

Towers of Strength

Today we present the second installment of our 13-month-long series, "Long Island: Our Natural World." In this issue and subsequent special monthly sections in Sunday Newsday, we hope to reveal the often hidden world of our island in all its dazzling variety and show how it affects our own lives.

Our opening section was published on March 16. Since then we've started a weekly page titled **This Week in Our Natural World** to keep you up to date on our environment.

And if you missed our first installment, you can catch up by logging on to **www.linature.com**, which is alive with audio and video presentations. The Web site also offers a live view of the round-the-clock comings and goings in a Long Island osprey nest.

In today's section, we take to the woods as well as the parks and landscapes of Long Island to tell the story of our trees — where they are, what they are, how they live and what they mean to us.

— The Editors

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IN PRINT: In addition to the monthly special sections, the **This Week in Our Natural World** page appears each Sunday with events, nature profiles and ideas for outings. Look for it at the back of the news section.

ON THE INTERNET: Newsday.com presents www.linature.com, a new Web site devoted to Long Island's natural world. It offers audio and video presentations, and a database of local species. Find it at www.Newsday.com or at www.linature.com.

ON TV AND RADIO: Look for previews of upcoming monthly sections on Saturdays on WPIX / 11's "News at Ten." Tune in to WKJY / 98.3 FM and WBZO / 103.1 FM on weekends for radio reports on "Our Natural World."

ON THE COVER:

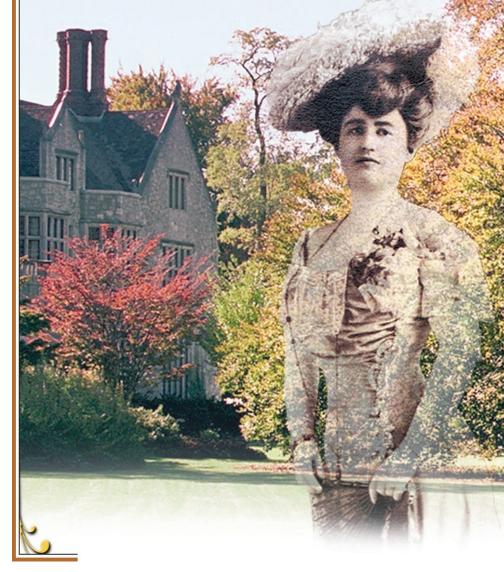
With their leaves beginning to change last October, three yellow poplar trees soar skyward at Avalon Park in Stony Brook. At left is a poplar blossom photographed last June at Shu Swamp in Mill Neck. Both photos are by Newsday's Bill Davis. Cover design by Newsday's Ned Levine.







giant tree – one of two moved from Massachusetts to Long Island in 1915 – helps tell the story of Long Island's love affair with trees



By Irene Virag

e sees the great copper beech in all its seasons, in all it moods, in all its majesty and he thinks of himself as its protector. He sees it in the lush heat of summer when its leaves are so purple they're almost black, and in the cold light of winter when its silver-gray limbs are touched by snow. He admires the complexity of its structure, the heft and power of its presence and the regal sweep of its reaching branches. He treasures its beauty.

"In the warming days of mid-April there's a slight tinge of copper when the buds swell," he says. "And then the leaves unfurl and the tree is transformed. The leaves are glossy and when the sun hits them in a certain way, the whole tree shimmers."

Vinnie Simeone is not the first person to love the tree that stands on the rolling lawn of Planting Fields Arboretum in Oyster Bay. The tree officially known as "The Fairhaven Beech" the tree that was the subject of a great odyssey.

