founding, the geographic factors affecting Danbury were not confined to recognizable political boundaries.

Geology of this region

The details of the millions of years of geological history which led to the geography of western Connecticut as today's residents know it have yet to be deciphered adequately.

Although geologists have studied the area since early in the 19th Century, they continue to explore and map and interpret the complex rock

structures which have been metamorphized, altered, tilted, bent, folded and eroded over the millenia.

A widely accepted theory is that continents drift across the surface of the earth, and that the collisions and separations of major land masses explain much that heretofore has been a mystery.

One early separation began some 700 million years ago when what is now a portion of North America was torn apart from its larger parent body. For 200 to 300 million years the ocean between continued to widen, but geologists are uncertain whether its maximum width should be measured in hundreds or thousands of miles.

Of specific pertinence to the geology of Danbury is that the zone marking what was the coastline of North America at that time runs directly through the local community. Formations west of this line--called Cameron's line in honor of its discoverer--are remnants of rocks which formed the early continental border, plus others of oceanic origin later pushed into them. To the east is land added millions of years later.

Eventually the continents moved toward one another again, and their approach thrust the heavy offshore sediment upward, into a towering mountain range along the edge of the North American continent. The ocean finally began to vanish about 350 million years ago as the northern part of the coast of the United States became welded to Europe and Africa. It was not until about 230 million years ago that the more southerly segment of North America was joined to West Africa, further folding the Appalachian Mountain region. The limestone and marble of western Connecticut was a product of this same period, originating as deposits of tiny shells off the coast and heated, squeezed and pushed inland as the continents came together.

Over eons the mighty mountains eroded, and the mud and sand from them spread across one-third of the continent. The Appalachians and associated ranges along the east coast are what remain. Some geologists identify the Hudson Highlands which border Danbury on the west, as well as the Housatonic and Berkshire highland farther north, as "stumps" of mountains which were raised 460 million years ago and then slid or were pushed tens of miles westward during early stages of this mountain building epoch.

While what is now part of North America was still joined to Europe and Africa, the inevitable stress and strain resulting from the movements of the continents created a series of splits in the

earth's surface, 10 to 50 miles wide and of great depth. The bedrock of the central Connecticut lowland is composed of sediments accumulated in one such rift valley and later hardened into sandstone. The tensions which created the rifts also opened cracks through which lava erupted, resulting in the basalt cliffs along the Connecticut River valley north from New Haven and also found in nearby Woodbury.

One of these great rifts finally split wide open and once again, about 170 million years ago, the North American continent separated from Africa. This time the break was not along the earlier fracture in the Danbury region but instead occurred in what is now eastern Connecticut fairly close to the Rhode Island border. Separation between Europe and North America was not complete until approximately 75 million years ago.

The bedrock of the Danbury hills is the result of these mind-boggling changes. Formations from the very ancient geological periods to the most recent are visible within the community to those who know where to look.

The basic structures are complex combinations of metamorphic rocks called schist, gneiss and granite, the characteristics, locations and extent of which are still being studied by geologists. One variety, Danbury augen granite, previously known as Danbury granodiorite-gneiss, bears the name of the town itself, and a 1958 report by the State Geological and Natural History Survey describes its outcrop appearance:

"The area underlain by the Danbury augen granite is marked throughout by excellent outcrops. This rock type forms hills and accounts for the high relief just west of Lake Candlewood. Outcrops make smooth pavements on the tops and on the dip slopes (west slopes) of the drumlins; many of these pavements are over 100 feet wide. The scarp slopes (east slopes) are marked by cliffs, and vertical faces 50 feet high are common. At many places along the base of the scarp slopes, piles of huge joint blocks have collected; these render the terrain almost impassable. . . . Exposures of typical material may be seen on the hill northwest of Wildman's Landing and along Candlewood Lake Drive West just west of Candlewood Knolls."

Fractures in this bedrock serve as conduits for ground water, but it is difficult to predict the yield in specific locations because the size and direction of the water-bearing cracks are

irregular. In the modern era of water pollution, fractures do little to purify contaminants that may enter the water and then be carried for great distances.

Occasionally builders have quarried the local bedrock granite for construction projects--foundations of buildings, churches and a few large homes--but its use has never made a major contribution to the local economy.

The marble laid down in the ancient seas also has played a major role in establishing the topography, for limestone erodes more easily than the other bedrock formations. The Still River Valley in Danbury, Brookfield and New Milford, as well as portions of the river bed of the Housatonic in New Milford, follow troughs cut out of this softer material. Lake Candlewood similarly lies in a marble bedded valley.

In the places where the limestone is near the surface quarries have flourished in the past. The lime was used primarily for agricultural purposes and the making of plaster and mortar. Marble quarries, especially in Brookfield and New Milford, supported several sawmills for cutting blocks of the stone and forming them into hearth stones, monuments, tomb stones, and fireplace facings. A few shops also specialized in producing marble pots, mantels and vases.

A descendant of one of the later quarry owners recently reminisced about the past of this industry:

"The stones for the lime kilns in Bethel and Redding were broken by blows of a sledgehammer, and the fires that would burn the lime for mortar or fertilizer flared all night long. The coopers who built the barrels for the lime, the oxen that carried the stone out of the quarry and the fires have long since disappeared. . . . The quarry and its kilns were like a magnet then, attracting immigrants or neighbors to work as quarrymen or to cut timber for the kilns." (The News-Times, Danbury, June 22, 1983)

Fire destroyed the abandoned buildings of the last functioning quarry, off Federal Road in the northeast corner of Danbury, in 1969.

The mountains along the east coast of the United States, created as they were by the shrinkage of the ocean, provided a great potential for rich ore deposits. However, the erosion of the Appalachians washed away most of the valuable ores long before man could use them. Only small pockets remained.

The closest Danbury was to a regular supply of iron ore during the 18th Century were the mines in Salisbury and Kent. Townsend's mine, at Simewog Hill, in neighboring Southeast, New York, reportedly shipped ore to Danbury during the same period. The mines in Brewster and Tilly Foster and Mine Hill in Roxbury did not develop their iron deposits until the following century.

Attempts to find precious metals in the region never proved successful although through the years the hopes of some remained high. In 1875 the Danbury News reported:

"For months the rumors of gold, silver and copper mines have been flying about thick and fast. The capitalist has looked at his bank account to see about purchasing stock. The merchant has hoped the rumors are true, that trade might receive an impetus. The laboring man has indulged in dreams of wealth and comfort, for is not gold to be had by the digging? These rumors have increased with time and calculation until everybody was talking of them, and most of them laughing in derision at the idea of precious metals being found in Danbury."

In that period the paper made reference to a silver mine in Padanaram, dug to a depth of at least 50 feet; a mica mine in Ridgebury; a mine on Thomas Mountain; a copper mine in the eastern part of the town; and an iron and lead mine in Middle River. None of these enterprises was long lasting.

However, Ridgefield produced mica in commercial quantities in the 19th Century. Pegmatite veins in Ridgefield and New Milford also were the source, in relatively small quantities, of a wide variety of other minerals, including such semi-precious stones as beryl, and rose and smoky quartz.

Danbury's claim to fame in the world of mineralogy is Danburite, a rare mineral first discovered in about 1837 by Dr. Charles Shepard while he was conducting a geological survey of the state. Dr. Shepard was not specific in describing the site of his find, merely stating that "it was collected in the town of Danbury near the manufactory of Col. White." To locate that site would seem to locate the source of Danburite. But Col. White had two mill sites in 1837.

In the year 1831 he purchased a mill at North Meadow, "the fulling mill place" with buildings and machinery for the business of carding wool and dressing cloth and the tools that went with it. When he sold it in 1848, it was called his mill or

factory at Padan Aran. This was located on what is now Route 37, the road to New Fairfield, near the Cracker Barrel Restaurant.

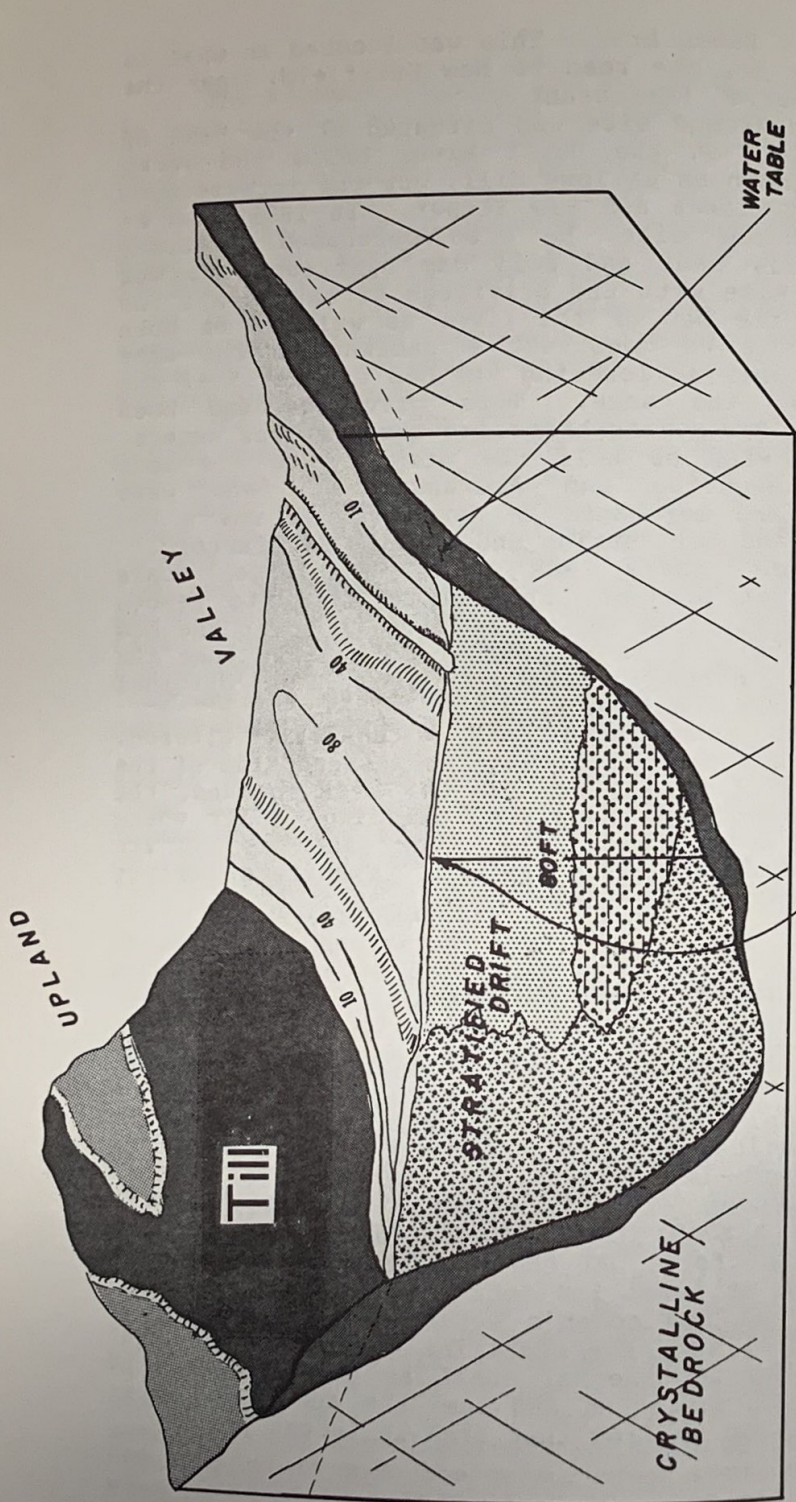
The second site was situated at the head of Elm Street, on the Still River below the rocky outcrop known as Gallows Hill, now the intersection of Beaver Street and Elm Street. In 1835 when he purchased the site, he also purchased a former grist mill, seat and mill dam upstream. He was sold the site with the privilege of taking all the stone in the bed of the river as well as on both sides of it to construct a raceway on the east side, as well as lowering the bed of the river and excavating the same. This privilege had been granted a few months before to the previous owners. In 1843, when he sold the property to his sons William Augustus and Alexander M., who were partners and merchants in New York, it was a hat forming, and fur cutting and blowing manufactory.

