



Grand elm at the head of Southwest Harbor, 1987.
From the files of John Dreier, Southwest Harbor Tree Warden.
Courtesy of the family of John Dreier

When Canopies Rivalled Cathedrals

Polly McAdam

Nearly a quarter of a century ago, residents of Mount Desert Island woke to find their beloved island covered in a layer of crystalline ice. The entire landscape glittered as the intense winter sun carved its path across the sky. For one resident of downtown Bar Harbor, the most vivid memory of that morning was Kennebec Street, lined with stately elm trees whose pendulant boughs were bent over, bowing beneath the weight of the shimmering ice so that they created a glistening silver ceiling. The tinkle of icy branches shivering against one another gave the impression of a thousand chandeliers swaying in the frigid air.

Though not always quite as magical, many streets in the United States, and especially in New England, nevertheless had an enchanting atmosphere cast over them by the once ubiquitous American elm: *Ulmus americana*. These trees grow with a thick, sturdy trunk and don't begin to branch until they are quite tall, at which point the slender limbs fan out through division and subdivision until many of the outermost branches point straight down. The shape of a lone elm from a distance

resembles the arc of water of a whale's spout, an upside down chandelier, or a fountain frozen in mid-air. As picturesque as one elm can be, when many are planted in parallel allées that skirt a main thoroughway, the splendor only increases. The trunk and larger main branches strain heavenward but the outer limbs seem to glance downward and take up as their main purpose the beautification of the earth. This pattern creates an avenue of vase-like figures whose edges graze those of their neighbors, forming vaulted, sun-dappled ceilings over even the humblest of streets.

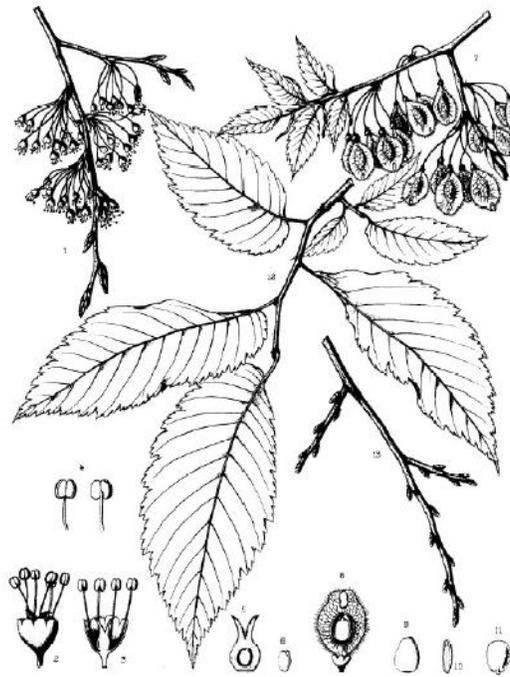
This vision became a coveted image in towns all across America, particularly in the Northeast. In 1852, the Elm Tree Association was founded in Connecticut as the first village improvement association (VIA) in America.¹ This organization helped to set the standard for the ideal Yankee town and more and more VIAs popped up throughout New England and the rest of the country.

Even before this, however, elms had provided common cause for celebration and reverence, possibly because they tended to be the only large trees left standing in and around settled areas. Many trees grow with the cellulose fibers, which make up the grain of the wood, running parallel to each other. Elms, on the other hand, grow with these fibers knitted together, making the wood incredibly durable as well as extremely difficult to cut with hand tools. Although historically used for wheel hubs, it was exceptionally rare to use elm in carpentry. Even today, woodworkers say they would be hard pressed to identify elm wood.² When burned as fuel it gives off a rank odor leading to its nickname "piss elm."³ As these trees don't seem to have many useful characteristics other than their aesthetically appealing growth habit, and can be extremely cumbersome to cut down, they were often left standing. In a time when wilderness was being actively eradicated from settlements in the early American colonies, frequently the only large vegetative presence remaining in the area was an *Ulmus americana*.