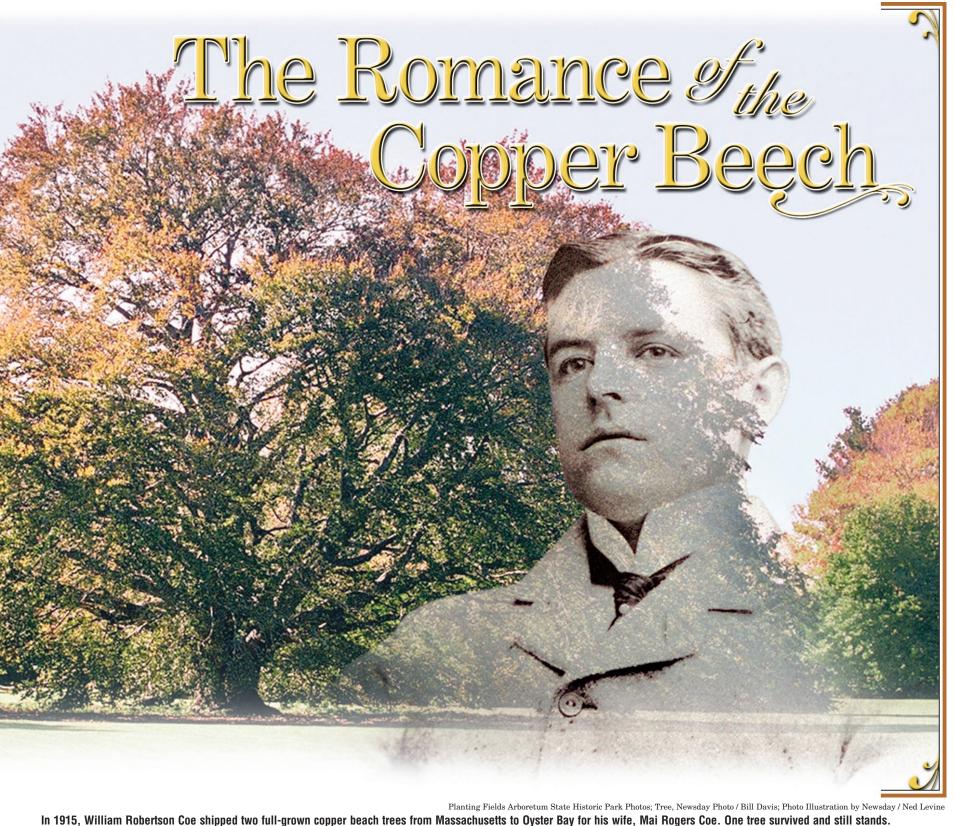
This is its story. The bittersweet tale of the tree that holds court outside a stone mansion begins in a gilded era of wealth and privilege and continues into today's more egalitarian times. It is the story of a tree and more than that. It is, perhaps, a metaphor for all our trees and the way they branch through our hearts and our lives and our landscapes.

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The way they live — and the way they so m

* * *

The story ran in the Fairhaven (Mass.) Star on March 20, 1915:

die.

The job of moving the largest trees the longest distance of which there is any record has just been completed. The two giant copper beeches that formerly stood within the grounds of the H.H. Rogers estate are now rearing their lofty branches on the estate of William R. Coe at Oyster Bay. The job cost \$4,000, an expenditure for mere sentiment's sake, for Mrs. Coe, a daughter of the late H.H. Rogers, used to play under the trees as a child. The trees traveled a distance of some 300 miles by water and a few miles by land to reach their destination at Oyster Bay, known to fame because of Theodore Roosevelt and otherwise distinguished because it is the home of so many millionaires that everyday the Long Island Rail Road operates what is locally known as the "Millionaires' Train" between Oyster Bay and New York.

There is no written record of how deeply Mai Rogers Coe felt about the copper beeches in the fading winter of 1915 — no diary entries, no correspondence, no inscribed memories of dreams dreamed or books read beneath the canopy of purple leaves.

But like motes of sunlight falling on the spreading branches, there are hints of the way it was in the life of a woman born to wealth and high society who in the prime of her adulthood felt she was old enough and rich enough to do what she wanted whether the object of her caring involved sapphires or shade trees.

Nor is there a chronicled epiphany on the part of her husband, William Robertson Coe, a self-made insurance magnate, a widower who married a Standard Oil heiress he met on a trans-Atlantic crossing. And who several years later bought a 325-acre estate on the North Shore of Long Island for their family.