Since there was such a large scale construction project, from about 1835, to remove rock on both sides of the bed and to lower the bed of the river, it is reasonable to believe that the Danburite already detached from its original location was found here.

Both sites have been extensively altered. The railroad passed through the western side of the Gallows Hill site. The dam has been removed, the pond drained and industrial buildings built where the pond once stood. The other site has had its dam removed and pond drained. Twentieth Century urban sprawl has replaced both.

Glacier once covered area

In the comparatively recent past as measured on the geologic time scale, the Wisconsin continental ice sheet covered a vast portion of North America. In the Connecticut area it reached--and created--Long Island. No one knows for certain the thickness of this gigantic glacier, but one estimate places it at least 2,500 feet over the site of Hartford. At the southern terminus it must have been at least 550 feet thick. Because a huge quantity of the ocean's water had become part of the glacial ice, the shoreline was far out on what is now the continental shelf as evidenced by the remains of mastadons and mammoths and fresh water peat dredged up from that area in recent years.



SATURATED THICKNESS OF STRATIFIED DRIFT IS 80 FEET AT THIS POINT, AND EVERYWHERE ALONG THE 80 FOOT CONTOUR LINE

Schematic block diagram shows general spatial relationships between stratified drift, till and crystalline bedrock. Water table marks the top of the saturated zone and contours show saturated thickness of stratified drift. (Connecticut Water Resources Bulletin No 21 - Upper Housatonic River basin.)

The ice reached its greatest extent about 12,000 B.C. The traditional concept that the glacier then gradually retreated, moving slowly northward does not fit the facts. On the contrary, the glacier melted in place, from the top down, and the ice generally remained longer in southern New England than in the northern parts.

Flint's study of the glacial geology explains this seeming incongruity:

"The chief cause of the preservation of the ice in the south appears to have been low elevation. The valleys of New England slope southward; hence the gravels and sand that came through the spillways were always spread southward over lower ice. The ice in the south had the best chance to be covered with a blanket of debris that was just as effective as sawdust; and so the ice remained and blocked the water out. . . .

"It would be interesting to picture the landscape of southern Connecticut during these last stages. Probably no ice was visible, being covered up (except along the lake margins) with thick gravel and sand. There is no reason why the landscape need have been bare. . . . Here in Connecticut carbonized twigs and other plant remains are of not uncommon occurrence in the terrace sands. This suggests that the land surface became re clothed with vegetation about as rapidly as it emerged from the ice. There is other evidence just as good. The remains of reindeer have been found embedded in the terrace sediments. If these reindeer stayed in a country where there was no vegetation, and therefore nothing to eat, then they were very different from their modern descendants.

"The evidence, then, combines to tell us the story, not of the melting back of the wavering front of a moving glacier, but of the melting down of a stagnant and decaying mass of dead ice, the highest parts first and the lowest parts last; hence roughly from north to south."

The effect of the glacier on the general topography of the Danbury region was relatively minor. The hills were lowered a bit and their edges rounded off. Valleys were widened and a series of terraces were deposited by the various shore levels of the glacial lakes which filled the valleys. Preglacial mantle rock was removed and redistributed. In places the bedrock was gouged out, and in places there were extensive deposits of sand and gravel.

The continents continue to move, with the Atlantic widening at the rate of a little more than an inch each year and occasional earthquakes are reminders of this geological instability. As early as January 1698, Rev. Seth Shove, minister of Danbury's church, reported a series of quakes that occurred during his pastorate. The one in 1698, as well as those in 1727 and 1729, he considered strong. The two in April and May 1702, as well as that in 1711, were less powerful. In 1701 and 1730 residents heard a noise in the air like the noise of a cannon, but no thunderheads were visible.

Modern seismologists find that there are frequent small earthquakes in New England, more than in any other region in the contiguous 48 states except California. Many pass unnoticed, but a few illustrations from the Danbury region indicate they are not as rare as many inhabitants suppose.

In 1848 James Nichols recorded the following in his diary:

"Last night after we had retired to rest and were about in the middle of nap No. 1 we were suddenly alarmed by a rumbling heavy sound which continued some seconds and jarred the whole house. A moment or two more, and a second sound of a similar kind but less severe followed, of about the same duration. By this time we were fairly awake and could have no doubt but they were two light shocks of Earthquake. It was judged to be somewhere between 11 and 12 o'clock. A similar single shock of Earthquake was felt a little after sunset about 3 years since.

"Today I have conversed with several who felt the same shocks, and were considerably frightened for the time. One lady (Mrs. Crosby) describes it as seeming to move along in a straight line downward in the direction of the main street in Danbury."

In 1870 the editor of the Danbury News reported a quite strong quake in Hartford and Boston but was pleased that "the shock in Danbury was not very strong but was realized by many. Our desk vibrated several times in succession, and then followed an instant pause, when the motion again commenced and continued the same time. We don't hear of anyone being knocked down and seriously bruised, but all are satisfied with what was experienced with no desire to have it repeated."

Four of the most recent shocks were in October 1981, January 1982, and February and

October 1983. All registered low on the Richter scale.

Geologists are not certain about the causes of these quakes in New England, for this area is near the center of continental plate, not on the edge where such movements are more likely. One theory is that the earth is slowly and unevenly bouncing back from the pressures placed upon it by the weight of the ancient continental glaciers. Another possibility is movement along rock fractures; one called the Ramapo Fault runs from Peekskill, N. Y., to New Jersey and is part of the Hudson Highlands. Moodus, a section of East Haddam, Connecticut, 40 miles east of Danbury, is another unstable area. The Indian name is Machimoodus, meaning "place of noises" and it has been a center of recorded seismic activity since the colonial period.

Only in recent years have scientists seriously studied earthquake activity in the region, stimulated partially by the potential danger to atomic energy plants which are near some of the fractures. One of the seismometers which the University of Connecticut has in place to gather data for this research is in Brookfield.

Soils of our region

Although the glacier did not radically change the basic bedrock topography of the area, the demise of the ice sheet left behind a mantle of till and stratified drift, which has had a profound impact on plant, animal and human life since that time. The depth, type and quality of this cover varies according to the supporting land forms and the accidents of glacial action.

The 1800 assessment by Rev. Goodrich of the land in his Ridgefield parish is descriptive of similar terrain in Danbury, where there was "... a considerable quantity of very stoney land which is yet and probably will be reserved to grow wood and timber upon. The soils on the Ridges are generally composed of Loom and clay and there is a considerable quantity in some part of the town and a light limestone soil but little of gravel. The low lands or swamps of which there are several are generally a deep black soil made by the fallen timber and leaves and the ash from the ridges, but they suffer much from the want of draining."

Soils are mixtures of sand, silt, clay,

pebbles, stones, and humus, the latter being the organic component made from decaying plants and animals. Specialists recognize a vast number of soil types and recent surveys in Connecticut have identified, located and mapped in detail the soils throughout the region.

Till refers to unassorted, unstratified deposits left by the melting glacier on the bedrock. Its components are of particles ranging from boulders to gravel, sand and clay. This compact soil is commonly known as "hardpan." Extensive usage of this type of soil for residential and commercial purposes can create serious problems of excessive run-off, including septic effluents, erosion, and pollution of adjacent water supplies.

Stratified drift resulted from water running in channels across and within the ice, or from waters dammed in temporary glacial lakes, which laid down alternating layers of sand, gravel, silt and clay. These deposits are primarily in valleys and lowlands.

The soils found in the valley floor, mostly stratified drift and glacial outwash, are fairly thick in places, and are important not simply for their agricultural potential or as centers of concentrated populations but also as water storing wetlands and underground aquifers.

A report for the Housatonic Valley Council of Elected Officials in 1978 stressed this value:

"The most promising groundwater sources in the region are the larger, coarse-grained stratified-drift deposits of the valley floors. Within these 'subterranean reservoirs,' if protected from pollution, lie the only major reserves of good quality water still available for the future needs of the various communities.

"These porous areas of valley sands and gravels are particularly susceptible to the entrance of pollutants in their direct 'primary' recharge areas (land surfaces directly over the aquifer), and to only a slightly lesser degree in their 'secondary' recharge areas (directly adjacent upland slopes through which groundwater flows down gradient along water table to enter the aquifer)."

The major aquifers within Danbury's corporate boundaries which the report identified are Sugar Hollow, Lake Kenosia, West and Middle Still River, Great Plain, Sympaug Brook, and East Swamp.

The sand and gravel deposited by the glacier are the most commercially valuable of all the resources left by early geological activities. In

recent years, the removal of hundreds of thousands of cubic feet of these deposits for use in construction projects has extensively altered the topography of some sections of the community. Hills have disappeared or been left with gaping gashes in their sides. The level land thus created often has become the location of commercial structures or housing of which the medical care center on Sand Pit Road is a prime example. And in the process a fascinating record of the ice age disappeared before the onslaught of the bulldozer and the dump truck.

In the past, farmers and builders made regular use of the quantities of stones and boulders of ice age origin for construction purposes, especially for building foundations, root cellars and stone walls around their fields.

Because so much of the soil cover in Danbury is relatively thin, the area also has serious problems in locating garbage dumps and septic systems. Landfills should occupy areas underlain with deep, thick soil so that the liquid leachate from the refuse can filter through the soil and be cleaned in the process. However, if this polluted water stays near the surface because either the hardpan or the bedrock will not absorb it, water intended for drinking purposes can easily become contaminated.

In the Danbury region the valley floors contain the thickest deposits of soil and seem the most appropriate location for landfill operations but these same areas are also the location of the aquifers holding the major supplies of groundwater.

Scattered throughout the hills also are small "islands" of gravelly loam left by the glacier and likewise suitable for small-scale farming and grazing. A French traveller described such an area in neighboring Newtown in 1780:

"In general the country is middling, yet in the midst of these rocks, we find some pieces of sown ground which seem to produce much grain, at least for the time being; for these farms, newly cleared, seem to me to have little depth of soil. At first they have produced much, because beds of the leaves of trees are found there which, being rotten and mixed with the soil, fertilize it; but this can only be for the moment."

Much of the terrain is much more rolling and its soil thin, essentially unstratified and sprinkled with stones.

Finally, many hillsides are so steep and rugged that only a minimum layer of soil remains in

place, with extensive outcroppings and loose boulders exposed.

A more precise analysis of the terrain and soil types in Danbury, prepared by the Connecticut Agricultural Experiment Station in 1939, estimates that 40 percent is hilly land, with light-textured, rapidly drained glacial till soils; 30 percent is very stony or mountainous land; 15 percent of stony, hilly land of medium to heavy textured glacial till soils. On a scale of 0 to 12 for measuring overall agricultural potential, Danbury rated a 5, falling between poor and fair.

The topography of Danbury

The ancient geological forces created at least four physiographic regions within Connecticut.

The Central Lowland is a belt of fairly level and moderately rolling terrain extending north from New Haven across the Massachusetts border. It is only about five miles wide at New Haven but expands to about 20 miles at the northern boundary of the state.

A narrow coastal plain borders the shore of Long Island Sound.

The Eastern and Western Highlands are located on either side of the Central Lowland.

