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Battle for the Elms

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New Yorkers tried to protect their elms, but the bugs won in the end.

BY JOE COLLEA

A Buffalo view down Delaware Avenue, ca. 1920, shows the tunnel-like effect created by elm trees.

he hamlet of Barneveld, New York, was once home to a cherished gift of nature. In

1978, the Boonville Herald noted that "one of the community's proudest possessions was the giant elm that stood at more than 119 feet high on Boone Street, near the center of the village. The tree had a circumference of 17 feet nine inches, with a crown measuring 131 feet." But that venerable landmark died prematurely, denied the right to live gracefully in its dotage by an insidious affliction. Known as "Dutch elm disease." this malady decimated rural and urban areas alike, killing millions of prized shade trees.

Between the world wars, residents of the Northeast and Midwest faced a confrontation ultimately lasting over forty years. The enemies were lowly beetles, a quarter inch in size. The victims were mighty elms, most of imposing dimensions. The losers were frustrated residents whose property the doomed trees inhabited.

Devastating March

Once the deadly fungi had begun their devastating march, no area was harder hit than New York. As its towns grew, their development required expanded street grids. In time, beautification projects were undertaken to gentrify the landscape and make the surroundings more hospitable. One inexpensive way to enhance urban environments was to line their streets with trees.

Offering both shade and longevity, the Ulmus americana—the American elm became the tree of choice for roadside plantings in the late nineteenth and early twentieth centuries. A common practice was to border a street on each side with a row of saplings between the sidewalk and curb. Once these seedlings matured, the effect produced was truly stunning. Because elms were crowned with broad canopies, an interlocking effect was fashioned when the limbs and leaves from opposite sides of thoroughfares met overhead. These same leafy umbrellas also existed along rows on the same side. The end result was a majestic arboreal tunnel.

In 1914 when Buffalo was known as "the city of trees," a resident shared his appreciation of a summer morning's delightful vista: "Delaware Avenue with its far stretching canopy of elms which form a veritable sylvan lane, so close do their branches meet, is more beautiful at sunrise than any other time of day."

Over time, the elm became as revered a part of the American scene as mom, apple pie, and Chevrolet. In 1940, the *Fort Plain Standard* celebrated the tree's stature, observing that "the American



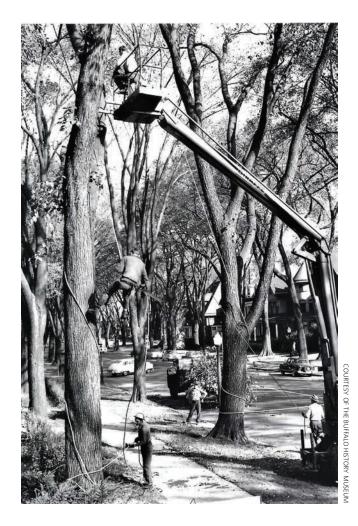
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elm is without doubt the most valuable shade and ornamental tree in the United States. Many cities and towns are noted for the beauty of their elms, and no one can estimate their value to the communities." Not only could elms be found soaring over roadways, but also proliferating in parks and backyards.

Insidious Infestation

But size, age, and respect proved no bulwarks against the insidious infestation that found its way to America in 1930. First discovered in Holland in 1919, Dutch elm disease ravaged trees in Europe for Elms could be found soaring over parks like Central Park in Manhattan, pictured above, ca. 1900.

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With increasing frequency, crews had to be called in to remove trees killed by Dutch elm disease.

The initial approach in combatting the sickness was to send out scouts to evaluate trees in and around the community.

over a decade before crossing the Atlantic. Then, infected beetles rode across the Atlantic as stowaways on freighters, snuggly encased in logs destined for the shops of midwestern furniture makers. Reaching their destination, the beetles found hospitable environments and desirable hosts in which to live and breed. Concurrently, these insects also spread the deadly spores of the disease, microscopic organisms that attached themselves to the beetles' exoskeletons. By blocking the flow of nutrients to its branches and leaves, the malady stealthily perpetrated an elm's death.

Gradually, the beetles created an ever-widening footprint of destruction. The New York Times reported the grim reality soon faced by communities across the Empire State: "Once a tree is infected it is usually doomed ... [taking] from two to three years for the elm to die." By 1934, reports confirmed that the destructive disease was already discovered in five states. From these limited beginnings, the disease spread rapidly, resulting in a scourge that would last almost a half-century.

Seasonal Spraying

The initial approach in combatting the sickness was to send out scouts to evaluate trees in and around the community. These lookouts were to report back any sightings of diseased elms. Yellowing, wilted leaves, and dying branches were the telltale signs. Though the trees identified were quickly cut down and burned, an unidentified factor impacted efforts to control the disease: by the time a tree began manifesting visual indications of sickness, the beetles had already moved on to new hosts. Furthermore, the spores did not necessarily begin infecting a tree immediately, sometimes remaining dormant for years.

With the disease spreading, local authorities turned to more aggressive countermeasures. This led to the introduction of seasonal spraying. The recommended timeframe for optimal success with these treatments was mid-May to mid-June, when the beetles were in their highly-susceptible larval stage. The chemical of choice was usually DDT or lead arsenate. While we now know that lead, arsenic, and DDT can cause cancer, this was not understood in the early years of their usage.

Checkerboard Approach

While such misting had the potential to kill the insects, the procedure ultimately failed because not every bark beetle in a given community was exposed to the lethal vapor. Local governments were willing to foot the bill to cover trees on publicly-owned land, which usually amounted to only those along roadways and in parks; however, the cost of spraying trees on private property was left to individual owners to address. Some did, and some didn't.