He was an English immigrant of working-class origins. If he found love and money in America, he also cultivated a lifestyle reminiscent of the gentry of his homeland. He was a sportsman and plant collector and his interest in horticulture was evident throughout the Oyster Bay estate called Planting Fields. He, too, cared about the copper beeches.

n Feb. 3, 1915, he wrote a letter to his oldest son, Robert, at boarding school in New Hampshire. He scolded the boy for spending \$15.27 on an autograph of Ulysses S. Grant and asked if he was wearing his winter underclothing. "It is snowing heavily here," he wrote. "The big trees are due to arrive at Oyster Bay today or tomorrow. I suppose they will have a hard time getting them up to the place with the heavy snow on the roads."

They had a very hard time. The trees had been dug up from the shaded grounds of the summer estate of Mai's father, Henry Huttleston Rogers, a titan of Standard Oil. The tycoon who befriended Mark Twain and financed Helen Keller's education and underwrote Booker T. Washington's schools and whose enemies called him "Hell Hound" died in 1909 and five years later his only son, Henry, was selling the family's 85-room summer home in Fairhaven, Mass. The house was being dismantled and the property subdivided. A road was slated to go right

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Copper Beech

TREE from N2

through the copper beeches. It is conceivable that Mai thought it would go right through her father's heart — and perhaps her own.

The 50-foot-tall trees were uprooted in December 1914 and their massive root balls encased in huge wooden crates. They were already more than a half century old and weighed 28 tons each, and they waited for a month on the fogbound wharf before a lighter was ready. On Feb. 5, landscape architect A.R. Sargent, who supervised the move, wrote Coe: "One tree is actually on the boat and the other is ready to be put on high tide tomorrow morning. I know you will be glad when they arrive at their final resting place."

When the skies cleared and the seas calmed, the crew refused to make the trip for fear that the heavy trees with their 40-foot spreads would capsize the barge. In the end, towing tugs were hitched alongside. It took $2^{1/2}$ days before the living cargo arrived in Oyster Bay.

Even then, as their millionaire owner fumed over the cost and delay, the adventure was far from over. For four days, the uprooted trees - already buffeted by wind and salt seas — stayed aboard the lighter while a half-dozen lawyers hired by Coe negotiated with utility companies to take down all the wires along the 2¹/₂-mile route to Planting Fields. Roads had to be widened to accommodate the trees and Coe had to pay for replacing the wires. As the Fairhaven Star reported, "Only Mr. Coe knows how much he had to pay various abutters on the streets who objected to having the trees pass at the expense of their own trees. The pocketbook of Mr. Coe was the open sesame that overcame all objections.' The journey through town took 12 working days, and according to one story, a team of 72 horses helped transport the two copper beeches.

The trip took its toll on both trees. It was March before they were planted. Only one survived.

W ind sighs in the copper beech on a chill November morning 87 years later. Two men stand under the sweeping umbrella of the tree whose origin is wreathed in mystery but that is believed to be more than 150 years old. One of them is the man who thinks of himself as its protector, who admires it in all its seasons and all its beauty. His name is Vinnie Simeone and he is the acting director of Planting Fields Arboretum and State Historic Park.

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He first saw the copper beech when he visited the arboretum in the fall of 1986 as a horticulture student at Farmingdale State University. "I was instantly enamored. The first thing that came to my mind was that this is a noble tree." Six years later, the typographer's son from Islip came to work as an intern at the arboretum and the copper beech took root in his everyday world. The other man is Sal Pezzino, a

The other man is Sai Pezzino, a 43-year-old South Huntington arborist who has been caring for the great tree during the past seven years. He looks up at the thick branches that he sometimes has to climb. "This tree deserves to be here," he says. "Trees are the coolest things on Earth." Both men are self-described tree-huggers and they are worried about the arboreal giant that is now more than 60 feet tall and spreads close to a quarter acre.