The Uplands in the western part of the state rise abruptly from the Central Lowland and in the south originate as low, rolling hills near the coast of Long Island Sound. As they extend northward, they become gradually higher and more rugged until, at the far northwest corner near the Massachusetts border, they reach their highest point at Mt. Frissel, rising 2,380 feet above sea level.

The northwest corner of the state occasionally is designated as a fifth and separate region--the Taconic Section--which includes the upper Housatonic Valley and the Taconic Range.

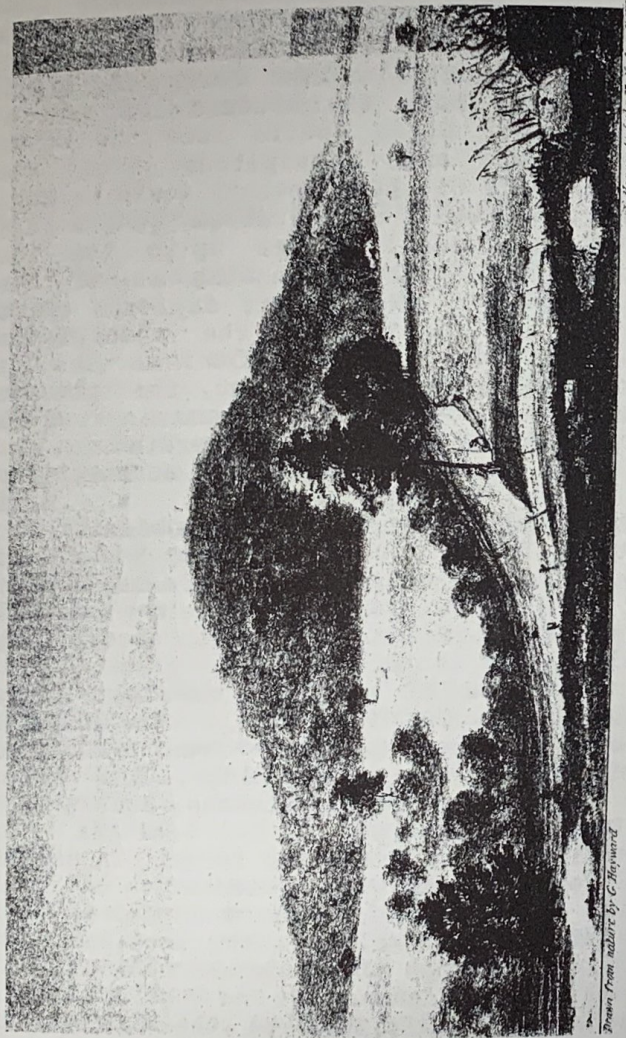
Each town in the area has its own special pattern of hills, valleys and rolling terrain, and that uniqueness has helped differentiate the development of one community from the other. The topography of Danbury, located in the western uplands about 20 miles inland from the Sound, was the inspiration for the following rather lush and romantic description written in 1847:

"One of the distinguishing characteristics of the landscape of Connecticut is her varied and romantic scenery. Occasionally a beautiful plain with slight undulation of surface, stretches away for miles in length and width, watered by clear streams, pencilling their long, crooked lines, widening at times into deep placid bays or narrowing to angry rapids; variegated with patches of forest, single shadetrees, gray rocks, village clusters, adorned with sweet farm-houses and dotted at intervals with herds of busily feeding cattle. From the borders of such a plain, the ground often swells into the strong contrast of abrupt and precipitous; into what indeed by the side of the Alleghany would be but a mere hillock, but which nevertheless, in the rural scenery which surrounds it, comes up to the idea of a very fair Mountain. Ascending one of these delightful eminences in a clear day, the eye of the spectator is enchanted by the rich picture opened to his view. . . . few surpass in magnificence, variety and extent, the prospect from the summit of Beaver Brook Mountain, and the bold, native scenery around Lake Neversink.

"In the annexed poems our authors have sketched with a bold pencil, a vivid imagination, and a thrilling sublimity of thought, the lofty, perpendicular cliffs of hoary rock rising in eternal majesty and strength from the level plain, as well as the equally enduring beauty and quiet freshness of the romantic old lake."

The elevation of most of the town ranges between the 500 to 700 foot level. The names of many streets and neighborhoods--Town Hill, Deer Hill, Golden Hill, Clapboard Ridge, Long Ridge, Ridgebury, Rose Hill, Highland Avenue, Brushy Hill, Wooster Heights, Coalpit Hill, Shelter Rock Heights--reflect the uneven land forms. In general the ridges have a north/south orientation and often lie parallel to each other. The mountains known to geologists as the New Milford, the Housatonic and the Berkshire Highlands which straddle the New York line and the northern section of the Housatonic River continue these ridges to the north. The names Ridgefield and Ridgebury are descriptive of the lay of the land to the west and south.

The hills near the border west of Danbury are the eastern terminus of the Hudson Highlands, and thus are part of a series of mountains that run from west to east. They originate west of the Hudson River, are sliced through by the river at



BEAVER BROOK MOUNTAIN

Beaver Brook Mountain as sketched in "Landscape Views of New England," 1847

Storm King and then continue eastward into Connecticut.

Danbury's highest peaks, such as Round, Spruce, Moses, Thomas and Town Mountains, are near the 1,000 foot range, and although not mountains in the traditional definition, their presence does impart a sense of a mountainous terrain. An 1842 visitor to Thomas Mountain reflected this feeling:

"A most noble, enchanting and sublime prospect opens from this mount. Before you spreads open an immense expanse of hill and dale, of cleared and woodland, extending to two or three different towns, on your right stretching almost immeasurable distance is a long view of Long Island Sound, bounded by the high and far extended banks of Long Island; on the left hand on to the North are mountains piled against mountains leaving their billowy shapes on and on, to the distant haze, until the eye can scarcely determine the boundary between land and sky. Behind you is the whole unbroken sheet of Mill Plain Pond and looking onward are still more highlands stretching away, away, till the eye of the beholder is ravished with the beauty and sublimity spread before him, and his mind almost lost in the contemplation of the magnificence and immensity of this Great Creator's works. A little farther to the south and Ridgefield spreads out like a map before you with its many rich and elegant buildings. It is altogether a most magnificent prospect. It well repays a journey thither and no one who has a love of the sublime should deny himself the felicity of paying it a visit."

The hills have played many roles in the lives of Danbury residents. Not easily farmed, they were less readily cleared of their natural vegetation and thus have remained longer as open land. Because they roughly encircle the more level land that became the town's trade and industrial center, rainfall, funneled by them into the Still River basin has resulted in numerous floods in the central area. Ridges near the "downtown"--Deer Hill, Farview Avenue, East Liberty Street, for example--became desirable locations for the residences of the more affluent. However, in recent years the increasing use of hills throughout the town for home sites has caused problems of erosion and proper septic disposal. But it was as obstacles to easy transportation that the uplands have had the longest history.

During most of its formative years the community was essentially a self-sustaining town,

for the topography tended to impede movement to and from the outside world.

Footpaths became roads

Despite the fact of the general north-south orientation of the ridges, the valleys between them were not always easily used for travel in a north-south direction. An Indian footpath was the original link to the coast. Although the route that the first families followed to Danbury is uncertain, several clues suggest that they came through Bethel from the south by way of Sympaug Pond. Probably the path was somewhat similar to that followed by the railroad. The 1708 agreement for the purchase of Ridgefield indicated that Danbury's cart path to Norwalk, built shortly after the settlement, crossed the Norwalk River southeast of the Branchville railway station and probably was close to the original route. The present Route 7 through the narrow and wet defile of Sugar Hollow was not opened until the beginning of the 19th Century, and supplemented a road which snaked across the hills between Moses and Thomas Mountains to Wooster Heights.

As late as 1734 the settlers were still searching for a lost survey for an improved road to Fairfield which the court had ordered years before.

Eastward toward Newtown not only hills but also the Housatonic River were impediments to easy transport.

The more open Still River valley to the north facilitated travel toward Brookfield and New Milford.

At first trails and the "highways" connected Danbury with adjacent towns, but travel over them remained difficult up to the time of the Revolutionary War.

West of Danbury an early route was through Miry Brook to Ridgebury and the New York border. In 1846, when residents of Ridgebury petitioned to be annexed to Danbury, they said, "the average distance at which the petitioners reside . . . from the town house of said Ridgefield is about ten miles . . . the greatest distance of any of the petitioners from the borough of Danbury . . . is but five miles . . . that the facilities for communication with said town of Danbury are very great, owing to good and convenient roads . . . and that the roads extending to said village of

Ridgefield are exceedingly rough and hilly and incapable of improvement except at enormous expense."

The plain surrounding Lake Kenosia and a narrow east-west valley now followed by Routes 6 and I-84 eventually made travel in that direction even easier.

Travel improved slowly during the colonial era but roads generally were very poor. An excerpt from the itinerary prepared for the movement of the French troops details conditions on the roads between Newtown and Danbury at the time of the Revolution:

"As you leave town you bear right between two low hills. . . . You go down a stony road, leave a large pond on the left, and then pass through a wood. You cross several little brooks that flow to the right into a larger one. You cross several little woods. Proceed downhill. The road is very steep. You pass a wood and a pond on the right and then cross a brook on a bad bridge.

"The road goes up and downhill, crossing several brooks. You pass a small wood on the right. The distance from here to Newtown is 5 miles. You proceed into a small wood and, upon coming out of it pass on the right a road going to Newbury. You enter another small wood, and after passing through it, come into a little valley where you cross a small brook on a bad wooden bridge. Passing a wood on the left you continue uphill on a bad stony road, having a hollow on the left and a wood on the right. Then you go downhill. Cross a brook on a bridge next to which there is also a ford. You pass several roads on the right and on the left several scattered houses. You come to a crossroads. Take the middle road leading to Danbury. . . . Danbury is a fairly large town that has been partly burned by the English. It is situated on a low plateau. A Stream called the Still River flows nearby. This is crossed on a wooden bridge, near where there is also a ford."

Poor as most colonial roads were, it was Danbury's location astride those highways that determined the town's strategic contributions to the Revolution. Danbury was occupied briefly and partially burned by the British army. It was a major supply depot for Washington's troops. Teamsters centered in the town went in all directions collecting and dispersing supplies. A hospital served the sick and wounded military personnel. A body of artificers stationed there

produced quantities of military goods. It supported two winter encampments, one within the town itself and one over the town line in Redding. It often served as a rendezvous point for the colonial forces. The French army passed through both going to and returning from Yorktown.

The explanation for much of this activity is geographic. Danbury was just behind the lines of the American forces surrounding New York City. Fairfield and Litchfield Counties were major producers of food, particularly beef and pork, for army use, and Danbury occupied a central location for receiving and packing those items.

Military supplies deposited along the coast of Long Island Sound or close to the Hudson River would have been in even greater danger of attack by the enemy. Travel and a supply line along the coast also was dangerous, so an inland route was preferable. Farther north the New Milford and Housatonic Highlands presented serious obstacles to east-west communication in that area. Usable roadways from central Connecticut to the Hudson already passed through Danbury. With improvements such as the building of a bridge across the Housatonic at Newtown the road through Danbury became one of the best routes.

By the end of the war Danbury, like all of the surrounding towns had grown in numbers, and the 1790 census recorded a population of 3,031, despite the recent loss of a portion of its residents when Newbury (Brookfield) became a separate community.

But more important than numbers was its experience as an active center of communication and trade which encouraged the inhabitants to shift their economic focus from farming to a mixed economy of trade, manufacturing and agriculture. The inhabitants pressed to further improve the roads that during the war had been poor but passable. As they stated in petition to authorize one of several turnpikes proposed to make the town more accessible to other regions, "the roads through the various Towns between Farmington and Danbury are extremely crooked and Hilly, and . . . many alterations may be made thereon to the great advantage of the public."

