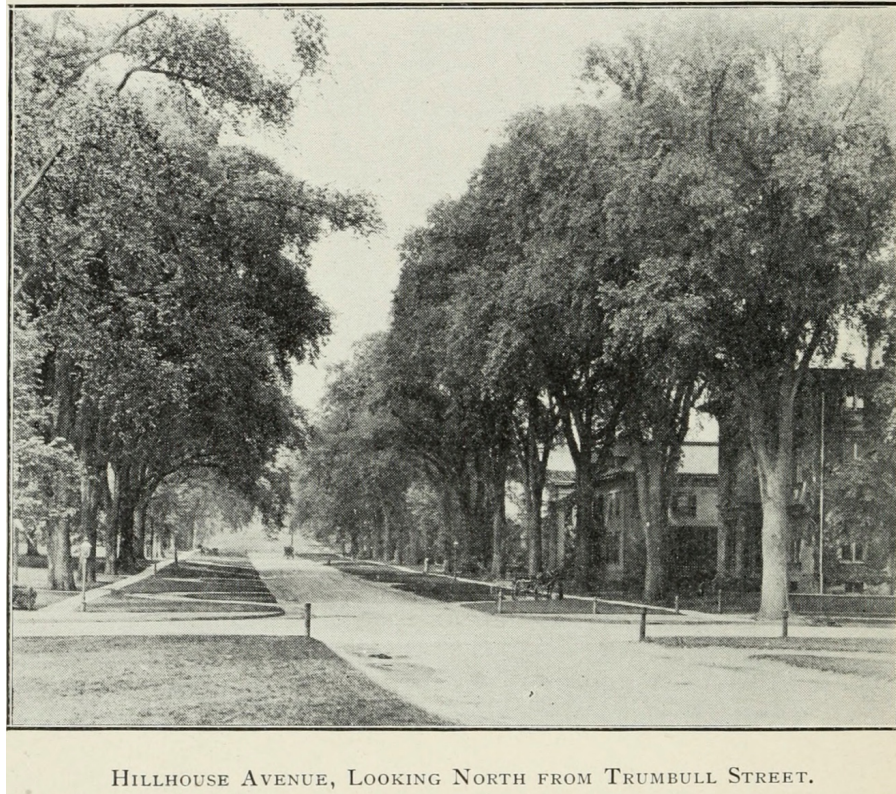


EVST 120: American Environmental History
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By submitting this essay, I attest that it is my own work, completed in accordance with University regulations. –Rebecca Ju

City of Elms: The Myth of the Urban Pastoral
by Rebecca Ju



In the mid-1800s, there was no place that lived up to its name more than the City of Elms: New Haven, Connecticut. Nearly every street was lined with tall, arching trees, and nearly every tree was an American elm. Sheltered under the “exquisite dapple of airy light and shifting shadow,” New Haven residents and visitors found themselves awestruck by the sheer beauty of the urban forest.¹ In 1839, author Nathaniel Parker Willis proffered, “If you were to set a poet to make a town, he would probably turn out very much such a place as New Haven.”²

¹ Berton Roueche, “A Great Green Cloud,” *The New Yorker*, July 15, 1961, 36.

² Nathaniel Parker Willis, quoted in William E. Decrow, *Yale and “The City of Elms,”* (Boston, MA: W.E. Decrow, 1885), 85.

What made the City of Elms most remarkable was how unlike a city it was. Yale University graduate Ezekiel Porter Belden praised the home of his alma mater to be “a city in a wood, or a wood in a city.”³ Upon visiting New Haven in 1842, Charles Dickens remarked, “These groups of well-grown trees, clustering among the busy streets and houses of a thriving city, have a very quaint appearance: seeming to bring about a kind of compromise between town and country; as if each had met the other half-way, and shaken hands upon it; which is at once novel and pleasant.”⁴ In fact, historian Thomas Campanella went so far as to proclaim, “The apotheosis of urban pastoralism in antebellum New England, and the pinnacle of elm culture in America, was New Haven.”⁵ According to Campanella, the Elm City stands as evidence that “an *urban pastoral* could be realized, that a city of artifice could be built in concert with nature—with both city and country gaining from the union.”⁶ Though the “rows of grand-old elm trees” that lined this pastoral city have long disappeared, New Haven still shines as a “felicitous union of worlds,” an example of a coexistence with nature that we continue to strive for today.⁷

However, a closer look at the Elm City reveals that, even at its peak, it was never representative of a true human connection to nature. Rather, it is another instance of exploitation, another example of our misunderstanding of the environment we live in. The urban trees, quite simply, were utilized by the American people, much as other New World trees were—it just so happened that the American elm was worth more alive than cut down.