The Fairhaven Beech is only the 17th largest of its kind, Fagus sylvatica Atropunicea on Long Island. And it's not the only beech tree at Planting Fields. William Robertson Coe planted a grove of copper and green-leafed beeches on his property. Indigenous to Europe, it is a cultivated tree in this country. It is no wild giant of the woods — no white oak or red maple or black tupelo. It is no native of Long Island's natural world like the towering tulip poplar or the fragrant-leafed sweetgum or the smooth-barked bitternut hickory or even the imposing American beech. And it is certainly not the oldest tree on our Island. A dying black oak on Lloyd Neck was here before Columbus and a sycamore on a North Shore estate dates back to the 1600s. Stands of native Atlantic white cedar dot the East End, and a virgin forest of white oaks speaks to yesterday on far-flung Gardiners Island.

But Vinnie Simeone is a spiritual descendant of Mai and William Coe. The 35-year-old horticulturist, who lives on the arboretum grounds, sees poetry in virtually all trees. To him, the great beech "is the epitome of what a tree should look like. In terms of aesthetics, it's No. 1 on my list."

On that cold November day, the two woody plant experts are grim. A few months before, Simeone had lunch with a writer. "I have some bad news," he said. "The Fairhaven beech is dying."

He shook his head. European beeches can live between 300 and 400 years, he said. But not the Fairhaven beech. "I can't tell you how long it has. It could live another 10 years, it might be gone in a year, but it's dying." It was as if he were talking about a dear friend.

The writer understood. She first saw the tree in summer and she was struck by what Simeone describes as "its presence in the landscape." It was easy to imagine that it was a gloriously robed monarch surveying its realm from a green velvet carpet. She strolled be-

"The Fairhaven Beech" above, at Planting Fields Arboretum. At upper left, Mai and William Robertson Coe with their children, from left, Robert D., Henry, Natalie and William. Below the family, the two 50-foot copper beech trees are loaded onto a barge at Fairhaven, Mass., for their $2^{1}/_{2}$ -day journey to Oyster Bay in 1915.

neath the tree and in the cool and quiet shelter of its branches she felt as if she were in a different dimension, in a place where the sky was made of purple leaves and dreams became life. It seemed to her to be a tree somebody had wished into being.

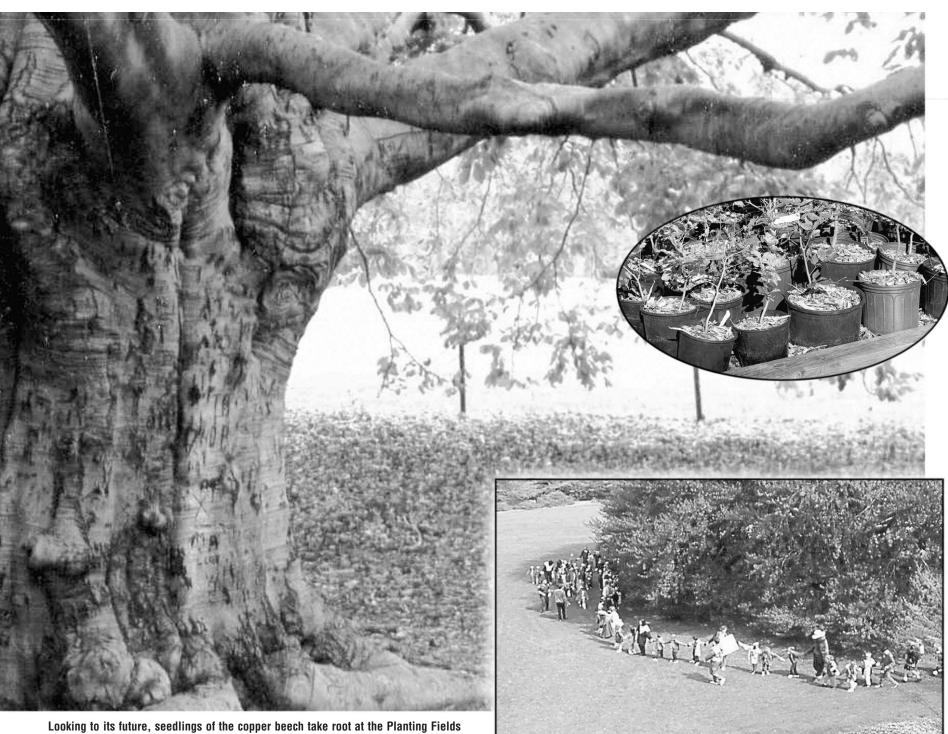
Then she heard its story and wondered what it must have been like when Mai and William Coe opened the red brocade draperies in their oak-paneled den and finally saw the living tree in residence on the great green lawn. Now she wondered if they ever thought of its mortality. Or if they were like her friend, Vinnie. "I used to think it was indestructible," he said, "that it would always be here."