The routes to Danbury's major markets in New York City were three: to Norwalk and then by ship; to the Hudson River and then similarly by boat down the river; and overland through Westchester County. Much of the town's shop and agricultural surplus was carried this way and imported resources--furs and horn in particular--returned by the reverse route.

During the War of 1812 the importance of a safer inland route for transport between New York and Hartford again surfaced as it had during the Revolution and mail stages were diverted through Danbury to avoid dangers from British ships on Long Island Sound.

The highways used during the Revolution and immediately after were the forerunners of the major transportation routes of today. The topographical features that led the early builders to choose the particular routes continue to guide modern engineers.

Route 7 north from Norwalk still winds between the hills and through Sugar Hollow and the terrain still hinders the rapid flow of traffic. North of Danbury the Still River valley funnels old Route 7 through Brookfield to New Milford. The east/west Revolutionary supply route became a portion of transcontinental Route 6, starting at Cape Cod and ending in California.

Danbury became a railroad center for reasons similar to these that made it a highway center. The Norwalk to Danbury and the east-west New England railways closely paralleled Route 6 and 7. The Housatonic line to New Milford passed through Brookfield, to which a spur line--the "Dummy"--connected in 1868, making Danbury also accessible to Bridgeport by train. Another connection leading to the New Haven area was possible via Hawleyville. The Shepaug line joined Bethel with Litchfield.

In the 20th Century buses and trucking companies used Danbury as the hub of several transportation routes that converged on the city. When Route I-84 came through Danbury it was because the topographic features made it a sensible route. It follows roughly the old Revolutionary War supply route from Hartford to Fishkill.

The level and gently sloping terrain is squeezed between the hills and ridges in an irregular pattern. Main Street, in the central part of the city, occupies a two-mile-long flat area, starting at its southern end as a narrow valley between two ridges. Other relatively extensive valley lands early acquired the label of "plains"--Barren Plain (near White Street), Great Plain, Mill Plain and Grassy Plain. Northeast of the center of the city are the flood plains of the Still River, Beaver Brook and East Swamp.

Although occupying proportionately only a fraction of the town total acreage, these areas have had intensive use through the years.

In the 1600s scattered groups of Quiripi-

speaking Indians people a territory which extended across the southern part of the state from the Connecticut River basin to an undefined boundary somewhere between the Housatonic River and the present Connecticut-New York border. Indian population in what is now the Danbury region was sparse when the settlers arrived. This was at least partially the result of epidemics which killed thousands of natives during the early decades of the 17th Century. One careful estimate suggests a mortality rate of 95 per cent.

The Indian name for Danbury was Pahquioque, meaning cleared land, a term which reveals which feature of the local geography the natives considered of primary importance. However, only a relatively small proportion of the land was under cultivation. Archaeological sites having the greatest concentrations of artifacts, particularly fire pits, pottery and stone tools, help locate their major residential areas.

All are where there was water, along with a considerable amount of flat land: the Segar Street region near the Still River, including much of the property on which the Danbury Fair once operated; Lake Kenosia and its environs; both sides of the Still River in the Beaver Brook and Stony Hill Districts and southern Brookfield; the area north of Wildman's landing now covered by Lake Candlewood. What is now the midtown campus of Western Connecticut State University was also used extensively for farming.

How Danbury developed

The earliest colonial settlement was in the narrow valley between Town Hill and Deer Hill, now the southern end of Main Street. On those lots they located their homes, barns, gardens and orchards, but this was only the base from which to expand. Robbins, the town's first historian, reported that "many parts in the middle of the town, which are now very fertile and prolific, were considered by the early proprietors as not worth cultivation. Some of them, therefore, went from four to seven miles for lands to raise their ordinary crops."

Throughout the colonial era the greatest number of inhabitants continued to reside in this central portion of the town, and a map made for the French army during the Revolution testifies to its density of population.

The greatest concentration of population was along both sides of Town (Main) Street, and, as an 1819 description emphasizes:

"It is built principally upon one street, which for more than a mile exhibits an almost continued range of buildings, consisting of Dwelling houses, Mercantile Stores, Hat Factories, Mechanics' Shops, etc. Within one mile and a quarter there are more than 100 Dwelling houses, with a great proportion of other buildings. . . . There are few interior villages in the State more compact, or that afford an equal aggregate of industry, and of mechanical and manufacturing enterprises."

Because of the number living in the center of the town the legislature in 1822 established a separate borough government. As the numbers continued to increase, the legislature enlarged the boundaries twice before 1850. Although the density in the center was considerable, the borough was not "industrialized." Many of the factories were small and scattered throughout the entire community, often as parts of the owners' farms. Danbury was still an agricultural town with a growing manufacturing-residential-mercantile core.

From 1850 on, industrialization dominated the economy. The completion of the Danbury-Norwalk Railroad in 1852 signaled a period of ever more rapid development in the center of the town. The huge tonnage of coal which the railroad almost immediately began to transport facilitated the use of large factories employing great numbers of workers. Nearby communities, which also had moved into the shop and mill stage of manufacturing during the first half of the century, lacked the quantity of centralized, open acreage for large-scale industry that the flat lands of Danbury provided.

In the decades that followed, Danbury grew from 5,964 in 1850 to 23,502 in 1910. By contrast Brookfield was 1,359 in 1850 and 1,101 in 1910. During the same period New Fairfield's population declined from 927 to 551. A Brookfield minister demonstrated the extent to which Danbury's growth resulted in part from migration from surrounding towns, writing:

"I go to Whisconier and ask where the people are who used to live in that house, and they say 'gone to Danbury'; I go to _____, and ask where the people are who used to live in that old place, and they say, 'Oh, they moved to Danbury'; and so over on Obtuse Point and Pumpkin Field the people 'have gone to Danbury.'"

Growth during the 20th Century, especially since 1945, was spurred by the availability of skilled workers and improved transportation facilities, especially the completion of I-84 and I-684 to New York. However, without land suitable for commercial and industrial development it would never have grown as it did. The flat areas that had attracted the Indians and then the colonial farmers to the area now appealed because much "buildable" land still remained. New businesses were encouraged to settle on lands owned by the Danbury Industrial Corporation, in Commerce Park on properties paralleling Route 7 north through Brookfield, along Routes 6, both east and west of the city, in Mill Plain and Miry Brook, and on the old Fair site.

The Still River system

The Housatonic River from its source near Pittsfield to Long Island Sound drains much of this western upland region. Danbury is not directly adjacent to the river itself, but it is an integral part of this basin. The Still River, the largest stream within the town, originates in Sanford's Pond near the New York border and meanders north for 17 miles to join the Housatonic in southern New Milford. The waters from most of the other streams, as well as from the ponds, lakes and swamps, eventually empty into the Still River as it winds its way through the community. Only a very small fraction of Danbury's water contributes to the Saugatuck, Norwalk and Croton River watersheds.

The gradient of the Still River is only about ten feet per mile, for, during most of its journey, it wanders through relatively flat terrain of sand and gravel originally laid down as the bed of a temporary glacial lake over a marble floor. An observer in 1847 described this often circuitous channel as viewed from Beaver Brook Mountain:

"Then you behold the slow river winding among clumps of willow and maple, butting against a steep bluff bank, then rebounding with a long graceful curve around a level meadow, fringed at its brink with dwarf flowering bushes; from thence at another angle descending a sparkling rapid and washing the shore of an immense pasture nipt off to a short velvet plush carpet down to its very edge."

There are, however, two segments of the route where the river is confined to a much narrower passage. The first is downstream from Mill Plain Swamp and the old fair grounds. At this point the stream passes between ridge, carrying Lake Avenue and Morris Street on one side and Park Avenue, Pleasant Street and Beaver Street on the other. Two dams in this area impounded the waters forming Oil Mill Pond and White's Pond.

The second major natural obstacle is Shelter Rock, around which the water has cut a narrow, steep-walled valley. Where the river emerges in Beaver Brook, the terrain once again is relatively level.

Early in the 18th Century settlers created mills in both of these narrowed valleys.

A mill of sorts was in place soon after the settlement. In 1703, when Wakefield Dibble built the town corn mill near Shelter Rock, he rejected another site already known as "the old mill" located somewhere near where the Still River today passes under West Street. Until 1730 Dibble's was the only mill on the main stream and only that portion near the mill was called Mill River. However, smaller brooks turned at least one fulling mill and probably a saw mill, part of which are listed in an inventory of property in 1697.

For many years the settlers applied the name Mill River to this main stream and they were not certain which of the branches feeding into the center of the town constituted the river itself. An early surveyor's sketch labeled the present day Padanaram, where it joins the Still River near White Street, as the North River or The River. Today's stream from Kenosia to Main Street also early bore the name Middle River, apparently a description of its position between Blind Brook and Kohanza.

The many smaller brooks that feed the Still River are today either so inconspicuous or so well hidden by bridges, culverts and buildings along their banks that most inhabitants, unless living immediately adjacent, are unaware of their existence. This multitude of rivulets, brooklets and brooks which carry off much of the surface water can be consolidated into a few major tributaries.

Miry Brook and Kissen Brook which collects water from Sugar Hollow and Lee's Ponds on the Perkin-Elmer property join the Still River near the Danbury Airport.



This aerial view, taken by Virginia Welch from a plane piloted by her husband Bill Welch, shows how the Still River was channeled through areas that were badly flooded in August and October, 1955. This section runs from White Street (upper left) along the railroad yards, past the Davis & Geck and Republic Foil plants, under the Triangle Street and railroad bridges to the Shelter Rock Road area. A detailed map of the Still River as it courses through Danbury will be found on Page 36. Concrete channels show in white to a point south of Chestnut Street. Upstream from White Street is another set of channels that extend through the central business district to Rose Street.

Blind Brook drains the Parks/Tarrywile area, running under Jefferson, Washington and Lincoln Avenues, West Wooster Street, William Street, West Street, New Street and Elm Street where it flows into the main stream.

Kohanza Brook starts with the Upper and Lower Kohnza Reservoirs, passes through the Ridgewood Country Club, eventually crossing Main Street and North Street to a point north of Patch Street where it flows into Padanaram Brook.

The Middle River Brook, a branch of the Kohanza, carries the overflow from Boggs and West Lake Reservoirs.

Three reservoirs--East Lake, Margerie and Padanaram--flow into Padanaram or North Meadow Brook. It follows Padanaram Road, runs under Hayestown Avenue, along Rowan Street and under Balmforth Avenue and East Franklin Street, between Main Street and Maple Avenue, to Crosby Street for its junction with the Still River itself. The section from Patch to Crosby Street also has had the name Middle River, being considered a continuation of Middle River Brook and/or Kohanza.

Sympaug Brook flows north from Bethel, joining the Still River near Cross Street. In early records it was also called Muddy Brook.

East Swamp/Limekiln/Beaver Brook enters the Still River valley near Commerce Park. Much of the wetlands that give the stream one of its names has been filled in recent years, but is an area in which the swamp reasserts itself regularly after heavy precipitation.

During the 18th and the early 19th Century the mills on the Still River and its tributaries, while important in satisfying some local needs, played only a minor role in the emerging industrial economy. Instead the early shops, making hats, combs, saddles and shoes, capitalized on the abundance of human labor and skills. The White Brothers used water power in preparing their furs and in a few instances a mill wheel powered saws for cutting combs. Most commonly, however, hydropower still served grist, saw and fulling mills.

Harriet Starr recalled the pleasant and bucolic atmosphere along the Still River during the early 1800s.