The utility of the elm can be tracked via three factors: its longevity, its economic value, and its ecology. For much of American history, these factors tipped the scale in favor of the trees, leading to the rise of forested cities such as New Haven. By the 1900s, the scale began to lean in the opposite direction, and once the elm was no longer more useful than it was burdensome, its fate was sealed. However, before we examine the rise and fall of the American elm, it is important to first understand how it initially

³ Quoted in Ezekiel Porter Belden, *Sketches of Yale College* (New York, NY: Saxton & Miles, 1843), 68.

⁴ Charles Dickens, *American Notes for General Circulation with a frontispiece by C. Stanfield* (Chapman and Hall, 1850), 53.

⁵ Thomas Campanella, *Republic of Shade: New England and the American Elm* (New Haven, CT: Yale University Press, 2003), 130.

⁶ Campanella, *Republic*, 127.

⁷ Dickens, *American Notes*, 53; Campanella, *Republic*, 129.

entered the sphere of the American people. To do so, we must begin long before New Haven was founded—indeed, long before Europeans ever arrived in the New World.

For as long as human memory can recall, American elms stood tall across North America. Though the native inhabitants of New England had, for years, thoroughly modified the landscape for their use, elms remained abundant. This was due in part to their preferred habitat, as they thrived in low, soggy bottomlands that were often too wet to be damaged by Native American forest burnings.⁸ As such, American elms thrived in the pre-colonial era, dominating the wooded landscapes of the time. Surprisingly, American elms were also spared the extensive logging that came with European colonization. Though colonists felled even the trees of lush bottomlands to clear land and gather timber, American elms were often left untouched. Elm trees, the colonists soon learned, didn't have many of the positive qualities of other hardwoods—their timber split easily and had less compactness, hardness, and strength.⁹ As such, they were not used in building houses or ships, and their “few and unimportant uses” were often not even worth the trouble to cut the trees down.¹⁰

Upon this reflection, it becomes clear that the American elm was subjected to the same evaluation as the oaks, maples, and pines that were felled by colonists. It was its uselessness as timber that allowed it to remain standing, scattered across the American landscape well into the 1600s. As agricultural development continued, however, so did New England settlement, and the American elm was soon drawn into the domestic life of colonial homesteaders.

As early as 1678, settlers began choosing large elms under which to build their homes for the aesthetic beauty and protection of the umbrella-like trees.¹¹ These “house elms” were often already established—in fact, some families moved their homes to be near another elm if the first died—but

⁸ Paul C. Guilkey, *Silvical Characteristics of American Elm* (St. Paul, MN: Lake States Forest Experiment Station, Forest Service, U.S. Dept. of Agriculture, 1957), 5; Campanella, *Republic*, 12.

⁹ Campanella, *Republic*, 17.

¹⁰ François A. Michaux, *The North American Sylva; or A Description of the Forest Trees of the United States, Canada, and Nova Scotia; Considered Particularly in Respect to Their Use in the Arts, and Their Introduction into Commerce; to Which Is Added a Description of the Most Useful of the European Forest Trees*, vol. 3, 3 vols. (Philadelphia, PA: WM. Rutter &, 1865), 69.

¹¹ Campanella, *Republic*, 25.

colonists soon began planting the trees themselves, for both sentimental and practical reasons.¹² Many pairs of “bridal elms” were planted to celebrate weddings; others were gifted as tokens of friendship or admiration.¹³ Throughout the eighteenth century, elms like these became a common sight, especially in the fertile river valleys of New England.

According to horticulturist Andrew Jackson Downing, the American elm was “nowhere seen in more majesty, greater luxuriance, or richer beauty, than in the valley of the Connecticut,” and there was no town better situated in this area than New Haven.¹⁴ The earliest known elms to be planted in New Haven were brought into town in 1686 as a housewarming gift to James Pierpont, a local minister. The twin trees, known as the Pierpont Elms, stood for over one hundred and fifty years, just the smallest indications of what was to come.¹⁵ From these humble beginnings emerged the City of Elms, at its peak home to thousands of towering trees. For these countless trees, however, there was only one man to thank: James Hillhouse. Hillhouse, a senator, lawyer, and public figure, was born and raised in the New Haven area.¹⁶ Upon realizing that the newly founded city did not have the money for extensive improvements, he appealed to the public to raise funds for his own beautification project: planting American elms along the city’s streets. In 1786, he succeeded in acquiring enough funding to plant a row of elms on the New Haven Green, but he continued his efforts.¹⁷ In 1792, Hillhouse again initiated an elm planting project, lining the entire length of the newly constructed Temple Street, the northern segment of which was later renamed Hillhouse Avenue.¹⁸

To this day, James Hillhouse is lauded as a great philanthropist, the father of the Elm City. However, his actions were not entirely altruistic—Temple Street ran through Hillhouse’s extensive lands, which he continued to develop over the years. In fact, the portion that was later named for the senator was

¹² Ibid., 28.

