

**Chapter 1 : - When Dad Cuts Down the Chestnut Tree by Pam Ayres**

*A father is going to cut down the chestnut tree in the yard and the children are excited because of all the fun they will have when the tree is cut down (climb on the.*

Nut production begins when C. There are several similar chestnut species, such as the European sweet chestnut, Chinese chestnut, and Japanese chestnut. The American species can be distinguished by a few morphological traits, such as leaf shape, petiole length and nut size. For example, it has larger and more widely spaced saw-teeth on the edges of its leaves, as indicated by the scientific name *dentata*, Latin for "toothed". The blight-resistant Chinese chestnut is now the most commonly planted chestnut species in the US, while the European chestnut is the source of commercial nuts in recent decades. It can be distinguished from the American chestnut by its hairy twig tips which are in contrast to the hairless twigs of the American chestnut. The chestnuts are in the beech family along with beech and oak, but are not closely related to the horse-chestnut, which is in the family Sapindaceae. The chestnut is monoecious, producing many small, pale green nearly white male flowers found tightly occurring along 6 to 8 inch long catkins. The female parts are found near base of the catkins near twig and appear in late spring to early summer. Like all members of the Fagaceae family, American chestnut is self-incompatible and requires two trees for pollination, which can be any member of the *Castanea* genus. The American chestnut is a prolific bearer of nuts, usually with three nuts enclosed in each spiny, green burr, and lined in tan velvet. The nuts develop through late summer, with the burrs opening and falling to the ground near the first fall frost. The American chestnut was a very important tree for wildlife, providing much of the fall mast for species such as white-tailed deer and wild turkey and, formerly, the passenger pigeon. Black bears were also known to eat the nuts to fatten up for the winter. The American chestnut also contains more nitrogen, phosphorus, potassium and magnesium in its leaves when compared to other trees that share its habitat. This means they return more nutrients to the soil which helps with the growth of other plants, animals, and microorganisms. Chestnut blight American chestnut field trial sapling from the American Chestnut Cooperators Foundation Once an important hardwood timber tree, the American chestnut suffered a substantial population collapse due to the chestnut blight, a disease caused by an Asian bark fungus *Cryphonectria parasitica*, formerly *Endothia parasitica*. This disease was accidentally introduced into North America on imported Asiatic chestnut trees. Merkel estimated that by blight had infected 98 percent of the chestnut trees in the borough. Salvage logging during the early years of the blight may have unwittingly destroyed trees which had high levels of resistance to this disease and thus aggravated the calamity. American chestnuts were also common part of the forest canopy in southeast Michigan. Huge planted chestnut trees can be found in Sherwood, Oregon, as the Mediterranean climate of the West Coast discourages the fungus, which relies on hot, humid summer weather. American chestnut also thrives as far north as Revelstoke, British Columbia. At present, it is believed that survival of C. The fungus uses various oak trees as a host, [14] and while the oak itself is unaffected, American chestnuts nearby will succumb to the blight in approximately a year or more. Attempts at revitalization[ edit ] Several organizations are attempting to breed blight-resistant chestnut trees. The American Chestnut Cooperators Foundation breeds surviving American chestnuts, which have shown some native resistance to blight, and the Canadian Chestnut Council is attempting to reintroduce the trees in Canada, primarily in Ontario. A technique called backcrossing is being used by The American Chestnut Foundation in an attempt to restore the American chestnut to its original habitat. Both Elkins and Griffin have written extensively about the American chestnut. Griffin, who has been involved with American chestnut restoration for many years, [16] developed a scale for assessing levels of blight resistance, which made it possible to make selections scientifically. He inoculated five-year-old chestnuts with a standard lethal strain of the blight fungus and measured growth of the cankers. Chestnuts with no resistance to blight make rapid-growing, sunken cankers that are deep and kill tissue right to the wood. Resistant chestnuts make slow-growing, swollen cankers that are superficial: The level of blight resistance is judged by periodic measurement of cankers. Grafts from large survivors of the blight epidemic were evaluated following inoculations, and controlled crosses among resistant American chestnut trees were made beginning