ike people, trees live and die. Stories begin and end and start again. Sometimes even love dies but its memory survives.

H.H. Rogers grew up in the mid-1800s in Fairhaven, a small town near the old whaling port of New Bedford, and when he amassed great wealth, he funded much of what exists

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Planting Fields Arboretum State Historic Park Photos; Saplings, Newsday Photo / Bill Davis

Looking to its future, seedlings of the copper beech take root at the Planting Fields Arboretum nursery, above right. Below the seedlings, schoolchildren circle and sing "Happy Birthday" to the copper beech in 1995 to celebrate the tree's 80th year at the arboretum in Oyster Bay.

there today — the Unitarian church, the town hall, a school and the Millicent Library, named for a daughter who died as a teenager. He lived on Manhattan's East Side but each year the family escaped to a summer home in Fairhaven. When the two-story house with picturesque views of the waterfront burned down in 1894, Rogers built an 85-room mansion in its place.

One story is that he had the copper beeches brought there from the center of town when Mai was already 20. It seems more likely that they always grew on the property — that he knew them from his own boyhood and his youngest daughter played beneath them as a little girl.

When she met William Robertson

MORE ON THE COPPER BEECH

Learn more about the history and the care of the copper beech at Planting Fields Arboretum by watching a video at www.linature.com. Coe, Mai was 25. Both had been married before. His first wife had died of brain fever; her marriage to a man Hell Hound Rogers disapproved of had been annulled with her father's help.

Coe was dapper, self-assured, stern in manner — a horseman, fly-fisherman and collector of rare books who would become a friend of Buffalo Bill Cody in later life and eventually buy the Wild West showman's Wyoming ranch.

Mai was her father's favorite, a woman of style who fancied elaborate hats, spoke fluent French, played the piano and traveled abroad. She was an art patron and commissioned murals by society painter Robert Chanler — palm trees and ornate designs in her bedroom but a western vista of buffaloes in the breakfast room that her husband must have had something to do with.

A sense of mystery clings to her. "Mai is very elusive," says Lorraine Gilligan, director of Planting Fields Foundation. "She left no correspondence. She was a wild child. She eloped with her first husband, and afterward her father sent her to Switzerland. Later in life, she'd say that she was old enough and rich enough to do what she wanted."

The Coes had four children when they bought Planting Fields in 1913. The original house burned down in 1918 and three years after that, they built Coe Hall, the Tudor revival mansion with its clustered chimneys and stone gargoyles that still look out at rolling lawns and specimen trees and greenhouses. At the dying copper beech.

In her 40s, Mai fell sick. "In later years, she spent much of her time up in her room," says Gilligan, adding that letters between father and children are sprinkled with frequent mention of Mai's health. "Mother is ill. Mother is better. Mother injured her knee. In 1924, she had jaundice — was it cancer, heart failure? It's never spelled out. All we know is that she was in poor health for years. Pictures show that her hair was white, her skin was ghostly."

Mai died in December 1924 at 49.

It was the day after Christmas. By this time, Coe was seeing Caroline Graham Slaughter, who two years later would become his third wife. William and Caroline Coe are buried together in Locust Valley. Mai rests alone in a mausoleum in St. John's Cemetery in Cold Spring Harbor. Michael Coe is a grandson of Will-

Michael Coe is a grandson of William and Mai. He is a professor emeritus of anthropology at Yale University and lives in New Haven. He never knew his grandmother but thinks of her and his grandfather and the great copper beech that he, too, played beneath and suspects he climbed as a child. The story of the tree's odyssey is part of his family history. The copper beech is truly his family tree.