But as the perception of wilderness as heathen or savage evolved and groups such as the Hudson River School painters immortalized the "elm-besprinkled meadows"⁴ of the Connecticut River Valley in the mid-1800s, many municipalities began re-incorporating green spaces into their communities. (Though not everyone was in accord; as one gentleman is reported to have complained, "We no sooner get the woods cleared than you start fetching them back!")⁵ Following this first wave of environmentalism, much of Mount Desert Island was absorbed into the

National Park system in 1919, four years after the formation of the island's first village improvement association. The Southwest Harbor Village Improvement Association was organized on July 27, 1914 and its first act was to purchase shade trees to adorn the village streets.⁶ Regarded as "the most magnificent vegetable of the temperate zone,"⁷ the elm tree quickly became as American as apple pie. Village improvement associations all over the country held "tree bees" and planted hundreds of elms to shade their communities.

*Ulmus Americana*⁸ is an ideal street tree. The majority of its bulk appears far above street level; the broad canopy, made up of thousands of delicate leaves, provides a sun-specked carpet of shade; and it is extremely resilient to compaction, oil spills, and other conditions occurring on bustling streets. Elms were planted as shade trees, given as nuptial gifts, and established to commemorate such events as the George Washington Bicentennial in 1932, during which the Southwest Harbor VIA donated six elm trees to the grounds of local schoolhouses.⁹ Due to their rapid upward growth, elms could reach incredible heights during one person's lifespan, making them a rewarding investment. But as



Botanical illustration of *Ulmus americana*.
By Charles Sprague Sargent

the American elm grew in popularity and in number, forming a dense swath across the country, a storm was brewing across the Atlantic that would lead to the downfall of the nation's favorite tree.

Elms were never immune to threats from pests and disease, but they had proven resilient when confronted with elm leaf beetle and various other nuisances. So when a new disease arrived in the 1930s, many assumed that it would be another quick fix, but it was not to be so.

Ophiostoma ulmi is a fungal disease spread by European elm bark beetles. It is believed to have originated in Asia, as many resistant cultivars have been found in regions there. Before arriving in the United States, this fungal disease wreaked havoc on European elms in Norway as early as 1918. Since it was virtually unknown other than by association with the research conducted by Norwegian scientists, it was inaccurately dubbed “Dutch elm disease” when it was first detected in America.¹⁰

The bark beetles obtain the fungal spores when feeding and carry them as they fly from tree to tree. Upon finding a suitable place to take up residence, the fungus expands into the internal workings of the elm where its growth obstructs the flow of water and nutrients—essentially strangling the tree. Bark beetles are very small insects, about the size of Roosevelt’s ear on a ten-cent coin, with a decidedly unimpressive range of travel. However, due to their minuscule size, they are capable of being picked up by wind currents and blown farther than they could ever journey under power of their wings alone. They are also capable of being transported in firewood or lumber.¹¹

On its own, against a brigade of healthy elm trees, Dutch elm disease would not have been able to cause the amount of damage that it eventually did. However, due to what is recalled as the “great hurricane” of 1938 that felled an enormous number of these lofty trees, leaving them extremely susceptible to infection, Dutch elm gained a tenacious foothold. One of the places that the hurricane hit hardest was the very same Connecticut River Valley, whose landscape helped inspire the American elm fervor. Even then, the grand canopies of Elm Street, USA may still have had a chance of surviving but for the country’s entering World War II. Not until the war was over was federal funding available to fight for the country’s beloved elm.¹²

Mount Desert Island was spared the initial waves of the disease, but by the late 1970s many trees on the island had succumbed. This prompted the creation of an Elm Tree Fund in Southwest Harbor that operated from 1980 to 1989. At the start of this crusade, there were over one hundred elms within the town itself. However, that number quickly fell. The Tree Warden reported that

A large number of trees infected with DED have been removed during the past years. When we started, there were about 102 elm trees in the village

of Southwest Harbor, of which some 25 were small, weedy and decrepit trees that were quickly and easily removed. Of the remaining 75 or so elms, we have taken down 32 trees, or almost half. This includes seven trees scheduled for take-down this fall, but does not include the two large elms on the Briggs property on Clark Point Rd. which must also come down.”¹³

Southwest Harbor was left with about a third of its original elm population, and this dramatic change in the landscape caused the townspeople to take action. In addition to the Tree Fund, a group of volunteers called the Elm Tree Spotters were charged with checking a certain number of trees in town at least twice a week. A letter sent out to this troop of “spotters” urged them to be vigilant and thorough in their visits to trees, as within the first two weeks of showing signs, the disease could already have progressed far enough that the elm couldn’t be saved.¹⁴