¹³ Ibid., 27.

¹⁴ Andrew J. Downing, *The Horticulturist and Journal of Rural Art and Rural Taste: Devoted to Horticulture, Landscape Gardening, Rural Architecture, Botany, Pomology, Entomology, Rural Economy, Etc.*, vol. 1 (Albany, NY: Luther Tucker, 1846), 396.

¹⁵ Ellen S. Bartlett, *Historical Sketches of New Haven* (New Haven, CT: Tuttle, Morehouse & Taylor, 1897), 16.

¹⁶ “Hillhouse, James,” *Biographical Directory of the United States Congress*, <http://bioguide.congress.gov/scripts/biodisplay.pl?index=h000618>.

¹⁷ Eric Rutkow, *American Canopy* (New York, NY: Scribner, 2012), 219.

¹⁸ Campanella, *Republic*, 107.

often chained off, marking it as private property.¹⁹ Of course, Hillhouse's projects also brought many trees to public lands for the enjoyment of the community. James Hillhouse reportedly had a "born genius for leadership, and was an untiring worker," bringing the elm saplings from one of his own farms and often planting them with his own two hands.²⁰ Even so, his actions were a statement of status, rather than a representation of his connection to the natural world. It was, in fact, the massive *departure* from traditional rural life that yielded this status—not only was James Hillhouse successful enough to become a member of New Haven's elite, but he also had the luxury to engage in agriculture activities for nothing other than aesthetic pleasure.

Aside from these benefits, much of the philanthropic reward for planting elms stemmed from the longevity of the trees. Hillhouse's enthusiasm for elm plantings was so strong that it "stimulated the little town of less than a thousand families so that even the children were aroused to help him."²¹ One of these children was Jeremiah Day, who later became the ninth president of Yale University. Day was "proud to recall the fact" that he had aided in Hillhouse's plantings as he walked under those same elms nearly four decades later.²² Henry Baldwin, a justice of the United States Supreme Court, also reflected on his youth in the city, stating, "I held many an elm while Hillhouse shoveled in the earth."²³

The American elm, unlike other trees, was both fast-growing and long-lived. Commonly reaching a height of 100 to 120 feet within the lifetime of its planter, a street elm would continue to flourish long after his death.²⁴ As such, James Hillhouse immortalized himself in these shade trees, staking a claim in history with each sapling. In fact, at Hillhouse's funeral in 1833, pastor Leonard Bacon pronounced, "Our city itself, we might say, is his monument," expressing that "the long colonnade of stately elms planted by his hands, under which we bear him to his last repose...remind[s] us of him."²⁵ Over half a century after

¹⁹ Bartlett, *Historical Sketches*, 58.

²⁰ Leonard Bacon, *Sketch of the Life and Public Services of Hon. James Hillhouse of New Haven with a Notice of His Son, Augustus Lucas Hillhouse*, (New Haven, CT: 1860), 38.

²¹ Sarah D. Woodward, *Early New Haven* (New Haven, CT: Price, Lee & Adkins, 1912), 42.

²² Bartlett, *Historical Sketches*, 56.

²³ Henry Baldwin, quoted in Woodward, *Early New Haven*, 42.

²⁴ Gifford Pinchot, *Forest Planting Leaflet: White Elm*, Circular 66 (Washington, D.C: Forest Service, U.S. Department of Agriculture, 1907).

²⁵ Leonard Bacon, *Funeral Discourse, Pronounced at the Interment of the Hon. James Hillhouse* (New Haven, CT: Baldwin & Ellis, 1833), 10.

his death, New Haven resident Ellen Bartlett looked upon Hillhouse Avenue and wrote, “Time has justified the foresight of the owner of the land; the homes of wealth and of learning are on either hand, and in this ‘cathedral city, whose streets are aisles,’ there is no street more beautiful than this.”²⁶

James Hillhouse, though a pioneer of arboreal philanthropy, was not the only contributor to the concept. Throughout the nineteenth century, the action of planting elms became representative of American character for upper-class men, especially due to the long-lived nature of the trees. For example, writer and clergyman Nehemiah Adams proclaimed, “Those who plant elms...must plant them for posterity,” urging the Boston elite to contribute to the beautification of their city.²⁷ Downing echoed this belief, writing, “We ought not to cease, till every man feels it to be one of his moral duties to become a planter of trees.”²⁸ Cities filled with good American elms were cities filled with good American men, past and present.

