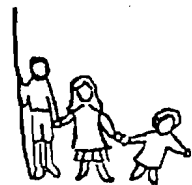


# The American Chestnut

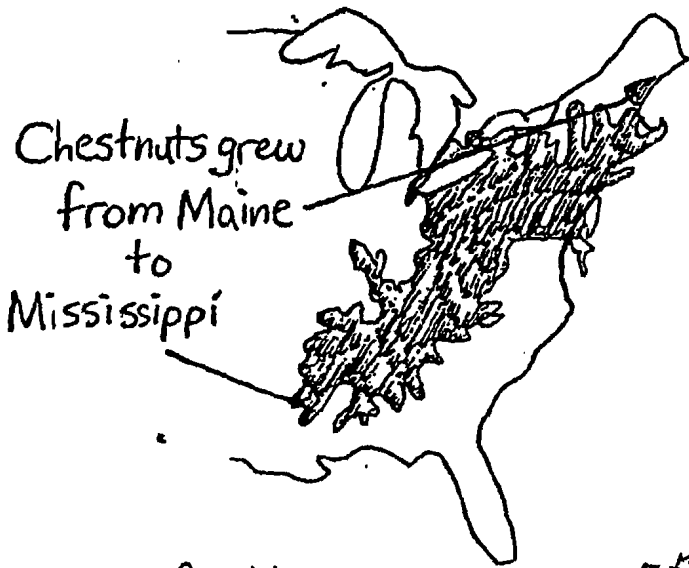


Bringing Back a  
King of the  
American Forest

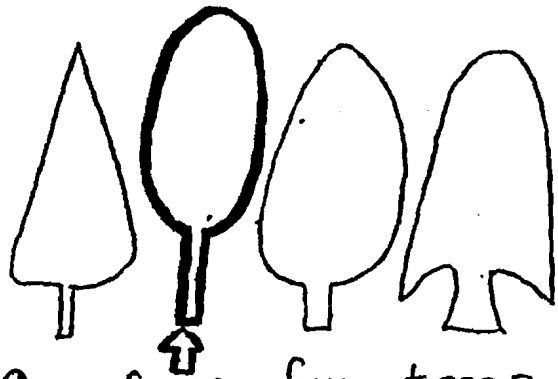
by Doris A. Goldman



Once upon a time ...



Chestnuts grew from Maine to Mississippi



One of every four trees in the eastern United States was a chestnut.

Bumble bee



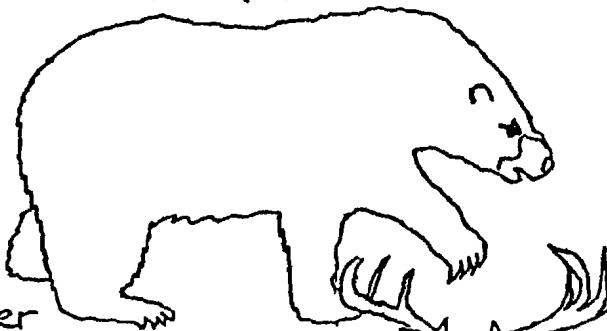
When the chestnuts bloomed in June, the hill tops looked like they were covered with snow.

The sweet smell of the white chestnut flowers filled the air.

Each tree had 1 to 3 bushels of nuts every fall!  
Many animals ate the sweet nuts.



Bears



Turkeys



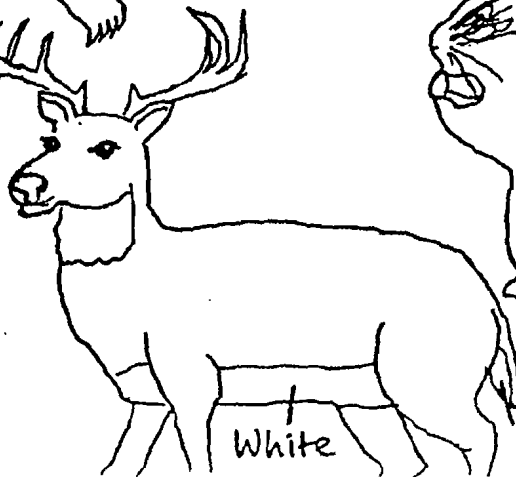
Chipmunks and Squirrels

Passenger Pigeons (Extinct)