After 1945, more funding was available to combat Dutch elm disease and the war had provided a new weapon: DDT. The hope was this powerful insecticide would take down the bark beetle population and therefore stop further spread of the fungus *Ophiostoma ulmi*. However, scientists quickly realized that the spray treatments proved ineffective. Elm trees are classified as “promiscuous” because their roots can exchange sap with other *Ulmus americana* up to fifty feet away.¹⁵ Dutch Elm disease is systemic and works in the vascular structure of the tree, so the inoculum is also transferred in a subterranean fashion. In response to this new information, root injection programs were started all over the country in an attempt to contain the disease. Injections began on the island as well. In Southwest Harbor, the Elm Tree Fund paid for the bulk of the cost; in other areas of the island, injections were offered to individual property owners for nearly \$200 per tree¹⁶ Unfortunately, even some trees that were treated yielded to the dreaded Dutch elm.

Today, all over the island, many large street trees have town tags on them, silvery metal coins that cling to trunks ten to fifteen feet above the ground. Trees are tagged if they are seen to be valuable municipal assets.¹⁷ For this reason, many of the trees sporting this shiny accessory tend to be clearly visible from roadways. In towns where there is a fund



Elms on Mount Desert Island. Top: W.P. Stuart estate on Sargeant Drive.
Bottom Left: Inn at Southwest Harbor. Bottom Right: Kennebec Street, Bar Harbor.
Courtesy of Polly McAdam

of private donations to take care of sylvan entities, tagged trees are kept under attentive watch and care. However, not all municipalities have residents with funds to spare for this kind of an undertaking, and so the responsibility for maintaining the health and aesthetic of the town's verdure falls to the private property owner. Mount Desert Island has long been a vacation destination for the wealthy, and some of these visitors became residents, adding a greater depth of economic resources to the towns where they settled.

In the late eighties, Southwest Harbor alone was reported to have about thirty-five remaining elm trees¹⁸ Now, there are about forty left on the island visible from the road: three in Bar Harbor, fifteen in Somesville, fifteen in Southwest Harbor, three in Manset, one in Tremont, one in Northeast Harbor, and around five others scattered individually throughout the island. The only large clusters of *Ulmus americana* remaining can be found on Main Street in Somesville between Somes Pond and Pretty Marsh Road and on Route 102 in Southwest Harbor from the great elm at 306 Main Street down to the Inn at Southwest. The other elms scattered around the island may have been spared by their own isolation, but most did not survive without a struggle.

Mentioned earlier, Kennebec Street in downtown Bar Harbor was once lined with magnificent elms. Standing on the front steps of the Post Office, one could see the verdant corridor leading up toward the old cemetery. As many elms became infected in the mid-1980s, this once shaded street became more and more barren. One colossal sentinel stood on the corner near the first house on the street. The trunk was large enough that an embrace would not reach all the way around. Even with an injection, it wasn't able to be saved from Dutch elm disease and was subsequently taken down. However, before the leafy lady was felled, one of her children took root in the hedge along the side of the house. The homeowners rescued the sapling from the hedge, hoping that its survival meant that it was somehow resistant to the disease. Even without the most careful of transplanting methods, the little tree, about an inch-and-a-half in diameter and just barely reaching shoulder height, took well. It was set in clay soil and seemed to thrive on neglect.¹⁹ It now reaches nearly thirty feet in height and seems healthy, though it still sports a twist in the trunk from its early days of competition for light and nutrients with the hedge.

Many other property owners were not as lucky. Alongside the sweeping expanse of Ledgelawn Avenue, there was once a lofty sentinel with a girth of six to seven feet in diameter. A man who has lived on the avenue for over seventy years remembers this great elm from when he was a boy, shading the area directly across the street from the Bar Harbor Historical Society. With or without injections, the tree was ravaged by the disease so badly that it needed to be taken down.²⁰ Now, in its place, grows a small blue spruce, a dignified tree on its own, but lacking the stately quality so evident in its predecessor.

