

## The American Chestnut Returns

By [Fred Thys](#)

WAYLAND, Mass. - July 17, 2008 - An American classic is poised for a comeback. This summer, across Massachusetts, dedicated rescuers are pollinating wild American chestnut trees.

They've been doing this for 25 years in the hopes of bringing back the chestnut, which was wiped out by a blight more than eighty years ago. This year, they think they're getting close to producing a tree that will resist the fungus. [WBUR's](#) Fred Thys reports.



Matt Sheldon pollinates an American Chestnut tree. (Photo: Fred Thys)

*Audio for this story will be available on [WBUR's](#) web site later today.*

### TEXT OF STORY:

**FRED THYS:** In his front yard by the Sudbury River, in Wayland, John Emery is banging a pill box on a ladder. He is doing his part to bring back a feature of the American landscape all but forgotten: the American chestnut tree. The pill box is full of pollen that he is trying to shake loose. Emery is a musician, but he has been fascinated by stories of the vanished chestnut tree since he was a boy. Now, as a volunteer for the American Chestnut Foundation, he is about to pollinate one by hand, and for that, he needs to find a female flower. It looks like a tiny green sea urchin with a white tuft at the end.

**JOHN EMERY:** Here is one. What you do in the standard procedure is to find a bur and then proceed to remove everything else on the tip of the twig. Most of this is these great big furry male catkins, which are about six or eight inches long and somewhat smelly, and then you have this exposed at the end.

**THYS:** Emery wants to prevent wild pollen from alighting on the female tips.

So the pollen is borne on the wind?

**EMERY:** The pollen is borne on the wind. So you put a kind of contraceptive over it. You put a paper bag over it. So you have got this contraceptive bag over it for about a week or ten days.

**THYS:** Emery explains that ten days later, you take the bag off, apply the pollen, and put the bags back on. Special pollination bags are treated with wax so that they last through

all those summer storms. It would be a lot easier if you could use the tree's male flowers to pollinate its female flowers, but Emery says that does not work.

EMERY: The tree produces pollen for the other trees, but it is self-sterile. The tree kind of recognizes its own pollen, and cannot pollinate itself, except under a few isolated cases, and then you get these weird, distorted trees that do not grow very well.

THYS: There was a time, Emery says, when a squirrel could jump from Maine to Georgia on the canopy of chestnuts. The trees grew to 120 feet high and four feet across. They lived for centuries, and when they were cut down, the rot-resistant but easy-to-cut wood was used for everything from telephone poles to guitars. That was before the blight arrived more than a century ago. It is a fungus that attacks the bark. Now, the trees grow to a certain height, usually twenty feet or so, but get attacked before they can reproduce.

EMERY: It is reproductively extinct, but there are millions of little shrubs.

THYS: The shrubs grow from the stumps of the old trees, but they cannot reproduce. At some point, without human intervention, all those stumps, would die, too.

EMERY: Even in places where there is not development and stuff, they give up after many, many tries.

THYS: But about twenty-five years ago, people started to work on creating a hybrid tree that looks like the American chestnut, but has the genes from a Chinese species that is resistant to the blight. Wherever there is a wild American tree flowering, volunteers use pollen from the hybrid to help it reproduce.

They will go to the most remote places to pollinate the trees. In the forest on the Prescott Peninsula, on the Quabbin Reservoir, retired forester Bruce Spencer's SUV is rumbling down the old road to the abandoned site of a town that disappeared more than eighty years ago to make way for Boston's drinking water supply.

BRUCE SPENCER: So a lot of the land that you see along this road were the fields that had been farmed. Some of them are still open land, but most of them were planted in pine and spruce.

THYS: Spencer is looking for one lone chestnut tree by the side of the road reaching for the sunshine on a crest overlooking the reservoir. It is a survivor of the blight that hit America's chestnut trees more or less at the same time that the town of Prescott disappeared to make way for the Quabbin.

SPENCER: There is the tree.

THYS: And in the middle of the road, there is Matt Sheldon, of Lewis Tree Service with his bucket truck. He says he is very good with a good bucket. He has been operating one eight hours a day, forty hours a week, for thirty years.

MATT SHELDON: And I am very interested in the American chestnut.

THYS: I can tell.

SHELDON: I have several of them on my property. I got one /55, 60 feet tall. Probably have thirty trees and I got 10 ? acres in Woodstock, Connecticut.

THYS: How far a drive is it?

SHELDON: From here? An hour-and-a-half.

THYS: He loves trees, he says, so this is a pleasure for him.

25 years ago, breeders crossed a Chinese tree, which is resistant to the blight, with an American one. Volunteers gave the blight to the offspring to see which ones resisted best. Those trees were bred with pure American trees, and the process was repeated until now, they have pollen from a tree that is highly resistant to the blight.

Charlotte Zampini, a plant population biologist from Framingham State College, pulls out a pill box from a cooler.

CHARLOTTE ZAMPINI: So here is our pollen.

SHELDON: Now you should shake it now and then?

ZAMPINI: Yeah.

THYS: Zampini shows Sheldon how to pollinate the tree.

ZAMPINI: Shake it. Pop the top open, and a lot of the pollen will stick to? sometimes it sticks to the top, so I tend to rub it on the top and then for extra security, I usually dip it in the pollen, too.

SHELDON: So that is it. I do not have to cover the whole thing. Just get some pollen on it.

THYS: Sheldon steps into the bucket and maneuvers himself up to the tree?s female flowers.

SHELDON: So this is just a native tree that grew here?

SPENCER: Yep.

SHELDON: It is doing good right now.

THYS: But soon, it will die. Wild chestnut trees seem to get the blight right about the time that they flower.

SHELDON: All right, you want to go up? All right, that is 73 feet.

THYS: We are above the tree now, and beyond the forest, we can see blue patches of the Quabbin.

So the tree, how tall do you think that is? Hm? about 55 feet, maybe?

SHELDON: Fifty. Maybe a little shorter. About 45 feet.

THYS: After a good hour's work, Sheldon's T-shirt is wet from the heat.

SHELDON: Past two days were terrible. I was just standing here and it was running off my face.

THYS: The hard work is about to pay off. Within two years, the American Chestnut Foundation and the National Forest Service hope to begin planting resistant trees in National Forests and in orchards across the East. Within a few more years, the Foundation hopes to be able to sell the trees to anyone who wants to plant them. For WBUR, I'm Fred Thys.