Grey

Pink



White



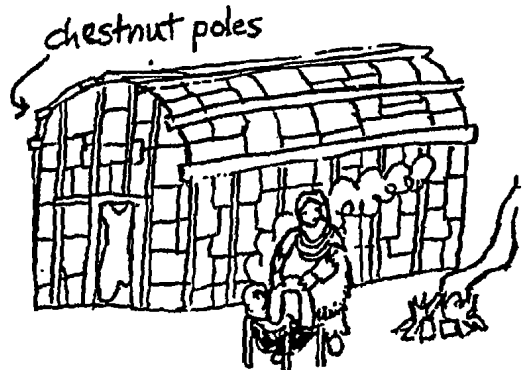
White

Deers and Elks

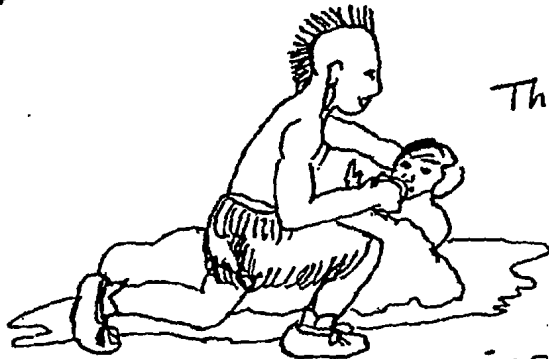
The American Indians ate chestnuts and ground them to get flour and oil.



They planted chestnuts by their villages.



They made a red dye from chestnut bark.



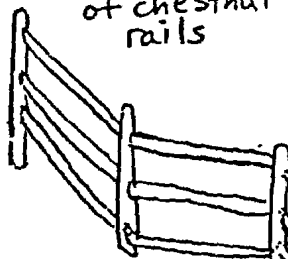
They taught the settlers to use a soup of chestnut leaves to treat children with whooping cough.

Chestnut trees were a major source of lumber. The wood is yellow and as resistant to rot as redwood!

Chestnut cabin and shingles



"worm fence" of chestnut rails

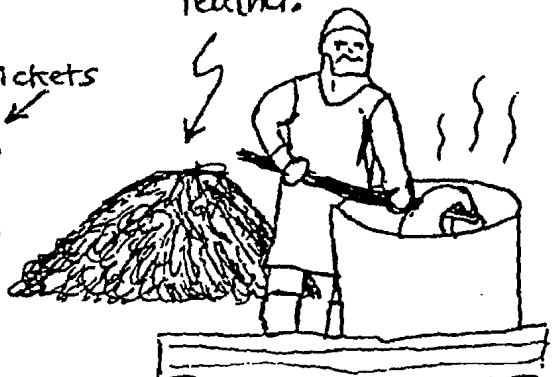


Chestnut water pump



chestnut bucket

Tons of chestnut bark were boiled to tan leather.



