

Will The American Chestnut Survive?

By Dina McClellan

A CELEBRATED TREE

The American chestnut tree was one of the most celebrated forest trees in the northeastern United States. It once grew across millions of acres from Maine to Mississippi. At 110 feet tall, these trees dwarfed all others. The Appalachians were so thickly covered with them that when they flowered, the mountaintops turned white. In the fall, the earth was black with fallen chestnuts.

A MYSTERIOUS FUNGUS

Today, the presence of the American chestnut in the region has been reduced to almost nothing. The reason is a mysterious fungus. It was first discovered in 1904 at the Bronx Zoo in New York City. Within two years, all the chestnut trees in the zoo were dead or dying. In another fifty years, the fungus would kill four billion trees across the eastern United States.

This is a fungus that spreads easily. Puffs of spores (tiny, seed-like particles that can grow into a fungus) fly through the air and are transferred to the fur and feathers of animals. When these animals perch on the chestnut trees, the spores can settle in the cracks in the bark. The fungus grows around the tree and strangles it.

1. HOW DO THE KILLER SPORES GET INTO THE TREE TRUNK?

But all is not lost. The American chestnut has two things going for it: (1) the fungus can't kill the roots, and (2) the roots can grow into new trees. That's the good news. The bad news is that the fungus still lives in the region and can attack new chestnut growth.

2. WHY MIGHT THE AMERICAN CHESTNUT BECOME EXTINCT ONE DAY?

HUMANS TO THE RESCUE

In the 1930s, scientists thought the American chestnut tree could be saved. They discovered the Chinese chestnut, a relative of the American tree. The big difference was that the Chinese chestnut came from the same region as the fungus, so it had a kind of built-in protection. The Chinese chestnut could not get sick.

The Scientist cross-bred the two species, hoping the result would be young trees that looked American but didn't get sick. It didn't work, however, and this work ended in the 1970s.

3. WHY DID SCIENTISTS OF THE 1930s BELIEVE THAT THE CHINESE CHESTNUT COULD HELP SOLVE THE PROBLEM?

Then, in the 1980s a scientist named Dr. Charles Burnham teamed up with a Minnesota chestnut farmer to find a new way of breeding the two trees.

First, the Chinese chestnut was crossed with the American chestnut, resulting in young trees that were half Chinese and half American. Then, these young trees were crossed back with the American parent, over and over again. The results of this procedure is an American tree that doesn't get sick.

4. HOW WAS DR. BURNHAM'S PROCEDURE DIFFERENT THAN THE ONE USED IN THE 1930s?

THE AMERICAN CHESTNUT FOUNDATION

In 1983, an organization called the American Chestnut Foundation was set up to support the program started by Dr. Burnham. Its members are hopeful that once the trees have been bred they can be put back into the forest using a process called reforestation. Then it's up to nature to keep things going.

5. WHAT DO THE MEMBERS OF THE AMERICAN CHESTNUT FOUNDATION WANT TO DO WITH THE NEW TREES THEY HAVE BRED?

Hundreds of trees have been reforested in Virginia Tennessee, and they appear to be doing well. But more time is needed to know if the trees can survive in the long run.

Reforestation is a huge task that takes many years of hard work. Foundation members truly care about these proud and beautiful trees. They believe that someday the famous “spreading chestnut tree” will regain its rightful place in the American forest.

6. WHY IS THE SURVIVAL OF THE AMERICAN CHESTNUT STILL UNCERTAIN?

I. REREAD THE ARTICLE AND ANSWER THE FOLLOWING QUESTIONS.

1. WHAT HAPPENED TO THE AMERICAN CHESTNUT TREE IN THE EARLY 20th CENTURY?

2. HOW DOES THE FUNGUS KILL THE TREES?

3. WHAT MAKES THE CHINESE CHESTNUT SUCH A GOOD CHOICE FOR CROSS-BREEDING?

4. WHAT ARE THE GOALS OF THE AMERICAN CHESTNUT FOUNDATION?

II. WRITE A SHORT PARAGRAPH EXPLAINING WHAT IS THE STORY ABOUT.

Once you finish to answer your homework, email your document to:

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Video:

https://www.youtube.com/watch?v=Zq41bL_8qeM

