Kensington's constant gardener keeps watch over American legacy

Ron Kuipers spends most days driving around Maryland in his pick-up truck with his two dogs.

Their mission? Save the American chestnut tree.

In the past five years, Kuipers has driven tens of thousands of miles, and spent hours mowing grass, pulling weeds and building fences to help spur the growth of the once-ubiquitous hardwood, which now is nearly extinct.

The U.S. Forestry Service estimates that, before the end of the 19th century, as many as one in four trees in the Appalachian Mountains were American chestnuts.

By the early 1950s, fewer than 1,000 remained uninfected by a fungal blight that threatened to wipe out the species.

Kuipers, 72, of Kensington, is a retired analyst for the CIA. He also is one of a handful of full-time volunteers with the Maryland chapter of the American Chestnut Foundation, which is dedicated to restoring the tree to prominence by breeding a strain resistant to the fungal blight.

Today, nearly every American chestnut — only a handful of mature ones exist in the wild — will at some point contract the fungus and die, he said.

Kuipers' official title is orchard manager and he oversees 15 orchards owned and maintained by the foundation in Maryland. There are five in Montgomery County and four in Frederick County, with most of the rest located in Central Maryland.

"Ron does a lot — clipping, weeding, fixing fences. You name it, he does it," said Gary Carver, president of the Maryland chapter of the American Chestnut Foundation.
of the group.

Kuipers said he does his job, like most of the volunteers, out of a sense of duty to American history and humanity.

"We did this — not us exactly, but this was because people brought the blight," he said.

Despite the disease, the trees are resilient and can grow several feet each year, which makes maintaining the roughly 4,000 American chestnuts planted by the foundation an act of constant vigilance, Kuipers said.

Beyond the threat of fungal infection, the trees also face danger from deer, rabbits, raccoons and other creatures that are attracted to the smell of the chestnuts and saplings, he said.

This year, the group is fighting an infestation of Asian ambrosia beetles, an insect native to China that burrows into trees to lay eggs, a process that creates more fungi that cause the trees to wilt. The beetle has affected hundreds of trees in the state.

With an annual budget of less than $5,000 — entirely reliant upon donations — the foundation can't afford full-time employees, so it shares resources with Virginia's chapter and relies almost entirely on volunteers, Carver said.

Every time a tree dies or needs to be cut back to remove an infestation, it sets back the foundation's main goal of creating an American chestnut resistant to the blight, Carver said.

"It's sad really, when you have to cut one of them down and start again," he said.

When a tree reaches maturity, Kuipers will give it one last test: He will give it the fungus to see how resistant the tree is to infection.

Four out of 100 trees will survive that process, Kuipers said. The nuts will be gathered and cross-bred in the hopes of finding a new generation of sustainable American chestnut trees.

The rest will need to be cut down and re-grown to start the process again.

The foundation and its members are making headway, growing in numbers and resources during the past five years, said Essie Burnworth, of Potomac, a volunteer and past-president of the foundation.

Last year, the foundation planted orchards in Carroll County, Black Hill Regional Park in northern Montgomery County and near Fort Detrick in Frederick County, she said.

There are more than 50 orchards in 10 states, all tended by chapters of the national group.

Because foundation members envision their goal to be accomplished decades from now, Burnworth and other volunteers are reaching out to high schools and telling students the story of the American chestnut.

Their hope, she said, is for a future generation to carry the torch and someday see their dreams realized.

"It's an ocean of things that need to be get done," she said. "It won't likely get there in our lifetime."

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Learn more
For more information about the Maryland Chapter of the American Chestnut Foundation, visit www.mdtacf.org.

The demise of the American chestnut tree
Cryphonectri parasitica or Endothia parasitica, most commonly referred to as "Chestnut blight," is a fungus believed to have been the downfall of the American chestnut tree.

Originally from southeast Asia, the fungus was discovered in New York at the turn of the 20th century and spread rapidly during the span of 50 years.

In 1912, Pennsylvania, South Carolina and West Virginia reported to have lost $82.5 million from a lack of healthy trees and chestnuts to harvest because of the blight, according to a 1996 report by New York University researchers.

By 1950, states that once had an estimated 4 billion mature trees - some of which were recorded to
stand taller than 100 feet and to have lived as long as 600 years - were finding few growing to maturity.

In 1983, The American Chestnut Foundation was founded with the goal of breeding an American chestnut with its Chinese counterpart, which are immune to the fungus.

The process, known as backcross breeding, cross-pollinates the trees to create a half-and-half American-Chinese tree which again is cross-pollinated with another American species. This is repeated with hopes of finding a mostly-American chestnut with the Chinese adaption against infection.

If a resistant species is found, the group will try to reintroduce it into the forests of the eastern U.S.

P> Source: The American Chestnut Foundation.