The City of Elms used this fact to bolster its standing as an economic power. By advertising its elms, New Haven also advertised its people and its prowess as a center of business. This is most evident in the brochures released by the New Haven Chamber of Commerce, printed and distributed to promote tourism and commercialism in the city. An 1889 pamphlet, titled “The City of Elms,” featured an illustration of the elm-lined public square prominently on its cover. Just underneath, bold font proclaimed that New Haven was the “Third City in Size and Wealth in New England,” with an “Assessed Valuation [of] \$50,000,000.” Inside, it included “Shade Trees” on a list of “Points for the Memory” with the following blurb:

New Haven is justly famous for its magnificent elms which border *all* its streets, making most charming vistas and drives. It well deserves its titles of the “City of Elms” and the “Pearl of New England.” Many of its trees are over one hundred years old and are as noble in their proportions as they are world-wide in fame.²⁹

Evidently, American elms were an important economic commodity for the city—out of the twenty-seven “points,” which included attractions like Yale University, churches, and summer resorts, “Shade Trees”

²⁶ Bartlett, *Historical Sketches*, 56-57.

²⁷ Nehemiah Adams, *Boston Common, or Rural Walks in Cities*, (Boston, MA: George W. Light, 1838), 33.

²⁸ Downing, *The Horticulturist*, 396.

²⁹ The New Haven Chamber of Commerce, “The city of elms,” (New Haven, CT: New Haven Chamber of Commerce, 1889).

received the longest description. However, this description praised the longevity and aesthetic beauty of the trees, making no mention of their natural habitat: the wild forests of New England that had been sheared for the economic growth of American cities.

As New Haven grew, so did the American elm's role in the city's identity as a thriving urban center. In 1912, the Chamber of Commerce published a "New Haven City Pocket Guide and Business Directory." Though released two decades later, this booklet repeated the "City of Elms" moniker, adding the slogan, "Old Elms, New Ideas, New Haven." The businesses listed included the "Orange-Elm Shop," the "Elm Tree Tea Shop," and the "Elm Tree Inn."³⁰ These pamphlets continued into the 1940s, always bearing the title, "New Haven, Connecticut: City of Elms."³¹ Used strategically to market the city, American elms were further exploited, pulling them deeper into the metropolitan sphere.

This is perhaps a good time to stop and ask: why elms? The answer is simple: in many ways, the American elm was ecologically perfect for urban planting. It was a hardy plant, able to grow in a variety of soil types, tolerating a wide range of moisture and sun levels. The challenges of the city did not hinder its growth, not even the high levels of foot traffic and constant pounding of horses' hooves.³² It was also a valued shade tree, of which "the American elm has no equal." Elm shade, as described in a *New Yorker* profile, was "an exquisite dapple of airy light and shifting shadow," known to have hosted "so many noonings and picnics and family reunions."³³

However, it is important to distinguish between appreciating the ecological advantages of the American elm and valuing the natural qualities of the tree. In fact, it was more often the *unnatural* qualities of street elms that were so adored. Elms were frequently planted in rows on either side of a street, so that their bowed branches created a lofted, emerald archway.³⁴ Stray limbs were pruned to

³⁰ The New Haven Chamber of Commerce, "Old Elms, New Ideas, New Haven," (New Haven, CT: New Haven Chamber of Commerce, 1912).

³¹ The New Haven Chamber of Commerce, "New Haven, Connecticut: 'City of Elms'," (New Haven, CT: New Haven Chamber of Commerce, ca. 1940).

³² Campanella, *Republic*, 123.

³³ Roueche, "A Great Green Cloud," 36.

³⁴ Campanella, *Republic*, 123.

maintain this shape, and most saplings came from nurseries rather than the wild.³⁵ Uniformity was also paramount as seen in a guide to the planting of shade trees, in which state forester Alfred Gaskill advised, “All the trees on a street, or at any rate all in a block, shall be of the same kind and as near alike as possible in size and shape.”³⁶ Clearly, the beauty of street trees was inherently unnatural—in fact, according to Gaskill, “Trees always suffer by contrast with those in natural situation, yet when arranged harmoniously in well-spaced rows, the uniformity of the trees matching the uniformity of the street, most satisfactory results are obtained.”³⁷ In fact, according to Andrew Downing, “The Beautiful is nature or art obeying the universal laws of perfect existence.”³⁸ At the hands of humans and the blades of pruning shears, the American elm ceased to display its wild nature, instead reflecting the rigid symmetry of the urban landscape. All over the nation, people eagerly planted uniform row after uniform row of these urban trees. By 1930, an estimated 77 million elms adorned the streets of American cities.³⁹