"My father . . . had a mill situated on the river that crosses the main street in Danbury, where many hours of my childhood were spent, and the miller, Mr. Dibble, would amuse me by showing me how grain was changed into flour. . . .

My father also built a large hat factory on the bank of the same stream, on what is now called White Street. . . . My father's home was in Danbury near the stream spoken of, and the green yard on the bank of the river opposite the mill was full of beauty. The stream then was not used above the mill and its water after a rain came flowing over the mill dam on one side and then passed foaming under the bridge."

The streams were relatively unpolluted, and residents enjoyed the fishing and boating pleasures the Still River offered. However, the new industrial economy introduced dramatic ecological changes.

After the mid-century large hat manufacturing factories replaced the many earlier shops which had been scattered throughout the town, in the rural areas as well as in the borough. The new structures were close to the river in order to discharge the huge quantities of water needed for processing the fur into hat bodies and almost immediately clean river water was a thing of the past. By the time of the Civil War, for example, members of the local Disciples of Christ church, who heretofore had baptized their members by immersion in the local stream, were forced to install an indoor baptistry.

Crowding of workers' homes on streets adjacent to Main Street created the threat of epidemic diseases. As an 1875 correspondent complained in the local paper:

"Our town, although as healthy as a majority of the towns in New England, is peculiarly situated for the inroads of malarial fever. The stream of water running through the thickest portion of the community is made the vehicle for the riddance of all kinds of rubbish, from the hat shops, the stores and from private dwellings. Our sewerage system is defective, and the water in private wells as well as in our public works is far from being as pure as it should or can be made to be."

Harriet Starr, writing about the home she had lived in earlier in the century, reported unhappily that the "house has been used for years for a store and an addition covers the yard and all the shrubbery that bordered the river bank, and the trees, have been destroyed."

The 1880 census also identified waste disposal problems in these words:

"As there are no sewers in Danbury all liquid household wastes are run or thrown into

vaults or cesspools, none being allowed to pass into the street-gutters. About 25 per cent of the houses have water closets and the balance privy-vaults. The cesspools and privy-vaults are all porous, have no overflows, and are cleaned by the owners when they see fit. If one is found to be a nuisance the board of health orders it cleaned. The night soil is usually buried, none of it being allowed for manuring land within the gathering ground of the public water supply."

During the last decades of the century the city began a sewer system to service the urbanized sector of the town.

The East Ditch--east of and parallel to Main Street--discharged the effluent it carried into the Still River just below the bridge on White Street. By 1890 this proved so unsatisfactory that a new line was built to empty the raw sewage directly into the river near the end of White Street. At first, a pond to catch the sediment and then a disinfecting plant did little to improve conditions downstream. Residents of Beaver Brook district, manufacturers, farmers, and the town of Brookfield below this "out fall" sewer instituted a suit against Danbury in 1895. The city lost the case and the court ordered it to build a filtration plant, one of the first in Connecticut.

For many decades, however, the factories continued to use the river to carry off the excess water generated by their manufacturing processes. Dyes, mercury and fur were a few of the many noxious or odorous substances dumped into the stream. The filtration plants helped but did not solve the problem of the river's pollution.

When the city proposed moving its dump near the filtration plant in 1927, residents, once again those in the Beaver Brook district in particular, protested against the adding of the run-off from the dump to the other pollutants, the nauseating stench which already made their lives miserable, and, as a "citizen-taxpayer" wrote to the editor:

"It is not alone in Beaver Brook that the same stream is a menace to health and a disgrace to Danbury. If some one would haul out the old mattresses, sofa pillows, bones, hen's feathers, rabbits fur, paper boxes, decayed fruit, household articles and other things too numerous to mention from White Pond at the corner of West and Beaver streets it would certainly improve the near source of the stream and help beautify one of the fairest approaches to the city."

Even as late as the 1980s the city still has to be on the alert to protect against unauthorized disposal into the river and its tributaries.

A modernized filtration plant on the site of the one built in 1897 still is in operation. Waters from this system are discharged into a brook which feeds the Still River. Phosphorous, which the regular treatment fails to remove from cleansed sewage water, became an additional pollution problem in recent years. When carried to Lakes Lillinonah and Zoar, in whose slow-moving water it fosters an excessive growth of algae, it can cause the lakes to "die." In the 1960s the Connecticut Department of Environmental Protection ordered the city to eliminate its phosphorous water discharge and in 1981 it finally complied.

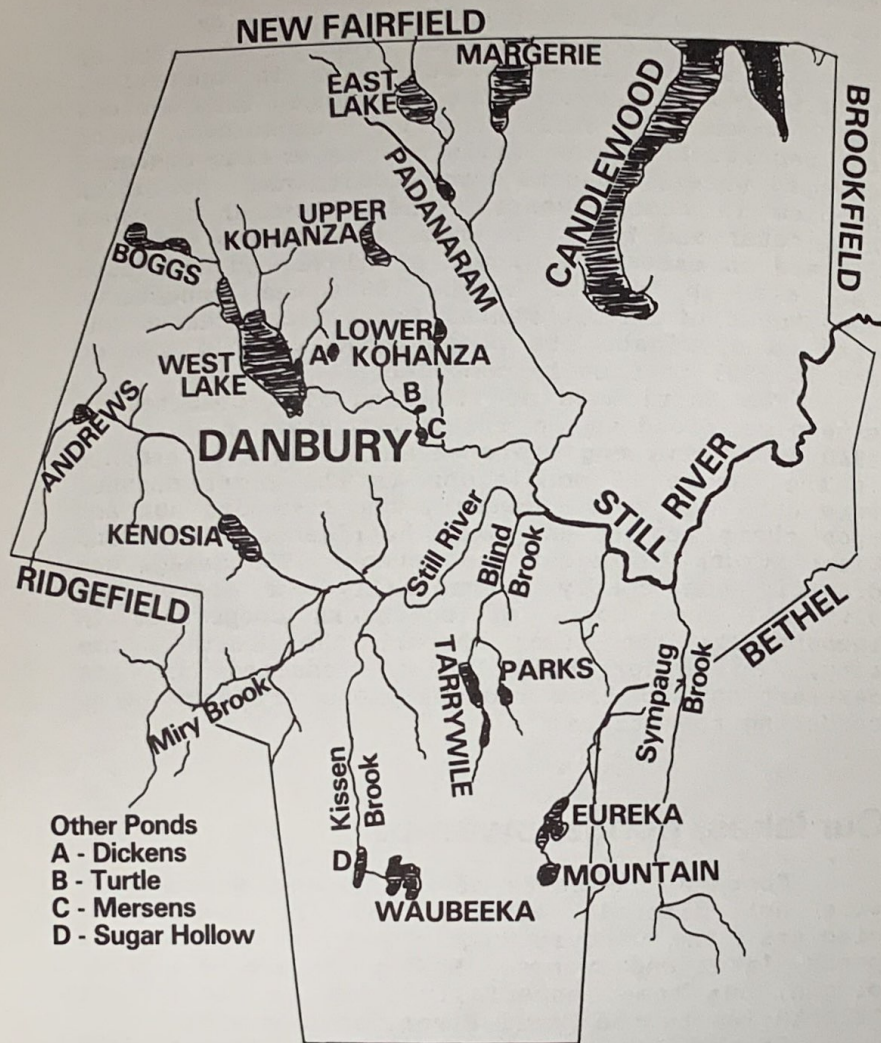
The hurricanes of 1938 and 1944 resulted in extensive flooding in the Still River basin. In 1940 U. S. Army engineers warned of serious trouble in the future if conditions in the river channel were not improved. However, the city did not act upon their advice and when hurricanes Connie and Diane struck in August and October 1955 damage was dramatic and costly. Eventually the state, the city and the Corps of Engineers cooperated in rechanneling the river through the heart of the city, an undertaking which resulted in the destruction and then redevelopment of large areas bordering the stream.

Our lakes, ponds, swamps

Compared to parts of the United States that were not directly affected by the continental glaciers, the Danbury region has an abundance of ponds, lakes and swamps. Most ponds are of glacial origin, but some, especially those on the smaller tributaries to the Still River, are man-made.

Of the natural lakes, Mill Plain Pond or Lake Kenosia and Neversink Pond, which was near the New Fairfield border in the northeastern section of the town, were the largest.

Prehistoric Lake Kenosia covered an area near the present New York boundary to Seger Street. When the water finally broke through the barrier at its easterly end and the water level subsided, the deeper areas of the old lake remained as individual ponds--Wolf Pond, Sugar Hollow or Bradley's Pond or Jackson's, Sanford or Andrews' Pond and the present Kenosia.



- Other Ponds
 A - Dickens
 B - Turtle
 C - Mersens
 D - Sugar Hollow

The Still River originates in the area of Andrews Pond and flows from Lake Kenosia through the downtown business district, picking up the discharge from its many branches along the way. Some smaller ponds and streams that help feed the Still River are not identified.

Neversink was absorbed into Lake Candlewood when it was built in 1927.

Corner Pond, abutting the New Fairfield line, marks what was the northwestern corner of Danbury before it acquired the northern portion of Ridgefield in 1846. The water from Corner Pond flows toward the Croton watershed, not to the Still River. Boggs Pond also passed into Danbury's possession at the same time.

Margerie Pond, straddling the Danbury/New Fairfield border was enlarged and converted into a reservoir in the early 1930s.

Eureka Reservoir and Mountain Pond, off Long Ridge Road, are part of Bethel's water system.

Many smaller bodies of water are scattered throughout the community also.

Some ponds were man-made and the locations of several of these are today known only through old maps. In 1969 the city of Danbury removed the dam on the Still River where waters had been held impounded in Oil Mill Pond at least since the early 1800s. Farther downstream the dam for White's Pond still stands, but the lake behind it has been almost completely obliterated by filling. The site of Lake George on Blind Brook at the corner of New and Elm Streets is now occupied by the Lebanese American Club and the facilities of a veterinarian's animal hospital.

Other ponds backed up water for mills on land situated today between Rose and Franklin Streets. Several mills also occupied sites on the Still River near where that stream crosses under Main Street. For many years a small pond provided power for a saw mill which occupied the present Cracker Barrel restaurant.

However, many man-made lakes continue to perform vital functions for the community. The most obvious are the reservoirs--Upper Kohanza, East and West Lakes, Margerie and Padanaram. Candlewood, created for hydroelectric purposes, is also a major recreational center. Waubeeka, enlarged from a smaller Salt Pond, is an example of a lake which first served as the core summer vacation community and later developed into a permanent residential neighborhood. Some small ponds such as Young's (Rogers), Turtle (Day) and Merson's at one time were mill and/or ice ponds. Rogers Park Pond is the result of dredging to help drain the marsh land upon which the park is built.

When the 1930 brochure speaks glowingly of Danbury's larger lakes as "aquatic gems in settings of emerald green" it is following a long tradition.

Local residents have for generations praised the beauty of the town's ponds and lakes.

Writing about Lake Mill Pond in 1850, the Danbury Times claimed that:

"The banks are not so remote but that the beholder may 'drink in' the scenery without ever straining the organ of vision, and the 'settings' of the jewel would compare favorably with anything of the kind in the country--there is no 'paste' about this affair. We mention this as only one among some half dozen worthy of notice."

Another favorite was Neversink, probably named for the Neversink Indians and not for its supposedly unfathomable depths. An 1851 item from the same paper described it as:

"Among the more attractive sheets of water, surrounding us within easy drives, and in a measure making up for the advantages secured by a proximity to the seashore, Neversink has ever been a more peculiar favorite with us--not only . . . for its 'gamey look,' but for the romantic beauty of its locality - nestling in the lap of Bear Mountain, from the rough and rocky side of which one would suppose the bed of the lake had one day, by some gigantic effort, been scooped out and the dismembered rocks and rubbish hurled upon it."