chestnut pickets

Chestnut bark whistle



# CHESTNUT BLIGHT

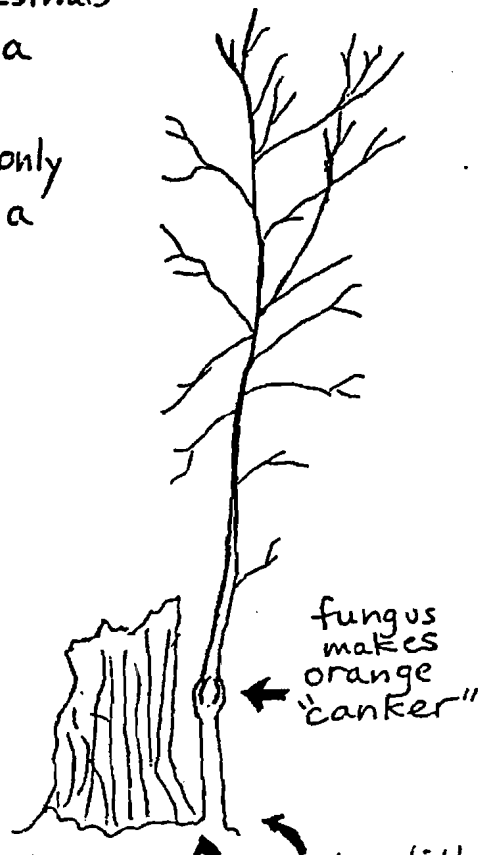
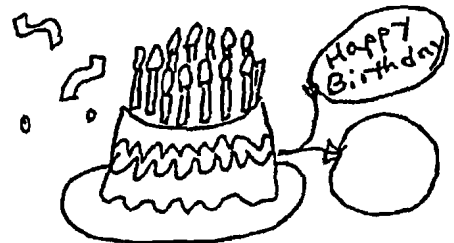
In the late 1800's some one planted some Chinese chestnuts in the USA. They had a fungus disease called "chestnut blight." It only makes Chinese chestnuts a little sick, but it kills American chestnuts.

In 1904, the chestnuts in New York City started to die. By 1950 nearly every American chestnut had died.

But chestnut blight doesn't kill the ROOTS, only the tree trunk, so

100 years later, from dead trunks sprouts still come up sometimes. When they get about 20 feet tall, they bloom, and about the same time, they get chestnut blight and die!

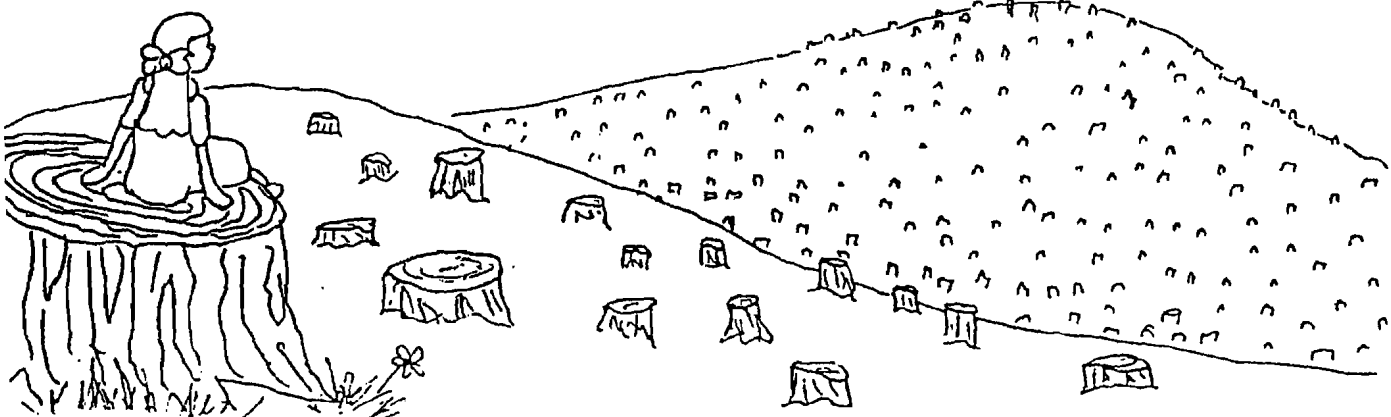
A chestnut tree should live for 600 years!

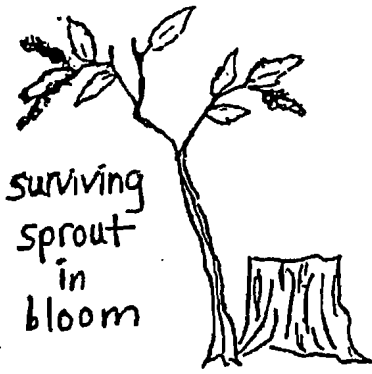


Chestnut blight fungus grows in the bark. When it has eaten a ring all the way around the tree ("girdled" the trunk), the tree dies.