In Richfield Springs, the village board picked up the tab for the treatment of public trees, while offering to include those on private property for a dollar each, but not every landowner opted to have his trees sprayed. This checkerboard approach was, in the long run, detrimental to the program. It meant that colonies of beetles, having escaped destruction, were then free to later relocate to other nearby elms, even those previously treated.

Another problem—one not immediately recognized undercut the battle to save the trees in a far more unobtrusive manner. In areas where the elms had been planted in close proximity, roots often



became intertwined. Grafting between trees occurred below ground, a subterranean connection allowing a tainted tree to infect healthy neighbors via a transfusion of tainted sap.

While World War II caused a diversion in resources and focus, the post-conflict years saw a rapid renewal of aggressive actions against the ever-spreading menace. More than fifteen years after its discovery, hopes still remained high that the pandemic could yet be expunged. For example, in 1947, the spirits of residents in Ilion, New York, were temporarily buoyed by a misguided assessment appearing in The Ilion Sentinel. Under the reassuring headline "Ilion Unhampered by Elm Disease," a local official stated that "no problem existed in Ilion because the trees were sprayed every spring, keeping them free from the disease."

For two more decades, the struggle continued. However, the statewide endeavor eventually became a failing proposition on two fronts. One was in the streets. In 1971, The New York Times reported a distressing exemplar of this situation: "In Syracuse, where 50 to 60 percent of all the trees are elms, city foresters have fought a losing battle against the disease since the early nineteen sixties. This year more than 10,000 elms have been cut down and removed and within two years virtually all those remaining are expected to die."

Fiscal Responsibility

The other area of contention was maintaining fiscal responsibility by local governments. Repeated spraying had been expensive. Removing and disposing of dead and dying trees added further costs, and the final tally was not yet complete until stumps were pulled, upheaved sidewalks repaired, and replacement saplings planted.

Once Ilion discontinued its spraying, efforts shifted to just cutting down the diseased trees. But eventually even this practice began to take its toll on the village budget. The knowledge that tax dollars spent fighting the disease were funds diverted from other pressing needs, such as paving streets or purchasing a fire truck, weighed heavily on local decision-makers.

Attempts to resolve this dilemma were often painful



Left: *Elms were sprayed with insecticide in an attempt to save them.*

Right: The girth of many elms was impressive, a testament to their long and celebrated lives.



This photo of the author and his mother, taken in 1950, shows rows of lofty elms that graced his neighborhood before the disease took over.

Future generations were to be robbed of experiencing the majestic grandeur of these woodland giants.

and unpopular. At their village board meeting in August of 1969, Ilionites learned that the cost was "about \$40,000 for the village to cut down 220 bad trees." Much to residents' chagrin, elected officials decided to revert to a 1961 ordinance that made property owners responsible for removing trees on the right-of-way. Five years later, in 1974, the Watertown Daily Times reported on a similar situation: "Department of Public Works employees are currently cutting down the last of the dead elm trees reported by city property owners in 1971 ... and prospects are nil for catching up with the spread of Dutch elm disease in the near future."

Municipalities were not alone in wrestling with the problem. Homeowners, like Ed Kuehner of Gloversville, also had to address the matter. His daughter, Carol Kuehner Lincoln, vividly recalled a towering elm that was the only tree on her family's property: "Once it became diseased, my father was worried about falling limbs, so he reluctantly had it removed. The backyard suddenly seemed so empty. and mom lost one of the anchors of her clothesline." Lincoln reflected on how, to a blue-collar worker like her dad, "opting for the tree's removal was a major decision, one that seriously impacted the family budget."

In Utica, which for years had proudly worn its title as "City of the Elms," the fight to save its beloved trees fared

no better. A brief ray of hope surfaced in the mid-sixties when "Bidrin" was developed. At the eleventh hour in the long fight, the Utica Observer-Dispatch touted a new pesticide that was "heralded as a deadly killer of the diseasebearing elm bark beetle." But the breakthrough fell short of expectations. Introduced by injection, Bidrin wound up being more of a complication than a savior since the serum was expensive, had a limited shelf life, and had to be applied by an expert.

Ultimately, the cold reality set in. One by one, communities gave up. The bugs had won. The headline of the August 3, 1974, edition of the *Utica Daily Press* told the sad story: "Replacement Called Only Solution: Fight Against Elm Disease Appears Lost." For safety reasons, the dead and dying trees would continue to be removed, but any hope of saving the elms was now but a forlorn hope.

Future generations were to be robbed of experiencing the majestic grandeur of these woodland giants. The inspirations for such names as Cortland's "Elm Tree Inn" and Stamford's "Elm Tree Motel," along with countless "Elm Streets" across the state, were gone. Writing for the Herkimer Evening Telegram in 1981, columnist Emily Denton summed up the loss in a few poignant words, lamenting that "no other tree has the same arching grace, and village streets are the poorer for their disappearance."

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he collection of vintage newspapers available on microfilm at the New York State Library was a valuable resource. Other facilities across the Empire State proved useful, including the Ilion Free Public Library and The Buffalo History Museum, the latter of which offered a wide-ranging collection of photographic prints from different eras and topics in the city's history. The Civilian Conservation Corp camp and personnel files, 1935-1942 and the State Entomologist's topical file, 1894-1960 at the New York State Archives contain records relating to Dutch Elm disease and its treatment.

Last but not least, older residents of the state gladly jogged their memories for stories about the loss of elms in their locale, imparting a personal perspective to the bigger picture. Their rich oral accounts are priceless.