As American urbanization continued, however, the factors that had historically favored the elms began to work against them. The longevity of the trees may have sustained the legacies of philanthropists such as James Hillhouse for generations, but it also meant that they continued to require maintenance long after their generous benefactors had passed away. The planting of elms had long been driven by property owners, as “public spirit was stronger in individuals than in common councils.”⁴⁰ Connecticut agriculturalist Ernest Jenkins pointed out the inherent problem in such initiatives, writing, “[Property owners] are not restricted in the number or kind of trees or the manner or place of setting them. Once set, however, they become the property of the city.”⁴¹ Though the city never endorsed Hillhouse’s plantings, New Haven had become dependent on the existence of their elms and the government was left with the task of maintaining the trees.

³⁵ Alfred Gaskill, *Planting and Care of Shade Trees* (Trenton, NJ: State Gazette Publishing, 1912).

³⁶ Campanella, *Republic*, 12.

³⁷ Ibid.

³⁸ Andrew J. Downing, *A Treatise on the Theory and Practice of Landscape Gardening; Adapted to North America; with a View to the Improvement of Country Residences with Remarks on Rural Architecture*, 5th ed. (New York, NY: G.P. Putnam, 1853), 73-74.

³⁹ James L. Sherald, *Dutch Elm Disease and Its Management*, 6th ed. (Washington, D.C.: U.S. Department of the Interior, National Park Service, 1982).

⁴⁰ Bartlett, *Historical Sketches*, 16.

⁴¹ Ernest H. Jenkins, *The Protection of Shade Trees in Towns and Cities* (New Haven, CT.: Connecticut Agricultural Experiment Station, 1900), 6.

Not only was the city itself dependent on its American elms, but so were its citizens. Growing up in the shade of magnificent elms, most New Haven residents could not imagine their city without them. Additionally, elms remained representative of the elite, and it was often the most influential citizens who were the most concerned. At the slightest sign of decline, they pressed the government to take action to protect their beloved elms. For example, in 1894, a group of prominent New Haven figures gathered to form a committee with the sole purpose of urging the Court of Common Council to “preserve the elm trees.” This committee included notables such as Eli Whitney and Henry W. Farnam and emphasized how important it was that the city “respects the beauty of the elms,” requesting the removal and replacement of dying or unsightly trees. Additionally, the proposal stated that “the beauty and attractiveness of New Haven depends so largely upon its shade trees” and that “they should be placed under the general care of an expert in forestry,” for whom a “reasonable sum should be appropriated annually by the city for the purchase, planting and trimming of the trees under the forester’s direction.”⁴²

The decline of American elms was not only due to neglect: forces of urbanization greatly accelerated their deterioration. Asphalt and water pipes suffocated their roots, motor exhaust choked their leaves, and leaking gas mains often poisoned the trees altogether.⁴³ Planted in a time when cars were science fiction, rows of street trees were often too close together to make way for modern vehicles, and city planners were left with no option but to clear healthy elms to build wider avenues or to construct right-angled intersections.⁴⁴ The lifespan of the American elm meant that it outgrew its own time in the spotlight—no longer was it in vogue for privileged men to donate their time and money to the cause of the street trees. As Andrew Downing pointed out in 1846, “Nothing appears to be so captivating to the mass of human beings, as *novelty*. And there is a fashion in trees, which sometimes has a sway no less rigorous than that of a Parisian *modiste*.”⁴⁵ Unfortunately for New Haven, there would be no modern James Hillhouse to save the Elm City.

⁴² “To preserve the elm trees : valuable report made to Chamber of Commerce,” *New Haven Morning Journal and Courier*, article dated 1894, reprinted 1898.

⁴³ Campanella, *Republic*, 144.

⁴⁴ *Ibid.*, 142.

⁴⁵ Downing, *The Horticulturist*, 396.

By the end of the nineteenth century, New Haven had lost half of its namesake elms. In 1900, the Connecticut Agricultural Experiment Station reported on the “present state and condition of the shade trees in New Haven,” stating:

In some parts of the city, trees are dying and are being killed by various causes at a rapid rate. As they are not being systematically replaced, there has ensued very great damage to the appearance of the streets and the beauty of the city, and the result must be disastrous in these respects unless prompt and intelligent action can check the destruction...At present the city is doing absolutely nothing in the way of planting trees on the streets or public squares.⁴⁶

According to the bulletin, the absence of action could be attributed mainly to lack of funds. Despite the economic benefit of street trees, the maintenance of elms became a financial burden on both the state and federal government. Following its report on the state of New Haven’s shade trees, the bulletin recommended the purchase of insecticide spraying equipment, amounting to \$500 per outfit, as well as “an appropriation of \$1,000 for planting 500 purchased trees and \$285 for the establishment of a nursery.”⁴⁷ Although these numbers may seem high, this was only the funding necessary to prevent the usual wear and tear on street trees. Just thirty years later, the American elm would face an entirely new adversary, one that demanded far more resources to combat.