By the late 1920s Candlewood covered the original Neversink, but the descriptions of the new man-made lake remained as enthusiastic. To quote one:

"Almost before you realize it you are on a high spot of ground, and from here get your first view of the lake--from this point a broad expanse of water some distance below. This first view is always breath-taking, and you can readily see why Candlewood is classed as one of the most beautiful lakes in the world."

Even in the second half of the 20th Century, despite the pressures from increased population, the opportunity to enjoy some of the lakes close to their pristine state remained. In one woodsman's view Boggs Pond was "the most beautiful, unspoiled body of water in Connecticut. A high mountain on the south shore, the highest in Fairfield County, over 1100 feet above sea level; a chain of others on the north side; New York state on the west; dam on the east. It has nothing on its shores. Beautiful scenery. Land is exactly the same as the Indians knew it. . . . A path over the rocks and cliffs to the west end will always be a pleasant memory. This is the last unspoiled

beauty spot in Danbury. It is today the same as the first white man saw."

In the 1980s developers built large homes adjacent to its eastern shore, and cleared land of the city-owned Richter Park also reaches to the water's edge.

There was so much marshy land in 1684 that the first settlers asked that their town be called Swampfield.

Swamps are lakes in the process of transformation. Vegetation, especially lichen and mosses, growing at the edge of a lake gradually begin to fill in the edges with both living and the decayed remains of plants. Eventually the lake as an open body of water may disappear entirely, replaced by a soggy, mucky accumulation that supports water-loving grasses, sedges, trees and bushes. Lake Kenosia provides a textbook-like illustration. Much larger in past ages, a portion of the old lake is now known as Mill Plain Swamp. The Still River continues to maintain a channel through the swamp itself. Miry Brook and other small streams also empty into the river in this same area.

There is a similar swamp on the east side of the town near where Beaver Brook joins the Still River, much of which has been filled in recent years for a shopping center. When in the 1840s Amos Morris began "redeeming, improving and rendering fertile," a portion of this, it was described as "Worth but little else than to hold the world together. Part of it was an almost barren rock and sand hill while the remaining greater part was what it now indicates, a low level and almost valueless swamp."

Thus perception of swamps as essentially worthless has persisted through the years and as a consequence communities often locate dumps in such areas. Danbury's landfill, for example, is part of East Swamp where the leachate could flow directly into the water and thence to the Still River and the Housatonic. Attempts are now being made to counteract this type of environmental abuse and eventually phase out the landfill itself.

Some of the wetlands have been so altered by events through the years that their continued presence is today obscured. For example, marsh lands underlie much of Danbury's Main Street area, beginning with Rogers Park and continuing northward. The site of the midtown campus of Western Connecticut State University similarly was, in the past, the "bog meadow" of the White family.

Although hidden from the eye of the casual observer, these swamps are still there, in some instances necessitating piles driven deep into the earth to support large structures.

These swamps and marshes, which can absorb surprising amounts of excess water, have been filled at an accelerating rate in the 20th Century. In the words of a naturalist from Wilton commenting after the 1955 floods:

"Sometimes our excuse was merely that they were handy places to dump refuse. More recently a frequent motive was to make money by acquiring submarginal areas at low prices, covering them with enough low-grade fill to raise the surface a foot or so above dry-weather water level, and then selling them to unsuspecting purchasers looking for good residential or business sites. In numerous instances similar filling operations have been conducted by local community authorities in order to provide increased parking facilities.

"Regardless of motives, the inevitable results of these self-seeking or plain stupid policies has been to step up the flood damage very appreciably by ruining the water withholding capacities of the thousands of acres involved. The bitter irony of the whole situation is that such foolish actions have usually masqueraded under the overworked cloak of 'Progress.'"

As the Still River was being rechanneled to carry away flood waters, a portion of the East Swamp, an important "sponge" for absorbing and for trapping sediments that otherwise might reach and fill up lakes and reservoirs, was being filled to create the Berkshire Shopping Center. Similarly many question the appropriateness of constructing a huge shopping mall near the Still River at the old fair grounds on land long known to be wet and marshy and overlying an aquifer.

Water supply systems

Ponds, streams, springs and dug wells supplied water for domestic uses until 1834, when piped water first reached a limited number of households in the borough. Water for this first system came from Tweedy's spring on a hillside off North Main Street and was available only to shareholders in the company.

In 1860, the completion of the Lower Kohanza Reservoir initiated the first public water system into the community. When the water was turned on in December of that year "in all the principal streets it ran pure, clear and limpid, to refresh the weary, lighten the labor of the worker, running our mills, playing our fountains, God's gift to man--pure water." This source was supplemented by Upper Kohanza in 1866. Both dams collapsed in 1869 and, despite the tragedy of the ensuing flood, were reconstructed within the year.

Workers completed the Padanaram system between 1882 and 1886.

By 1895 Danburians felt that if the population continued to grow at the rate heretofore experienced it might be necessary to add another reservoir at West Lake--or Boggs, as they first named it--but if they did so it "would place the future water supply of Danbury beyond all contingency."

However, very dry seasons were already creating crises, and by 1906 the city installed a pumping station on the Rundle-White farm to feed the Kohanza system and introduced a similar plan to take water from Lake Kenosia through Oil Mill Pond.

The city finished the West Lake Reservoir in 1908, but the earlier prediction that with its construction the city's water problems would be over proved to be far from accurate. Optimism regularly obscured reality. The 1914 report of the Superintendent of Water Works declared:

"Our water supply is ample for a city of 75,000 people; in fact we now store more water than most of the other cities in the state; with waste eliminated entirely, we have water enough to make the City of Danbury one of the most beautiful cities in the country; as a step in that direction I would increase penalty on waste, and remove charge for lawn and garden sprinkling entirely."

Since that date, however, it has been necessary to continue the search for new water sources. Margerie Reservoir was added in the 1930s. The city has explored the possibility of diverting water from Balls Pond into the public system. In some dry seasons it has been necessary to turn to such supplementary sources as Parks Pond and wells at Lake Kenosia to meet its needs. In very recent years water meters have been installed to try to control excess usage.

A potential water shortage remains as one of the most pressing ecological issues facing

Danburians. The limited availability of water is already threatening continued growth. For example, fears that lack of water might make it necessary to choose between building the Westside Campus of Western Connecticut State University and industrial and commercial complexes in the same general area almost became a reality in the late 1970s.

In the 1970s the Connecticut Department of Planning and Energy Policy listed Danbury as having the only regional system consuming its water at the safe yield level. All others had a margin of safety. Subsequent reports by the Housatonic Valley Council of Elected Officials have emphasized the importance of ground water protection. Two aquifers have the highest priority: East Swamp, which has potential because of the presence of the Danbury landfill, sewage plant and road salt stockpile and intensive commercial and industrial use along Newtown Road; and Lake Kenosia, for which the report states that "this valuable aquifer needs special protection to assure its continued water supply potential" and that among other factors "major protection strategies should emphasize existing wet lands." Despite such admonitions extensive development has continued in the area.

Climate and weather

Broad climatic patterns are averages of the weather over a defined period of time. Particularly in New England, these averages can be very deceptive, for changeableness in the weather is one of constants in this part of the country. Samuel Clemens, (Mark Twain) who lived the latter years of his life in Redding, knew this region well and his observations about that subject have become classic:

"There is a sumptuous variety about the New England weather that compels the stranger's admiration and regret. The weather is always doing something there; always getting up new designs and trying them on the people to see how they will go. . . . You take up the paper and observe how crisply and confidently [the weatherman] checks off what today's weather is going to be on the Pacific, down South, in the Middle states, in the Wisconsin region. See him sail along on the joy and pride of his power till he gets to New England, and then see his tail drop. He doesn't know what the weather is

going to be in New England. Well, he mulls over it, and by and by he gets out something about like this: Probable northeast to southwest winds, varying to the southward and westward and eastward, and points between, high and low barometer swapping around from place to place; probable areas of rain, snow, hail and drought, succeeded or preceded by earthquakes, with thunder and lightning. . . . Yes, one of the brightest gems in the New England weather is the dazzling uncertainty of it. There is only one thing certain about it: You are certain there is going to be plenty of it--a perfect grand review; but you can never tell which end of the procession is going to move first."

Brumbaugh, in The Climate of Connecticut, summarizes the other major patterns:

"Large ranges in temperature both diurnal and annual.

"Ample precipitation usually uniformly distributed throughout the year.

"Great variations between the same season in different years.

"Considerable diversity from place to place."
Danbury's location places it squarely within the prevailing westerly wind belt. Most of the local weather results from the warm, moist southwesterly air currents flowing to the northeast from the Gulf of Mexico region interacting with the comparatively cooler and drier air from the west. Because these large air movements are not susceptible to really long prediction, the great uncertainty lies in now knowing how hot or cold it will be during a particular day, when rain or snow will fall, or whether there will be a hurricane or blizzard during a specific season.

The four distinct seasons offer stimulating weather changes throughout the year. Temperatures vary widely. The mean minimum temperature in January is between 18 and 20 degrees, and the mean maximum July temperature is 84. The mean annual temperature of the area is about 49 degrees. By contrast, the average precipitation is about the same each month, regardless of the season.

The diaries and other personal accounts of past generations often contain much more detailed information about the weather than any other aspect of local geography. Perhaps this is because they thought of the mountains, hills, valleys and rivers as enduring in contrast to the ever-changing weather and thus were enthralled by its variability. But probably the concern of most was

more practical. As farmers, attempts to understand and perhaps predict weather was vital to the success or failure of their crops.

The following are excerpts about the weather from the 1839 diary of Barzillus Kellogg of Brookfield:

"April 28 - Sunday. The fore part of the day clear and warm. The afternoon clouded over and sprinkled a trifle and was cooler, wind N.W.

"April 29 - Monday. Morning cloudy and soon commenced raining which continued most of the forenoon. Toward night it cleared off, wind E.N.E.

"May 3 - Friday Morning. I found there had been a considerable shower during the night. The day had been mostly clear and cool, wind N.W. . . . The snow which has fallen over the past winter is 49-1/2 inches. There have been 32 snowstorms.

"May 4 - Saturday. Morning cold and the ground slightly frozen. The day has been mostly clear and cool. Wind W.N.W."

James Nicholas thus described conditions in July 1849:

"Last evening the heat gave over, a cool wind blowing all the afternoon so that a coat and vest now seemed necessary articles. Today the cool wind continues unabated so that people have no occasion to complain of heat. But a drouth very severe, is rendered still more so by the prevalence of the wind which scorches everything and seems to exhale the last particle of moisture from the surface. As I came from Church, my eye rested on my oats in the Pine Tree lot, among which I could note many places apparently almost as dry and scorched as if fire had passed over them."

Winters were colder than in the 20th Century, and storms frequent. For example, there were 21 snowfalls in 1831-32 and 20 in 1840.

It was the trials of winter that brought forth in James Nichols the most elaborate commentary. Scattered throughout his journal are beautiful descriptive passages.

"Although scarce an individual of adult age fails to look upon the first snow with a cold shudder of horror and general regret, yet when the Earth is fairly coated, the roads beaten hard, the busy teamsters sliding along, the swift horses almost flying, the bells shaking and ringing out their merry music it is with equal feeling of regret and almost sorrow, that we see this fine, lively order of things broken up and turned into

mud, toil and dragging heavily through the ruins and decomposition of the snow path."

