

Environment

'Hope for future'

Clones 'help' elm tree Herbie live on, for now

YARMOUTH, Maine, Jan 27, (AP): A massive elm tree nicknamed Herbie is long gone, but it is going to live on, thanks to cloned trees that are being made available to the public.

At 110 feet and more than 200 years, Herbie was the tallest and oldest elm in New England and survived 14 bouts of Dutch elm disease because of the devotion of his centenarian caretaker, Frank Knight, the late tree warden of Yarmouth, Maine.

The duo became famous after Knight spent half of his life caring for the tree, which he referred to as "an old friend". Knight realized he couldn't save the town's elms as they succumbed by the hundreds to Dutch elm disease. So he focused his efforts on one of them: Herbie.

Over five decades, Knight oversaw selective pruning of Herbie's diseased limbs, and applications of insecticides and fungicides. The pair became well known, both in Yarmouth and beyond, thanks to international news coverage.

The tree was cut down Jan 19, 2010, as the 101-year-old Knight looked on. Knight died two years later.

But before Herbie was chopped down, the Elm Research Institute in New Hampshire worked with Knight to collect some cuttings from Herbie to preserve the tree's legacy with clones.

The hope is that Herbie's descendants will have some resistance to Dutch elm disease. But that remains to be seen.



Livingston

Resistant

"Like many cancer patients, he was a survivor. We wanted to make every effort to reproduce Herbie hoping his clones would prove equally resistant to Dutch elm disease," said John Hansel, the 95-year-old founder of the Elm Research Institute based in Keene, New Hampshire.

The years-long effort has created 1,500 mini Herbies. The goal is to create many more - hundreds of thousands more, he said.

"Herbie is our hope for the future," Hansel said. Hansel also devoted himself to preserving elm trees after they were wiped out by Dutch elm disease.

Elm trees once lined streets in towns from coast to coast. But all that changed with startling speed because of the Dutch elm fungus, spread by bark beetles, beginning in Ohio in the 1930s. Once afflicted, elms faced a swift and an all-but-certain death.

Working with the University of Wisconsin, Hansel helped to create and distribute about 300,000 "Liberty" elms that were based on trees from the Midwest. Those trees were named for Boston's "Liberty Tree", a giant elm.

Hansel shifted his effort to Herbie in hopes of creating a new standard bearer that's better suited to the Northeast.

It's been a painstaking process. Researchers began clipping leaves from Herbie years before his demise. Researchers planted about 5,000 of clippings in pots before finally getting a single tree that took root.

From that, there are now 1,500 trees. That represents a critical mass to begin creating them in even larger numbers.

"I love the idea," Santerre said. "People are interested in big trees in general, but Herbie captivated people's attention. It was a beautiful tree, and the idea that someone could re-create that in their yard or in their community is a very appealing thing to do," she said.

The National Arboretum also took an interest in Herbie and took some clippings, as well. Some of those seedlings were planted in Maine, but they didn't survive, Santerre said.

William Livingston, a professor at the University of Maine, said there's a great legacy behind the Herbie name. But it's also exciting to have trees that could have some resistance to Dutch elm disease, he said.

"There's a chance that those trees have some resistance and will be in a position to survive," he said. The nonprofit Elm Research Institute is selling the trees.

The new Herbies are available now at \$19.95 for a 1-foot tall tree, or 6-foot trees will be available for \$114 for those who are willing to wait three years, said Yvonne Spalthoff, from the Elm Research Institute. The trees come with a 10-year warranty.



In this Jan 21 handout photo provided by the Office of Civil Defense, Taal volcano emits small amounts of ash in Batangas province, southern Philippines. The government will no longer allow people to live on the crater-studded island that's home to the volcano. (AP)

Climate

'Warming initiative will increase gas prices'

Govs slow to embrace climate pact

CONCORD, NH, Jan 27, (AP): Supporters of a regional pact that would tackle transportation emissions are struggling to win over several New England governors concerned that the climate change initiative will increase gas prices.

After the Transportation and Climate Initiative was announced last month, New Hampshire's Republican Gov Chris Sununu said the state won't join, citing fears of a gas price hike. Vermont's Republican Gov Phil Scott said he couldn't support the initiative if it amounts to a tax on carbon. A spokesman for Maine's Democratic Gov Janet Mills said the state has yet to sign a draft memorandum of understanding for the TCI, citing the unique challenges of addressing transportation in a rural state.

The initiative is aimed at a dozen Northeast and mid-Atlantic states and would take effect in 2022. It would address pollution from transportation - which represents 40% of greenhouse gas emissions in the region, the largest source of emissions. The area has tens of millions of registered vehicles.

New Jersey has not committed to implementing the initiative while a spokesman for Democratic Gov Ned Lamont said his administration was still examining it. Virginia is also reviewing the draft memorandum.