Though it has been a tumultuous history for *Ulmus americana* throughout the country, Mount Desert Island has been stable in terms of Dutch elm disease for the past decade or so. The current tree warden of Southwest Harbor recalls that during his six years of involvement there have been no subsequent losses of elms due to the disease. The Tree Fund still receives \$2,000 annually to take care of the major street trees in town, and this amount is supplemented by private donations. The trees, though seemingly healthy, are still monitored and pruned regularly. Three to four years ago, during reconstruction of the sidewalk along Route 102 in downtown Southwest, the warden recalls sitting right next to the gargantuan elm that stands sentry over the town to ensure that the workers took care to dig around the roots rather than cut straight through.²¹

The loss of elm-lined streets has added to a change in atmosphere that began to accelerate in the late 1970s. More and more visitors began coming to the island every year; old buildings were taken down and replaced; roads were widened; and the expanse of asphalt parking areas multiplied. As a consequence, gone were many of the tufted streets that provided a magical, sun-streaked backdrop to many a happy childhood. As early as 1980 new trees were ordered to replace dead elms, including maples, oaks, ash, and the more exotic tulip tree.²² Though not as grandiose as the towering elms, these trees have helped the community remain idyllic in the bosky Yankee tradition.

What elms remain have certainly lived full lives. The sky-scraping monument that stands sentry at the Moorings Inn in Manset has presumably been present since the institution of this century-old establishment. Photos of this elm in 1938 show it quite a bit smaller, but with the same grandeur it displays to this day. The soaring elm on Main Street in Southwest Harbor is one of the largest remaining in Maine.



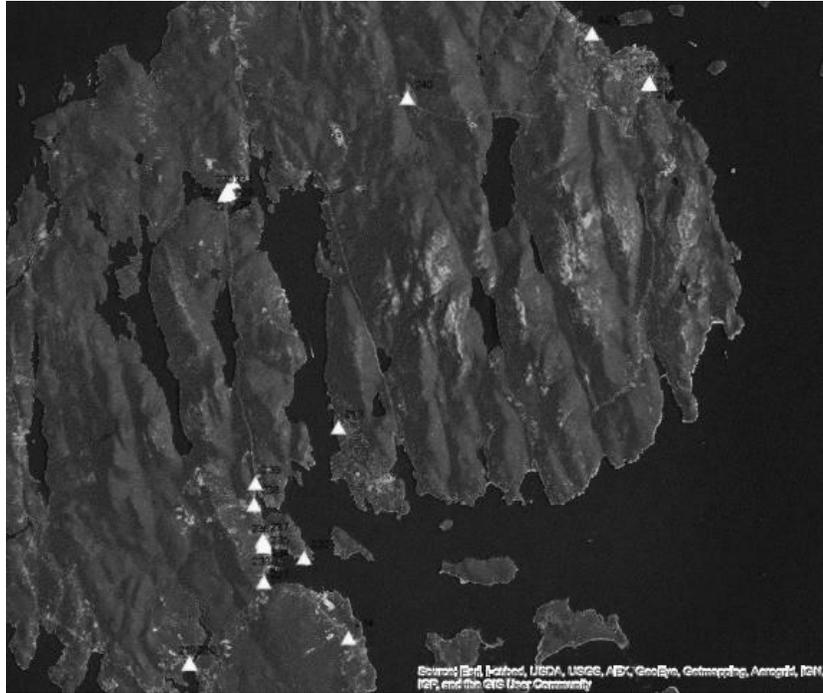
On the left: The Moorings Inn -- then known as the Andrew Tucker /Andrew H. Haynes House, 1938. *Photograph by W.H. Ballard. Number 6225 - The Southwest Harbor Public Library Collection of Photographs.* On the right: The Moorings Inn, 2013. *Courtesy of Polly McAdam*

And the arching stand of elms along Main Street in Somesville that now shade the Jordan-Fernald Funeral home, established in 1981, survived the height of Dutch elm disease on the island.

Though apparently stable, *Ulmus americana* is not the only species to be threatened and to, in turn, threaten the quality of life here on Mount Desert Island. Before Dutch elm disease, there was the crisis of the American chestnut blight, and today we face new issues such as the hemlock wooly adelgid, the Asian longhorn beetle, and red pine scale. The latter has gained a strong foothold in parts of Acadia National Park within the past three years. Though the defoliation of these coniferous members of our woodland ecosystem may be less noticeable than the half-dead crown of an elm towering above our homes, it is no less important. As one islander pointed out, a stand of dying red pines along the side of a trail up Parkman Mountain is not much different than a diseased elm by the post office; it still affects the aesthetics of the area and the experience of the visitors who come here. Perhaps the lesson left for us from the saga of Dutch elm disease is to take better care of our sylvan neighbors—those residing on our property as well as those beyond our front yard.