"Today ended principally a long series of cold weather, and a long season of excellent sleighing began to lose its adhesion and rapidly decompose and return to its original. That the cold of this Winter has surpassed the cold of many former Winters, is a fact, which anyone who has pounded his toes, sucked his fingers, rubbed his ears, or cleared the icicles from his nose, I presume, is not prepared to deny."

"Winter has before showed his teeth and grated them rather angrily at us through the chinks and loop holes of retiring Autumn, but today he has shown his shaggy mane and shook it around us. The storm of hail and rain which I said began yesterday, was continued with little intermissions thro the night and the opening morning disclosed a scene which made us shudder. The rain and sleet was still falling, the trees were loaded in every limb with ice, and hung over like weeping willows, every blade of grass was a large icy tower on the ground, and fences, stones, were veneered thickly with the same material. The falling rain through the day continued to load still deeper the forest trees. They hung down their heads still more mournfully, while the wind waving their congealed branches slowly to and fro made one continued roar through the valley like the distant advance of the long railroad train. Occasionally, a large limb loaded beyond the power of endurance would fall with a terrific crash to the ground, a sight grand to behold notwithstanding the gloom and severity of the storm. For myself I did but little except to look after my animals and work within doors at things necessary to be done in a wet day."

"Sunday 8. This morning the sun rose upon a scene which for beauty and brilliancy overreaches all description in words. The rain which fell yesterday and congealed in chrystal formations upon every bough and twig of all forest, shade and fruit trees, and each dry blade of grass, every humble weed and worthless bush became a skeleton for a drapery of burnished silver, more dazzling to behold than the most elaborate works of the Artist. In a word, the world around us had suddenly as by a stroke of an enchanter's wand been changed into a world of silver chrystal, glowing with pure light, variegated with the hues of the prism as the successive angles saluted the eye. . . . Town

Mountain and Thomas Mountain wore their robes of silver fret work with admirable precision, and magnified the rich sunlight into a glitter almost too intense for the eye to behold."

From the time of the very earliest records there also are accounts of climatic events that occurred rather infrequently and sometimes were extreme in their impact--hurricanes, tornadoes, blizzards, extended droughts, floods.

One particularly memorable experience was the summer of 1816 which farmers called "eighteen hundred and froze to death." In 1815 the eruption of Mount Tambora in Indonesia ejected some 25 cubic miles of debris and the resulting atmospheric dust substantially reduced the amount of sunlight reaching the earth and the resulting colder and drier weather affected not only North America but also Europe and Asia. In Connecticut unusually low temperatures, often accompanied by frost and ice plagued the state and through the spring, summer and fall seasons periodically destroyed the crops.

Another unique occurrence was the Great Dark Day of May 19, 1790. One hundred years later the Danbury News reported reminiscences:

"Many are the stories our old people have heard from their parents of that great day. Candles were lighted and kept burning to enable the amazed people to get about. Danbury chickens sought their roosts and went to sleep, as a matter of principle, although wondering, without doubt, what on earth was up. . . . They told their children that for several days before the nineteenth the air was full of vapors, as we often see it when fires are raging in the woods near us, and the sun and moon appeared red. The winds blew chiefly from the south-west and the weather was cool and clear. The morning of the nineteenth was cloudy and in many places slight showers fell . . . but as the sun rose it did not increase the light, and the darkness deepened and deepened, until the children standing before the tall clocks could not see to tell the time and the older people peering over the almanac, were not able to see the letters. . . . Lights were seen burning in all the houses and the people passing out of doors carried torches and lanterns which were curiously reflected on the ever-hanging clouds."

Of the hurricanes, the most devastating were those of 1938 and 1955. Small tornadoes touched down in Bethel in 1949 and Ridgefield in 1950. Of the several blizzards, those of 1888, 1934, 1969,

and 1978 are most readily recalled by today's residents.

However, despite all these climatic variations and the general unpredictability of the weather, meteorologists also discern one long range trend. Beginning around 1600 and continuing to about 1880 was a period weather watchers call The Little Ice Age, when temperatures averaged a few crucial degrees colder than the present and when severe winters were the rule and not the exception. A warming trend followed, and the climate of the first half of the 20th Century was unusually mild. In recent decades average temperatures have again begun to fall.

Severe storms can cause the usually placid Still River and its tributaries to go on a rampage, for the hills that ring Danbury form the sides of a bowl-like depression which diverts the water toward the center of the city. Records show that flooding has occurred periodically throughout the 19th and 20th Centuries. The newspaper account of an 1843 flood is typical:

"A rain storm commenced on Monday night and continued through yesterday. The streams in this vicinity were very much swollen, and some damage done. A part of the bridge in West Street has caved in, and we have heard of small one's being carried away. The water found its way into dwelling houses on low ground in the vicinity of streams, to greater depth than experienced before for many years. A part of the hill north of "Bishops Pond" slid down and took passage on the ice."

In 1841 most of the bridges in the town were either demolished or rendered unserviceable. The storm in April 1854 washed away the dams at Oil Mill Pond, White's Fur Factory and Hurlbutts Pond and other dams were damaged as was the Main Street bridge.

The hurricanes of 1938 and 1955 are now legendary because of the destruction they inflicted on the Danbury region.

Land use through the years

Analysis of pollen concentrations and radiocarbon dating make possible tentative descriptions of the climate and plant life in Connecticut since the end of the glacial era.



1847, by Chapman & Andrews

LAKE NEVERSINK

Drawn from nature by C. Hayward

Neversink Pond was a popular spot with Danburians until it disappeared when Lake Candlewood was created as a pumped storage hydroelectric reservoir a little more than 50 years ago. This sketch is also from "Landscape Views of New England," 1847.

After the ice disappeared, the plant cover resembled that of the present day Arctic tundra--lichen, mosses, grasses, sedges, dwarf willows--supporting a wide variety of animals ranging from mammoths, mastadons and caribou to giant beaver and many smaller species.

Small hunting and gathering bands moved into Connecticut sometime before 8,600 B.C. in pursuit of the migrating animals they used for food. The animals grazed where grass was plentiful, especially on the coastal plain which was perhaps 60 miles wide at that time. Scattered archaeological discoveries in this region suggest that animals and men also moved inland through the hills of western Connecticut by way of the Housatonic Valley and then to the shores of Glacial Lake Danbury which covered the floor of the Still River Valley. Hunters probably were few in the region, however, because of the limited grasslands.

When the environment changed, so did the human life style. The tundra gave way to a predominantly evergreen forest and the grasses on which the caribou, mammoth, mastadon and moose-elk had fed disappeared. These animals died out or migrated, and the hunters likewise vanished. For 2,000 years there seems to have been no human habitation.

However, as the climate became warmer and drier a mixed forest of oak, pine, hemlock and beech replaced the previous evergreen cover, and about 5,000 B.C. mankind returned. From that time Connecticut has been continuously inhabited.

There is no detailed information as to the forest the first settlers of Danbury found on their arrival. In all probability it would be what foresters would label as an oak-chestnut or sprout-hardwood biome in that it was dominated by oaks and chestnuts which commonly reproduce by sprouting from roots and stumps.

The boundary between the sprout-hardwood biome and the hemlock-white pine-northern hardwoods region to the north is indefinite. A segment of the irregular line of demarcation, however, is close to where Fairfield and Litchfield County meet. Hemlock and white pine, which are found in considerable quantity in Litchfield are rarely mentioned in descriptions of the Danbury region.

Danbury's first historian, Rev. Thomas Robbins, failed to note the natural environment in his sermon of 1800. However, in the same year Rev. Samuel Goodrich of Ridgefield provided an account which also is applicable to Danbury:

"The original Timber consisted of several sorts of Walnuts & Oaks; Butternuts are plenty, with Maple, Beech, Birch, Ash, Dogwood, Elm, Sassafras and a number of shrubs as Whorlte berries, bay berries, &c and a few scattered Spruce trees. . . .

"There is a considerable number of the sugar maple trees growing but no more sugar made than is consumed by the makers. . . .

"We have some vegetable poisons such as the mercury vine and red sumach shrub. A plant that somewhat resembles fennel the name is not recollected. From the wild parsnip when cut issues a juice which is very poisonous to some persons. There were a few Barberry bushes in Town that were for a long time kept for medicinal purposes."

The journals kept by French visitors during the Revolution supplement the limited accounts of local residents. Crevecoeur was particularly impressed by the tulip trees which grew "very tall. I have seen trees with a spread of 5 or 6 fathoms or around 30 feet." He also noted the wild cherry and "another curious shrub [bayberry] that the English call 'wax bush.'" Others commented on the sassafras and grapevines "seen everywhere climbing, and supporting itself upon the trees."

Abbe Rubin provides an outsider's perspective on the forested area in general:

"I once imagined that these antique forests, into which the arm of man had never carried the destructive strokes of the ax, would have nothing to offer the view, at every step, but ancient trees, whose rugged knotty, hollow trunks, were by rains and frosts, supporting nothing more than a dry naked top, stripped of its extended boughs. Instead of these venerable tokens of age that I looked for in the woodlands, I found everywhere the freshness and vigor of youth the most robust. The trunks, close and compact, straight and towering into the air beyond the reach of the eye, display from the top a multitude of branches, cloathed with a deeper green than ours can boast of."

The Reverend Mr. Goodrich also provided a good account of many of the animals associated with this biome:

"There were formerly Deer, Bears, Wolves, Panthers and Wild cats in our woods and Beaver in our ponds. But they are now extinct - But we have Red and grey foxes, some few Raccoons, Woodchucks - Grey and striped squirrels and within a few

years the red squirrels have multiplied to a very surprising degree. Rabbits are very plenty weasels several sorts of moles, Bats & mice and shunks. Several sorts of an amphibious nature, otters, musquashes & minks. There were at the first settlement great numbers of rattlesnakes & snakes equally pisonous but they are almost destroyed - one method for their destruction was the turning the swine among them which devoured them. There are yet a few black snakes, some adders, striped milksnakes, a few very small red and green snakes, there are water snakes in the ponds and brooks. The birds are chiefly those of passage - but those which tarry with us thro the winter are the turkey formerly plenty a few have been seen within two or three years, Pattridges & quails are some years very plenty, meadow birds, Wood cocks and woodpeckers, Wrens and Snowbirds. There are at seasons great flights of pigeons, but not so frequent as formerly as they change their course more to the westward as the country becomes cleared & settled and there are more wood ducks at the season of them. . . ."

However, such descriptions give only a limited coverage of the flora and fauna, and one that also may suggest that all parts of the region have nearly identical distributions of the plant and animal life. This is far from the reality. Many factors--elevation of the terrain, slope, soil characteristics, exposure to the sun--create micro communities, so that within a town itself, often within a short distance of one another, plant and animal life can vary greatly.

Both the Indians and the white settlers were attracted to the area by the lands on the valley floors, and although the Indians and the colonists both were farmers, they treated the land differently.

For many generations the Indians successfully adapted to what the local geography had to offer. Food, which they themselves raised, hunted or gathered provided sufficient fuel for their primary power source--human muscle. There was an abundance of wood for cooking and heating. Intentionally set fires helped control underbrush and thus improve hunting. But they did not try to satisfy their needs wholly within the narrow confines of the town as identified today. They moved from summer to winter settlements as the seasons changed. They spent extended periods along the coast of Long Island Sound gathering seafood, and at other times camped along the Housatonic to be near the supply

of shad and lamprey eels. Their hunting expeditions took them to wherever game was plentiful.

It is also highly probable that they engaged in the fur trade with the colonists almost 40 years before Danbury was settled. By 1646 Stephen Goodyear, Deputy-Governor of New Haven Colony, had established a trading post on an island in the Housatonic River a short distance south of Lovers' Leap Gorge. The Still River enters the Housatonic just north of the gorge and thus the post had easy access to the Still River basin.