"My grandmother must have loved those trees. She knew what she wanted and I suspect all this was her doing. Of course, my grandfather N5

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Copper Beech

TREE from N4

loved trees and he would have wanted those big majestic specimens. He could guard his pennies but not on this one."

The great copper beech had been standing at Planting Fields for four decades when William Robertson Coe died in 1955 and deeded the property to the state. He envisioned that his 409 acres would become a horticultural campus. For several years, the state university system conducted college programs on the grounds, but by 1971, Planting Fields had become a public arboretum.

The copper beech and other specimen trees became wards of the state instead of a rich man's prized possessions. In time, the Fairhaven beech would become the signature tree of a place that venerates trees. Visitors would hear its story, school children would hold hands around it and sing "Happy Birthday" to mark its 80th year on the grounds.

During the campus years, and even afterward, the tree with the romantic history may have been a hangout, even a trysting place. The soil beneath it was compacted by foot traffic and students carved initials into its trunk, some of them climbing its strong gnarled limbs to record what seemed in the flush of youth to be undying love. "DR & SH" in a heart with an arrow through it. "JB & SZ."

But that was the least of the problems facing the trees of Planting Fields. "Many of these once stately trees have seen a steady decline," Simeone summed up in a newsletter last spring. "They've endured years of drought, deferred maintenance and insect infestations."

It was hardest on the great beech. Not only was it a victim of benign neglect, but its defenses had been weakened years before by the journey from Fairhaven. Like many humans, the tree masked its trauma. It was beautiful but stressed. "Back then," Simeone says, "people just didn't know the toll that kind of move would take."

In the summer of 1996, Simeone saw signs of decline. That October, Pezzino came to the arboretum with a group of visiting arborists. He noticed that the tree's leafy top was thinning — a sign that the copper beech had been living off stored energy and was having an increasingly difficult time sustaining itself. Then he scratched the ground and found roots just an inch or two below the surface.

Pezzino was like a doctor who had found an interesting case. Actually, he grew up in a neighborhood in Wheatley Heights where there were few trees. He didn't turn into a tree-lover until he came to Planting Fields to study woody plants as a student at Farmingdale. "From the beginning," he says, "this tree was a challenge."

Within days, the tree doctor returned to the arboretum to examine his patient. He discovered the roots didn't even reach the drip line — an imaginary line on the soil around a tree that mirrors the circumference of the branches above. He'd expected them to extend at least another 15 feet. "About 90 percent of the root system was destroyed when it was transplanted. I'm surprised it's still alive."

The roots that anchor a tree in the earth also gather water to nourish it. Trees may not get around but they're very alive and there's a lot happening. Microscopic root hairs absorb water and minerals from the soil to create sap. Every day, a 40-foot-tall deciduous tree takes in 50 gallons of these dissolved nutrients. That sap travels through the tree along a straw-like system and can be sucked up at a rate of about three feet per hour by a process called transpiration. People perspire, trees transpire. As sap flows into the veins of the leaves, it causes them to sweat, cooling the tree. And as moisture is secreted from the tracery of veins, more water rushes in.

Leaves contain a green chemical called chlorophyll that reacts with carbon dioxide in the air, water in their own veins and energy absorbed from the sun to produce food for the tree. Oxygen, a byproduct of photosynthesis, escapes into the air through tiny holes in the leaves. This is the essential interconnectedness of trees and people. Humans inhale oxygen and exhale



Horticulturist Vinnie Simeone with the copper beech, which he calls "the epitome of what a tree should look like."

carbon dioxide; trees breathe in carbon dioxide and breathe out oxygen. In fact, one acre of trees generates enough oxygen daily to support 18 people. We need each other.

In the meantime, the food made by the leaves is transported through tiny tunnels in the soft inner part of the bark called phloem. There it nourishes the cambium — a thin layer of cells protected by the bark that becomes important in understanding the hard times of the Fairhaven beech. The cambium generates cells that become either xylem or phloem — the pipelines that carry food up and down the tree. Each year, the living cambium pushes slightly outward to strengthen and thicken the trunk and branches. New cells grow and old ones die, creating the layers known as tree rings.