This adversary arrived in the form of a foreign invader, one that had never before been detected in the New World.⁴⁸ The fungal plague, called “Dutch elm disease,” had already ravaged the European landscape before crossing the Atlantic. Appearing first in the Ohio River Valley, New Englanders initially thought that their elms would be insulated from the disease.⁴⁹ Within a decade, it became painfully clear how wrong they were.

Carried along the east coast by wind-borne elm bark beetles, Dutch elm disease quickly spread across the entire East Coast. By 1934 the situation had become alarmingly serious—in September of that year, 6,500 diseased elms had been counted in New Jersey, New York, and southern Connecticut. The American Forest Association sounded a call in the *New York Times*, writing, “To arms for the American

⁴⁶ Jenkins, *The Protection of Shade Trees*, 6.

⁴⁷ *Ibid.*, 22-27.

⁴⁸ Steve H. Dreistadt et al., “Urban Forest and Insect Ecology,” *BioScience* 40, no. 3 (March 1990).

⁴⁹ C.J. D’Arcy, “Dutch elm disease,” *The Plant Health Instructor*, 2000.

<https://www.apsnet.org/edcenter/intropp/lessons/fungi/ascomycetes/Pages/DutchElm.aspx>.

elm!”, a battle cry that was echoed in every elm-lined city.⁵⁰ In response, both local and federal governments dedicated resources to fight the spread. The United States Department of Agriculture established a Dutch elm disease research center, and officials called for rapid and drastic action, and the Works Progress Administration supplied funds for the Civilian Conservation Corps which, at its peak, enrolled 365,000 men. The fight was expensive: the removal of just one diseased tree could cost up to \$1,100.⁵¹ After complaints of insufficient funds, President Roosevelt authorized more than \$2.5 million in 1935 to bolster the fight, which consisted mostly of identifying and burning infected trees. These methods proved rather ineffective—in 1936, the number of destroyed elms reached a whopping 1,286,912.⁵² Even so, the American elm was still more valuable than it was costly, and the USDA continued to allocate anywhere from \$200,000 to \$500,000 annually for the cause.⁵³

However, in 1945, the federal government had to turn its attention to wars overseas. With the onset of WWII, all federal funding to fight DED ceased, allowing the blight to spread unchecked across New England. The scales had finally tipped fully the other way: the American elm was no longer worth more alive, so the people had no choice but to let them die. By 1952, Dutch elm disease had spread to cover all of New England.⁵⁴ With all attention turned overseas, few were left to observe the siege that was occurring at home.

Those who did, however, still failed to see the last factor turn against their beloved elms. By emphasizing the ecological aspects of the trees, people made them all the more susceptible to Dutch elm disease. This was made evident in 1938, when the trees of American cities were dealt a literal death blow. In the fall of that year, the storm that became known as the Great Hurricane began to develop over West Africa, arriving in New England on September 21st.⁵⁵ The torrential rainfall drenched the trees’ roots and saturated their leafy crowns; violent wind gusts pulled the waterlogged giants to the ground. Though

⁵⁰ “To Save the Elm,” *The New York Times*, April 30, 1934, 14.

⁵¹ James L. Sherald, *Elms of the Monumental Core: History and Management Plan*, (Washington, D.C.: U.S. Department of the Interior, National Park Service Center for Urban Ecology, 2009).

⁵² Campanella, *Republic*, 153.

⁵³ “Acts Making Appropriations for the Department of Agriculture,” *U.S. Statutes at Large* 50-57 (Washington D.C.: U.S. Congress, 1936-1943).

⁵⁴ Campanella, *Republic*, 159.

⁵⁵ *Ibid.*, 154.