People tried to stop the Chestnut Blight. They cut down miles of timber. Even that didn't work.





The American Chestnut can recover... if we help it.

HOW?

by

"BACK-CROSSING"

It takes 6 generations of trees. Here's how it works:

1. surviving American chestnut



X

blight-resistant Chinese chestnut



they carry 2 "genes" for resistance



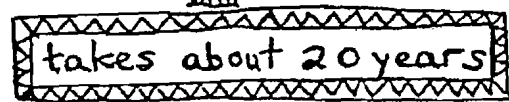
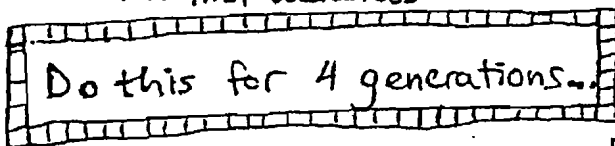
Their kids will be  $\frac{1}{2}$  American,  $\frac{1}{2}$  Chinese chestnut, and will inherit some Chinese chestnut blight resistance.

2. Breed the kids that are most resistant and look most like American chestnuts

the "first backcross"

X

surviving American chestnuts



3. Grandchildren  $\frac{3}{4}$  American chestnut X surviving American chestnuts



4. Great-grandchildren  $\frac{7}{8}$  American X surviving American chestnuts



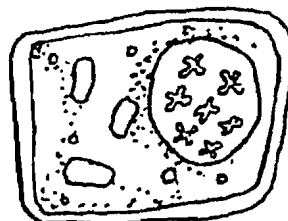
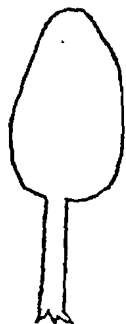
5. Great-great-grandchildren  $\frac{15}{16}$  American X each other ( $\frac{15}{16}$  American)



6. Great-great-great-grandchildren, 99% American

... one of every 16 of these trees will be completely resistant to Chestnut Blight

look like American chestnuts, tall and hardy



one cell from a chestnut tree



inherit both genes for blight resistance from Chinese ancestor

**Pennsylvania Chapter  
American Chestnut Foundation**

**Dedicated to the Restoration of the American Chestnut Tree**

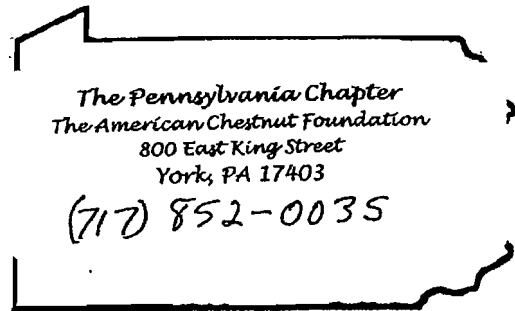
At the turn of the century the chestnut blight attacked the American Chestnut Trees and nearly wiped them out of our nation's forests. This fast growing, rot-resistant tree once dominated our forests and furnished beautifully grained easily worked lumber used for buildings and fine furniture. It also produced an abundant supply of sweet nuts favored by wildlife and people.

Through the American Chestnut Foundation's past efforts we now know that the chestnut blight problem has a solution. Bringing back the Chestnut Trees to their rightful place in our forests can be a reality. Dr. Charles Burnham, one of the founders of the foundation, introduced the backcross method of breeding as the way to achieve our ultimate goal of establishing breeding populations of blight resistant American Chestnuts, each of which will be adapted to a different growth zone in the natural range.

The Pennsylvania Chapter was organized in 1995 as an affiliate of the American Chestnut Foundation, a privately supported, non-profit organization founded in 1983. The chapter needs your support in its efforts to help restore the American Chestnut Trees to our state forests. For membership brochures and further information contact:



- L**umber tree
- E**cological link
- A**bundant Food for wildlife and people
- F**orest in good health and balance



*Become a life giving leaf of the American Chestnut Tree with your membership dues or donation.*