All this is taking place inside the copper beech, even as its health fails. Simeone and Pezzino helped it along with a get-well regimen — adding nitrogen to the depleted soil and amending it with mulch to nourish the roots. They gave the tree regular vitamin boosts of organic and chemical fertilizers, and made sure it was well watered, especially during droughts. They pruned away dead wood and put up a wire fence to keep passersby from walking beneath the tree. But just as the copper beech was regaining its inner strength — it has put out about 9 inches of new growth annually for the past couple of years, up from 2 inches — it was hit with a one-two punch.

Insects and a fungus-like organism attacked. Experts who've studied the tree disagree over which came first, but the debate is irrelevant. Neither the pests nor the pathogen can be vanquished.

"We were just getting it in shape," Pezzino says, "but now it's battling something we have no control over." He points to hundreds of perfectly round pin-holes in the bark. "That's the work of the borers," he says. "We don't know why but they're attracted to dying trees."

According to entomologist Dan Gilrein of the Cornell Cooperative Extension of Suffolk County, the culprits are two species of bark or ambrosia beetles — *Xyleborus dispar* or pear blight beetle, and *Xylesandrus germanus* or black-stem borer. The females of both species bore into the bark of declining trees and settle in the living cambium. They create tunnels called galleries, where they deposit clusters of soft oblong eggs and a white ambrosial fungus for the larvae to feed on when they hatch. The larvae create their own network

Keeping It Alive

Seedlings of the famous copper beech at Planting Fields Arboretum will be awarded to schools, parks and other community groups that win an essay contest. See Page N22 for details. of tunnels, further weakening the tree, and hibernate in them until they bore back out as black beetles no more than an eighth of an inch long.

The fungus-like organism isn't pretty either. Called *Phytophtora inflata*, it belongs to a deadly family whose members caused the Irish potato famine and several years ago introduced sudden oak death to California. Phytophtora reveals itself as a black stain that looks like a dry ink blot on the tree. Chisel past the ³/₄-inch-deep bark of the copper beech as Pezzino has and the affected wood is bright pink. These symptoms, along with the tree's thinning crown and dying branches, indicate that phytophtora is decaying cells where live bark and live wood meet. The destruction prevents the transport of water and nutrients up and down the trunk.

"It's remarkable how long a tree can hang on," says George Hudler, professor of plant pathology at Cornell University in Ithaca, who was been investigating phytophtora on beech trees throughout the state since 1999. "By the time you notice the symptoms, the damage is done."

The organism used to attack American elms, he says, but when Dutch elm disease wiped them out, it found a new host — eventually showing up on mature European beeches.

"I'd say the big beech at Planting Fields has five years at the outside," Hudler says.

"Its days are numbered," says Simeone, "but it doesn't want to give up."

The story has an epilogue. When Simeone sensed that the copper beech was in trouble, he collected seeds from the tree that had touched him at first sight and nurtured them. The copper beech cooperated. When trees are dying, they put out extra seeds as if to lay claim to the future. And one day when the old tree is taken down, its stump and decomposing roots will nurture its successor.

Now, about 100 seedlings, none more than a few feet high, are being tended in the arboretum's nursery. Simeone monitors the health of the young trees, the color of the leaves. He thinks about their potential for presence in the landscape. One of them will inherit the Fairhaven beech's place on the lawn outside the front door of Coe Hall and in the history of a country estate called Planting Fields. And hopefully in the hearts of people who will cherish it.

When its time comes, the proud tree with the purple leaves and the romantic past should have few regrets. It has been admired by generations of passersby. It escaped bulldozers and found a new life after a remarkable journey. And most of all, it has been loved. re.com

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Michael Čoe — whose grandparents were responsible for that journey — is the president of the board of directors of the Planting Fields Foundation. He offers an epitaph for the Fairhaven beech.

"It's had a wonderful life."