American elms were hardy trees, the soil of city streets was too shallow to keep them in the earth. In just a few hours, the Great Hurricane uprooted 13,500 elms in New Haven alone, damaging another 7,000.⁵⁶

After the storm passed, it left over a million fallen shade trees in its path. The sheer number of trees, so appreciated when alive, served only to aid the spread of Dutch elm disease when dead. The rotting, damp wood was the ideal breeding ground for the elm bark beetle, which exploded in population and range in the following seasons, bringing DED with it. In Connecticut, the infected zone increased by 258 percent in three years following the hurricane, reaching nearly 1,500 square miles, and there seemed to be no feasible way to stop its spread.⁵⁷

At the time, many marveled at the force that was DED, incapable of comprehending its magnitude. It wasn't until years later that researchers revealed what truly gave DED its unstoppable edge—an advantage that humans created centuries before the plague reached New England. Unbeknownst to them, people like James Hillhouse had removed the final ecological defense of the American elm the very moment they planted them in the ground. In natural forest settings, elms are solitary trees, isolated from other members of their species.⁵⁸ However, when planted in artificial monocultures as in urban settings, the roots of any elms within fifty feet of one another grafted together, forming a city-wide network below the soil.⁵⁹ In creating uniform archways, planters also built an underground passageway for DED to travel from tree to tree. These connections are estimated to have contributed up to one half of DED transmissions, buried far away from any amount of burning, cutting, or spraying that money could buy.⁶⁰

Though the fall of the American elm was due in part to natural forces and simple misfortune, it represents a greater misunderstanding of environmental history. Even at its peak, the City of Elms was never a true pastoral city. Throughout the years, people exploited the longevity, economy, and ecology of the American elm. Additionally, once these factors ceased to be beneficial, the trees were abandoned to

⁵⁶ Jill Jones, *Urban Forests: A Natural History of Trees and People in the American Cityscape*, (New York, NY: Viking, 2016), 128.

⁵⁷ Rutkow, *American Canopy*, 225.

⁵⁸ Guilkey, *Silvical Characteristics*, 5.

⁵⁹ Dreistadt, "Urban Forest."

⁶⁰ Ibid.

die. This is not to say that the elm was not loved or nurtured—rather, it is to say that the American people appreciated the American elm without ever truly understanding the wilderness it came from. Back in 1842, Nehemiah Adams said of an elm, “That tree was once a component part of this great American wilderness, which is now called the new world; but it is pleasant and useful to remember that we too live in the old world. It is sublime to think of the grandeur of these old solitudes.”⁶¹ It may be sublime to think of a time where beautiful trees thrived along our city streets, but it is vital not to conflate our appreciation for elms with an understanding of how to coexist with our natural surroundings. If we are to ever learn how to “live in the old world,” we must not strive for another Elm City. Instead, we should learn from the errors of humans past, continually working to better understand the great wilderness that we, too, once came from.

⁶¹ Nehemiah Adams, *Boston Common* (Boston, MA: W.D. Ticknor and H.B. Williams, 1842), 16.

Bibliography

An Act Making Appropriations for the Department of Agriculture for the Fiscal Year Ending June 30, 1937, and for Other Purposes. Public Law 691. *U.S. Statutes at Large* 50, 1936.

An Act Making Appropriations for the Department of Agriculture for the Fiscal Year Ending June 30, 1938, and for Other Purposes. Public Law 511. *U.S. Statutes at Large* 51, 1937.

An Act Making Appropriations for the Department of Agriculture for the Fiscal Year Ending June 30, 1939, and for Other Purposes. Public Law 462, 464. *U.S. Statutes at Large* 52, 1938.

An Act Making Appropriations for the Department of Agriculture for the Fiscal Year Ending June 30, 1940, and for Other Purposes. Public Law 106, 107. *U.S. Statutes at Large* 53, 1939.

An Act Making Appropriations for the Department of Agriculture for the Fiscal Year Ending June 30, 1941, and for Other Purposes. Public Law 421. *U.S. Statutes at Large* 54, 1940.

An Act Making Appropriations for the Department of Agriculture for the Fiscal Year Ending June 30, 1942, and for Other Purposes. Public Law 266, 267. *U.S. Statutes at Large* 55, 1941.

An Act Making Appropriations for the Department of Agriculture for the Fiscal Year Ending June 30, 1943, and for Other Purposes. Public Law 515, 516. *U.S. Statutes at Large* 56, 1942.

An Act Making Appropriations for the Department of Agriculture for the Fiscal Year Ending June 30, 1944, and for Other Purposes. Public Law 213, 214. *U.S. Statutes at Large* 57, 1943.

———. “Hillhouse, James.” *Biographical Directory of the United States Congress*.
<http://bioguide.congress.gov/scripts/biodisplay.pl?index=h000618>.

———. “To preserve the elm trees : valuable report made to Chamber of Commerce.” *New Haven Morning Journal and Courier*. Article dated 1894, reprinted 1898.

———. “To Save the Elm.” *The New York Times*. April 30, 1934.