"I am happy to see that other Governors are following my lead in rightfully sounding the alarm on this new gas tax," Sununu said in a statement. "New Hampshire is proof that the best environmental stewardship can be achieved without massive tax schemes."

Many of the states are already part of

the Regional Greenhouse Gas Initiative, which covers 10 states in the Northeast and mid-Atlantic and targets emissions from the power sector.

Under the agreement, wholesale fuel companies would be required to purchase pollution allowances at auction. The sale of those allowances could generate billions for states to invest in carbon-reducing transportation options - like electric buses, electric car charging stations, bike lanes and sidewalks.

Reductions

The initiative could lead to emissions reductions in the region by as much as 25% by 2032. But the opposition appears to be around a potential gas price hike. If fuel companies pass the cost of the allowances onto consumers, the price of gas in the region could climb by five cents to 17 cents per gallon in 2022, when the pact would take effect.

Among the pact's opponents is Americans for Prosperity, the advocacy group founded by the billionaire Koch brothers. The group's New Hampshire chapter came out against the TCI the same day as Sununu, calling the initiative a top-down government mandate that would "punish hardworking Granite Staters."

Supporters of the TCI said the fears over gas prices are overblown and ignore the initiative's potential benefits.

"Personally I think this is political grandstanding," said Timmons Roberts, a professor of environmental studies at Brown University. "This is the incremental change, it would be over 12 years. This is just using a well-meaning effort as a whipping boy."

But Roberts and others acknowledge

that the pact needs to address the concerns of low-income and working families who must drive long distances for work or school.

"Some people positively opt into this lifestyle, but many don't. They live where they live because of family, lack of economic mobility, or other factors," said Jason Veysey, the deputy director for the Stockholm Environment Institute's energy modeling program.

"People who have to drive may be negatively affected by an increase in fuel prices," he said. "However, it's worth underlining that TCI is supposed to be a cap-and-dividend program, in which higher costs for the most vulnerable are mitigated by the dividends."

The pact has been praised by many of the region's business, health and environmental leaders, including Massachusetts Republican Gov Charlie Baker. He touted the pact in his State of the Commonwealth address last week as part of his plan for the state to reach net-zero greenhouse gas emissions by 2050.

Other governors also appear supportive.

J.J. Abbott, press secretary for Pennsylvania Democratic Gov Tom Wolf, said the state was "committed to being a part of the TCI conversations," but would make no decision on joining "until the program is fully designed."

Josh Block, a spokesman for Rhode Island's Democratic Gov Gina Raimondo, said she is "fully committed to the goals of the Transportation Climate Initiative," but that the specific statutory and regulatory changes needed to meet those goals "will be the source of public discussion and input over the coming year."



In this Dec 15, 2009 file photo, a pedestrian walks past a large elm tree known as 'Herbie' in Yarmouth, Maine. (AP)

Discovery

URI gets grant: Two scientists at the University of Rhode Island have been awarded a federal grant that aims to increase diversity in the biomedical sciences, according to the school.

URI said Assistant Professor Bryan Dewsbury and Associate Professor Niall Howlett have been awarded a five-year, \$1.25 million grant from the National Institutes of Health to provide research opportunities to minority students. They will provide four students annually with a \$10,000 scholarship and a \$13,000 stipend, plus additional money for research materials and conferences.

The students will conduct research in a biomedical, behavioral or health sciences research laboratory.

"The research world, especially biomedical, is not very diverse, and that's a problem for basic equity issues of access," Dewsbury said in a statement. "In addition, without sociological diversity, you lack a diversity of ideas. It's especially a problem because there are consequences from the kinds of questions scientists ask and don't ask."

It's the first training grant awarded by the National Institutes of Health to the university. Dewsbury and Howlett hope it will lead to additional grants to help further diversify undergraduate research. (AP)

Images lions spark concern: At an impoverished, forlorn zoo in Sudan's capital, the park's few remaining lions are starving in rusted cages - their ribs protruding, eyes glassy and skin flaccid, desperate

for food and water.

The unsettling images, shared on social media by a local animal rights advocate, drew impassioned responses from thousands around the world. But it wasn't enough to save two lionesses at the Khartoum zoo, said local activist Zuhair al-Sarag.

"This is actually a crime," he said, adding that the park once teemed with animals. "Someone should be held accountable."

With the staff at the destitute Al-Qurashi Park, as the zoo in Khartoum is known,



Howlett



Dewsbury

unable to feed and look after the animals, many have died off or were evacuated, leaving only three skeletal lions, including a lioness.

Locals concerned about the fate of the lions flocked to help recently, bringing food and medical items, despite the economic crisis gripping the country. Soaring food prices in Sudan triggered a mass protest movement last year that convulsed the large African country, ultimately ousting longtime autocrat Omar al-Bashir in April. (AP)

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