But as its history demonstrates, the American elm is truly a testament to community participation and concern. Where they once symbolized town prosperity and “village improvement,” the elms that remain today represent the positive effects of a community taking steps to address an issue that affects future generations. So the next time the

cascading canopy of an ancient elm catches your eye, take a moment to think about all that it has been through and postulate on the stories it must hold within its growth rings. Note the outer branches bowing towards the earth— as if in thanks to those who fought so hard, as if in entreaty for the well-being of their arboreal brethren who face contemporary threats.



Elm locations on Mount Desert Island (not a comprehensive survey). Note the clusters in Somesville and Southwest Harbor. *Produced with help from Gordon Longworth*

Notes

¹ Thomas J. Campanella, *Republic of Shade: New England and the American Elm* (New Haven, CT: Yale University Press, 2003), 85.

² Interview with Alan deCheubell, Bar Harbor woodworker and cabinet maker, October 23, 2014.

³ Charles Fergus, *Trees of New England: A Natural History* (<https://books.google.com/books?id=tJfhE3IothQC&printsec=frontcover&dq=trees+of+new+england:+a+natural+history&hl=en&sa=X&ei=xJqRVKTmO9LhsASX4YCYAg&ved=0CCgQGAEwAA#v=onepage&q=trees%20of%20new%20england%3A%20a%20natural%20history&f=false>; Google Books, 2005), 110.

⁴ Campanella, *Republic of Shade*, 19.

⁵ *Ibid.*, 70.

⁶ Mrs. Seth Thornton, *Traditions and Records of Southwest Harbor and Somesville* (Bar Harbor, ME: Acadia Publishing Company, 1930), 118.

⁷ Eric Rutkow, *American Canopy: Trees, Forests, and the Making of a Nation* (New York: Scribner, 2012), 218.

⁸ The most common, and most famous, elm species found in New England is the American elm, *Ulmus americana*. However, it sometimes can be confused with Slippery Elm, *Ulmus rubra*, though this elm is increasingly less common. The American elm is generally tall and vase-shaped with drooping outer branches and often a few smaller branches emerging from the trunk. It has oval-shaped leaves that taper to a point at the tip and an asymmetric base in which one half is a bit more bulbous than the other. The leaves have sharply toothed edges. Slippery elm is similar in most aspects, but is generally regarded as less graceful, and the leaves have branching lateral veins. See Maine Department of Agriculture, Conservation and Forestry and Maine Forest Service, "Forest Trees in Maine, 2008," Forest Service Documents. Paper 4. http://www.maine.gov/dacf/mfs/publications/handbooks_guides/forest_trees/pdf/As_hes.pdf, 136.

⁹ Thornton, *Traditions and Records*, 120.

¹⁰ David F. Karnosky, "Dutch Elm Disease: A Review of the History, Environmental Implications, Control, and Research Needs," *Environmental Conservation* 6 (1979): 311-12.

¹¹ John Dreier, "Guide to Care of American Elm: Expanded notes of September 30, 1980 lecture . . . by Dr. Gerald N. Lanier." Tree Warden Files, 1980-1989 Elm Tree Program, Town of Southwest Harbor. Courtesy of Susan Dreier.

¹² Sukey Wagner, "Elm Trees: Gone Today, Here Tomorrow," *The Colebrook Land Conservancy Newsletter* 20, no. 4 (Spring 2010), 2.

¹³ Southwest Harbor Conservation Commission, "Review and Projection of Elm Tree Program September 23, 1981." Tree Warden Files, 1980-1989 Elm Tree Program, Town of Southwest Harbor. Courtesy of Susan Dreier.

¹⁴ John Dreier, "Information for the Elm Tree Spotters," June 15, 1981. Tree Warden Files, 1980-1989 Elm Tree Program, Town of Southwest Harbor. Courtesy of Susan Dreier.

¹⁵ Campanella, *Republic of Shade*, 166.

¹⁶ Interview with Dean Booher, homeowner and dentist, Bar Harbor, October 27, 2014.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ *Ibid.*

²⁰ Interview with Butchie Lambert, homeowner and long-time resident, Bar Harbor, November 8, 2014.

²¹ *Ibid.*

²² *Ibid.*