Adams, Nehemiah. *Boston Common*. Boston, MA: W.D. Ticknor & H.B. Williams, 1842.

Adams, Nehemiah. *Boston Common, or Rural Walks in Cities*. Boston, MA: George W. Light, 1838.

Allen, Everett S. *A Wind to Shake the World: The Story of the 1938 Hurricane*. 1st ed. Boston, MA: Little, Brown & Company, 1976.

Bacon, Leonard. *Funeral Discourse, Pronounced at the Interment of the Hon. James Hillhouse*. New Haven, CT: Baldwin & Ellis, 1833.

Bacon, Leonard. *Sketch of the Life and Public Services of Hon. James Hillhouse of New Haven with a Notice of His Son, Augustus Lucas Hillhouse*. New Haven, CT, 1860.

Bartlett, Ellen S. *Historical Sketches of New Haven*. New Haven, CT: Tuttle, Morehouse & Taylor, 1897.

- Belden, Ezekiel P. *Sketches of Yale College*. New York, NY: Saxton & Miles, 1843.
- Campanella, Thomas. *Republic of Shade: New England and the American Elm*. New Haven, CT: Yale University Press, 2003.
- D'Arcy, C.J. "Dutch elm disease." *The Plant Health Instructor*, 2000.
<https://www.apsnet.org/edcenter/intropp/lessons/fungi/ascomycetes/Pages/DutchElm.aspx>.
- Decrow, William E. *Yale and "The City of Elms"*. Boston, MA: W.E. Decrow, 1885.
- Dickens, Charles. *American Notes for General Circulation with a frontispiece by C. Stanfield*. Chapman and Hall, 1850.
- Downing, Andrew J. *The Horticulturist and Journal of Rural Art and Rural Taste: Devoted to Horticulture, Landscape Gardening, Rural Architecture, Botany, Pomology, Entomology, Rural Economy, Etc.* Vol. 1. Albany, NY: Luther Tucker, 1846.
- Downing, Andrew J. *A Treatise on the Theory and Practice of Landscape Gardening; Adapted to North America; with a View to the Improvement of Country Residences with Remarks on Rural Architecture*. 5th ed. New York, NY: G.P. Putnam, 1853.
- Dreistadt, Steve H. et al. "Urban Forest and Insect Ecology." *BioScience*. March 1990.
- Gaskill, Alfred. *Planting and Care of Shade Trees*. Trenton, NJ: State Gazette Publishing, 1912.
- Guilkey, Paul C. *Silvical Characteristics of American Elm*. St. Paul, MN: Lake States Forest Experiment Station, Forest Service, U.S Dept. of Agriculture, 1957.
- Jenkins, Ernest H. *The Protection of Shade Trees in Towns and Cities*. New Haven, CT.: Connecticut Agricultural Experiment Station, 1900.
- Jones, Jill. *Urban Forests: A Natural History of Trees and People in the American Cityscape*. New York, NY: Viking, 2016.
- Michaux, François A. *The North American Sylva; or A Description of the Forest Trees of the United States, Canada, and Nova Scotia,: Considered Particularly in Respect to Their Use in the Arts, and Their Introduction into Commerce; to Which Is Added a Description of the Most Useful of the European Forest Trees*. Vol. 3. 3 vols. Philadelphia, PA: WM. Rutter &, 1865.
- The New Haven Chamber of Commerce. "The city of elms." New Haven, CT: New Haven Chamber of Commerce, 1889.
- The New Haven Chamber of Commerce. "New Haven, Connecticut: 'City of Elms'." New Haven, CT: New Haven Chamber of Commerce, ca. 1940.
- The New Haven Chamber of Commerce. "Old Elms, New Ideas, New Haven." New Haven, CT: New Haven Chamber of Commerce, 1912.

Pinchot, Gifford. *Forest Planting Leaflet: White Elm*. Circular 66. Washington, D.C.: Forest Service, U.S. Dept. of Agriculture, 1907.

Roueché, Berton. "A Great Green Cloud." *The New Yorker Magazine*. July 15, 1961.

Rutkow, Eric. *American Canopy*. New York, NY: Scribner, 2012.

Sherald, James L. *Dutch Elm Disease and Its Management*. 6th ed. Washington, D.C.: U.S. Department of the Interior, National Park Service, 1982.

Sherald, James L. *Elms of the Monumental Core: History and Management Plan*. Natural Resource Report Draft. Washington, D.C.: U.S. Department of the Interior, National Park Service Center for Urban Ecology, 2009.

Woodward, Sarah D. *Early New Haven*. New Haven, CT: Price, Lee & Adkins, 1912.