The Norwalk families came to Danbury seeking farms, and the relatively level valley of the Still River and its tributaries was the most extensive segment of arable land available inland from the coastal plain at Norwalk and Fairfield. The best soils and terrain in the colony had already been claimed by 1680 when the official position was that "most land that is fit for planting is taken up. What remains must be subdued, and gained out of the fire as it were by hard blows and for small recompense." Thus, when the settlers moved inland in 1684 the land they acquired was considered less desirable than that found in the early settlements. However, the inducements were sufficient for them to face the hardships the migration entailed.

The colonists required great quantities of land for an agricultural system that involved tilled and pasture lands, draught animals, plows and metal tools.

Their original choice of Swampfield as the name for this new town symbolized the importance of other flat areas, wet though they were, as an attractive feature. Marshy lands with very few trees were a source of hay until other meadow lands could be cleared, and, if not too wet, could also be used almost immediately for agricultural purposes.

They introduced new animals. The inventory of Thomas Barnum's property in 1695/6 indicates their variety and numbers. When he died he owned a sow and five pigs, plus other swine, a pair of oxen, a pair of steers, two calves, one red cow, one spring calf, two horses, 14 sheep and bees. To support these had required holdings expanded well beyond the original Town Street grant. He had 4-1/2 acres of upland in the East Field, Town Hill, Deer Hill, Shelter Rock and Barren Plains lots, a lot on the east side of Shelter Rock, a "Little Lot," Mill lot and four divisions of meadow land.

The Danbury proprietors probably followed the

practice of their Ridgefield neighbors who "annually burnt over the high rough lands for the benefit of the wild feed that grew on them, which was a great injury to the old trees and entirely prevented the young from growing."

They cleared the forest cover not only for crop and pasture land but also for heating purposes. Early home fireplaces were perhaps about 10 percent efficient, that is about 90 percent of the heat went up the chimney. With an estimated four to five cords of wood used per season for each person, a family of eight might use between 32 and 40 cords of wood a season. Much of the original forest went up in smoke. In a few years the colonists had transformed the natural environment.

Agriculture continued as the principal occupation throughout the colonial period. To meet the needs of a growing population--2,526 in 1774--more and more land was put under cultivation and farmsteads scattered throughout the entire community.

As a result of the technology in use, soil conditions deteriorated as the settlers opened their land to agriculture. As one observer described the process:

"The farm was, . . . 'suitably divided into meadow, pasture and plow land,' and each division was exclusively directed to its object, until most of the nutritional grasses had 'run out' in the meadow and the plow land had become too much impoverished to bear a remunerating crop. Many an acre was turned into 'old field,' or commons, destitute alike of natural or artificial herbage, affording scanty gleanings to half famished cattle."

But clearing additional acreage tended to obscure but not solve the geographic problems facing the town. All who wanted farms could not get them. Part of the pressure for land was eased temporarily as some moved elsewhere--to New Milford, Kent, Dutchess County, Winchester which even had a section of the town called the Danbury Quarter. But the number of residents continued to increase and the productivity of the land continued to decline.

Not until early in the 19th Century did most farmers begin to adopt new techniques to reverse the decline in productivity through the addition of swamp muck to the fields, crop rotation, manuring and growing soil-building crops like red clover. The marble in western Connecticut also provided limestone in quantities for use on the fields.

Draining the "Swampfield's" swamps to add needed acreage of rich soils also was a popular but expensive and time-consuming technique for converting marshes into tillable land.

Unfortunately, even intensive efforts could not alter the basic geographic reality that the soils had never been of top quality. Although for several generations the land had been sufficiently productive to meet subsistence needs, many farmers began to emphasize cattle and sheep raising.

For the first four decades of the 19th Century the acreage of tilled land declined and that devoted to pasturage increased, and beef, pork, cattle, horses, corn, wheat and rye became major items of commerce.

As Timothy Dwight explained:

"Grass is undoubtedly the most valuable object of culture in New England. One hundred acres of the best grazing-land, under the direction of a skillful farmer, will yield as much profit, as one hundred and fifty of the best arable land, under the same direction. Grass grows spontaneously even on the driest ground, and luxuriantly on others. The hills are often too moist to admit of other objects of culture."

During the 1840s, however, western competition cut seriously into the profits of sheep raising and soon that, too, went into decline.

As industrialization increased from 1850 on, the importance of agriculture declined, although the portion of the community outside the city remained essentially rural. The 1880 census summarized the situation:

"The country immediately surrounding Danbury is mainly cultural. In addition to farm and garden produce large quantities of milk are annually produced, not only for the supply of the town and for the manufacture of condensed milk, which is quite extensively carried on in the vicinity, but for shipment to New York."

A considerable portion of this land gradually returned to forest and, until comparatively recently, has remained that way. From 1870 to 1910 the population of the city grew from 6,542 to 20,234, an increase of over 200 per cent. The area outside the city limits increased only 33 per cent.

During the first third of the 20th Century housing development such as West Terrace and Juniper Ridge on the periphery of the central city presaged the outward expansion that soon was to follow. The completion of Lake Candlewood in 1929 not only transformed rural farmlands and swamps

into a hydroelectric project but also attracted colonies of summer vacation homes along its shores. Other portions of the rural countryside likewise drew new groups of part-time, then permanent, residents. Long Ridge became a center for a cluster of world famous artists, writers, musicians and dancers. The community built around Lake Waubeeka began as a country retreat for New York firemen.

The real explosion in Danbury's population began in the post World War II era. The community eagerly accepted the "benefits" of the economic boon but it was not prepared to deal with many of the concomitant ecological problems. With the growth of business and industry came great numbers of people who needed services and places to live. Expansion into farmlands outside the inner city's boundaries became a flood. As late as the 1930s many of the country roads were narrow and winding and some were still unpaved. Houses were relatively few. In the 1980s most of these roads remained narrow and winding--but paved--and are lined with homes. New roads serve large developments which occupy what until recently had been the pastures, crop lands and woods of the farms originally reached by those same country roads.

Attempts to maintain a balance between intense utilization of the land for active use and preserving areas more or less in their natural state has been a factor in land use since colonial days. The original proprietors received all the land in the town, and until the entire grant had been distributed several generations later, large sections remained as undivided or common land. Even after the entire community had become individually owned property, the continued existence of extensive farm, pasture and wood lands guaranteed the persistence of "open land," although much was by then in private hands. The second half of the 20th Century, however, has witnessed the unbelievably rapid disappearance of this heritage of nature as it was converted to domestic and commercial uses.

Land reserved as open space or as parks for recreational use has not grown with the rapidity of the population.

Small segments of land near the center of the town--Elmwood Park and those on West and Franklin Streets--do not approach even the town green of some smaller communities. In the 19th Century Wooster Cemetery was treated by many not only as a

burial place but as a place of refuge for the living. In the Sugar Hollow section, the state acquired Wooster Mountain State Park, which still remains essentially inaccessible. Ridgewood Country Club is private but an environmentally valuable piece of open space near the center of the city. Even the addition of Rogers, Richter, Hatters, Kenosia, and Town Parks, plus the Old Quarry Nature Center and most recently, Bear Mountain Reservation as a gift from the federal government do not compensate for the breathing space Danbury had just a few decades past.

The local newspaper has consistently supported the position held by many residents who favor the acquisition of additional open space. In 1960 the editor quoted with approval the statement that, "Man's carelessness with nature destroys the best form of relief he has from the tensions of urban life. Natural open land is the ideal setting for rest and recreation. Once it is developed it cannot be replaced."

A 1968 editorial emphasized a similar theme.

"A necessary purpose of open space is to preserve the balance of nature. Man's knowledge of that necessary balance is far from perfect, but more and more he is coming to understand the importance of ecology, the science which deals with the life cycle of earth, water, plants and animals and their interrelationships. . . . Open land not put to an active use is not idle land. In fact, no land is really idle, not even desert. . . . Designation of open space areas makes sense, not only for the benefits which accrue today but for a solid investment in the future."

If the current generation of Danburians does not listen and thus fails to preserve the land currently available for open space and recreation, it will be impossible for the next generation to do so.

Just as the early settlers seriously upset the ecological balance of the environment through cutting off the woodlands and overly exploiting the soil's fertility, so, too, the actions of 20th Century residents are changing and often irreparably damaging the fragile geography of the region.

Modern construction has steadily reduced the land surface suitably open to absorb rainfall. With much of the forest and fields replaced with buildings, parking lots, highways and other impervious structures, rapid runoff has increased. Some housing developments are situated on soil

features unsatisfactory for drainage and properly functioning septic systems. Private wells and small group water systems are not always adequate and increasing numbers have become contaminated. The pressure to build high rise apartments, commercial structures and condominiums and requests for alternative uses of land heretofore considered suitable only for single family homes threatens to create additional problems.

Danbury has recognized that it cannot continue the haphazard growth that had occurred in the past. However, the original planning documents adopted by the town were very general in nature. An attempt to improve land use practices in the city was the enactment of zoning laws, first adopted in 1929 and then amended extensively until a new code went into effect in 1964. The town government had another set of regulations. Both of these were replaced by a new ordinance in 1971. For several years after its establishment the official planning department was inadequately staffed and financed and could do little more than rush from one crisis to the next. Only recently has it had the opportunity to begin the task of integrating decision making about such everyday issues as highways, water resources, sewage, building sites, population densities, solid waste disposal, wetlands and septic systems. Unfortunately many plans, including those pertaining to land use and building codes, have proved only partially effective. Manipulation of the law and lax enforcement have helped thwart policies established by the voters.

Issues that we still face

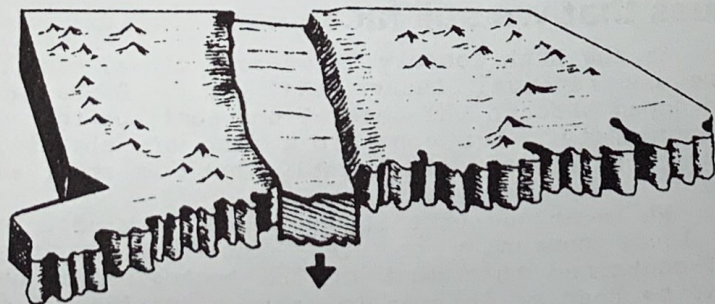
As the 20th Century draws to a close, many of these geographical issues with which Danburians have coped through the generations continue to face the community. But conditions also are changing, in some instances significantly, both in scope and type.

While at one time it was perhaps feasible for the local community to view itself as being so self-contained that most of its ecological issues could be handled internally, that situation, if it ever did exist, ceased long ago. Even during the colonial period Danbury was tied economically and socially to more distant places. Today these interconnections have grown in number and extent. Jobs, services, and shopping take residents to

towns other than where they reside, and they move freely and quickly. Areas serving commercial enterprises merge into each other, especially along major highways, and most who use these routes have little concern where one town ends and the other begins. Population growth continues throughout the entire region.

Pollution threatens the future of the Still and Housatonic Rivers and Lake Candlewood. PCBs are carried down the river from Pittsfield. More and more contaminants are seeping into the ground water aquifers. Air pollutants, including acid rain, reach the town from states far to the west. Communities are seeking cooperative answers to questions concerning sewage and solid waste disposal. Some scientists envision a radical alteration in the climate if the "greenhouse effect" actually does raise world-wide temperatures.

Many of these factors are not within the powers of any one town to manage or control. Increasingly, therefore, the people of Danbury also face ecological problems that demand regional, national and even international solutions.



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HOW DANBURY GOT
TO BE WHAT IT IS

Edited by

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