in They were inoculated in and evaluated in and Nine of the trees showed resistance equal to their parents, and four of these had resistance comparable to hybrids in the same test. Time will tell if the progeny of these best chestnuts exhibit durable blight resistance in different stress environments. Burnham of the University of Minnesota in the s. Burnham, a Professor Emeritus in agronomy and plant genetics who was considered one of the pioneers of maize genetics, [22] realized that experiments conducted by the USDA to cross-breed American chestnuts with European and Asian chestnuts erroneously assumed that a large number of genes were responsible for blight resistance, while it is currently believed the number of responsible genes is low. The USDA abandoned their cross-breeding program and destroyed local plantings around after failing to produce a blight-resistant hybrid. While many companies planted invasive grasses, others began funding research on planting trees, because they can be more cost-effective, and yield better results. This tree contains enough Chinese chestnut DNA that encodes for systemic resistance genes to resist the blight. This is essential for restoring the American chestnut trees into the Northeast. Oxalate oxidase breaks down the oxalic acid which the fungus secretes in the cambium to lower the pH and subsequently kill plant tissues. The chestnut trees which contain this resistance gene can be infected by the chestnut blight, but the tree is not girdled by the resulting canker and heals around the wound. This lets the fungus fulfill its normal lifecycle without the death of the tree. Members of this genus infect fungal pathogens and reduce their ability to cause disease hypovirulence. The use of hypovirulence to control blight originated in Europe where the fungal virus spread naturally through populations of European chestnuts. The reduced ability of the fungus to cause disease allowed the European chestnut to regenerate, creating large stands of trees. Hypovirulence has also been found in North America, but has not spread effectively. It is a mature American chestnut that has recovered from severe infections of chestnut blight. The cankers have healed over and the tree continues to grow vigorously. Scientists have discovered that the chestnut blight remaining on the tree is hypovirulent, although isolates taken from the tree do not have the fungal viruses found in other isolates. Planted outside the natural range of chestnut, these trees escaped the initial onslaught of chestnut blight , but in , scientists found blight in the stand. Scientists are working to try to save the trees. One of them has been pollinated with hybrid pollen by members of The American Chestnut Foundation ; the progeny will have mostly American chestnut genes and some will be blight resistant. A combination of factors may account for the survival of these relatively large trees, including low levels of blight susceptibility, hypovirulence, and good site conditions. In particular, some stands may have avoided exposure due to being located at a higher altitude than blighted trees in the neighboring area; the fungal spores are not carried to higher altitudes as easily. The officials admitted they had known about the tree for seven years, but had kept its existence a secret. The exact location of the tree is still being held secret, both because of the risk of infecting the tree and because an eagle has nested in its branches. The Adair County tree is over one hundred years old. It is believed to be the result of nuts planted by early settlers in the area. The American Chestnut Council, located in the local town of Cadillac, Michigan , has verified its identity and existence. Efforts have been initiated to protect the property from logging and development. These trees will be protected from logging if the wilderness area, proposed by Friends of Allegheny Wilderness, is passed into law. The Montreal Botanical Garden has the American chestnut among its collection of trees and ornamental shrubs. Over one dozen trees were at least 12 inches in diameter with several measuring nearly 24 inches in diameter. Only one of the larger trees was a seed and pollen producer with numerous pods and pollen strands laying on ground. The site did, however, have a high presence of chestnut blight, although the seed producing tree and several other large ones were relatively blight-free with minimal to no damage. The donated trees were from saplings grown in Europe, away from the blight. They have 16" diameter trunks and are approximately 40 feet high. Well north of the natural range of the chestnut, it has avoided the blight. It is a hardy, nut producing tree that has been producing for nearly 30 years. It has borne fruit since The great majority of chestnut trees in the United States are derived from Dunstan chestnuts, developed in Greensboro, N. Brooklyn Museum, Gift of Harvey Isbitts, Chestnuts are edible raw or roasted, though typically preferred roasted. Nuts of the European sweet chestnut are now sold instead in many stores. One must peel the brown skin to access the yellowish-white edible portion. Native Americans used various parts of the American chestnut to treat ailments such as whooping cough , heart conditions and chafed skin.

The tree was particularly valuable commercially since it grew at a faster rate than oaks. Being rich in tannins , the wood was highly resistant to decay and therefore used for a variety of purposes, including furniture, split-rail fences , shingles, home construction, flooring, piers, plywood , paper pulp , and telephone poles. Tannins were also extracted from the bark for tanning leather. This "wormy" wood has since become fashionable for its rustic character. Catkins in the spring, spiny nut pods in the fall, and leaves in the early winter can all be a problem. These characteristics are more or less common to all shade trees, but perhaps not to the same degree as with the chestnut. The spiny seed pods are a particular nuisance when scattered over an area frequented by people.

### Chapter 2 : American chestnut - Wikipedia

*The prospect of seeing the chestnut tree cut down makes a child think of all the good things that will come from its removal; but then come thoughts about all the good reasons for letting the tree stay where it is.*

On 23 February , she writes about the tree: Ik ga haast elke ochtend naar de zolder waar Peter werkt om de bedompte kamerlucht uit mijn longen te laten waaien. Vanuit mijn lievelingsplekje op de grond kijk ik naar de blauwe hemel, naar de kale kastanjeboom aan wiens takken kleine druppeltjes schitteren, naar de meeuwen en de andere vogels, die in hun scheervlucht wel van zilver lijken. Nearly every morning I go to the attic to blow the stuffy air out of my lungs, from my favorite spot on the floor I look up at the blue sky and the bare chestnut tree, on whose branches little raindrops shine, appearing like silver, and at the seagulls and other birds as they glide on the wind. How could I have suspected that it meant so much to Anne to see a patch of blue sky, to observe the gulls during their flight and how important the chestnut tree was to her, as I recall that she never took an interest in nature. But she longed for it during that time when she felt like a caged bird. She only found consolation in thinking about nature. But she had kept such feelings completely to herself. In September , an appeals panel made two decisions: Bomenstichting , was involved in the discussions. On 13 November , the Borough Amsterdam-Centrum declared that it would cut down the tree on 21 November Boom-KCB, an engineering firm specialized in trees, [15] determined that the tree was "storm-proof", and able to sustain itself, eliminating the need for outside interference as it did not pose a danger for the public. They urged the Mayor of Amsterdam , Job Cohen, to proceed with emergency cutting. One of the eleven saplings in the U. Some weeks later, tree experts from both sides presented a joint evaluation of the tree. Their judgment was that the tree had a life expectancy of at least 5â€”15 years. To ensure safety, the supporting construction should be built. The supporting structure, finished in May , was designed to make it possible for the tree to survive at least five more years. The next day, it was reported that a small side shoot was growing out of the stump below where it broke, and it is hoped that it will grow into a new tree. There are plans to keep large pieces of the fallen trunk and its large branches. The fallen tree is estimated to weigh about 27 metric tons. The fallen wood has now been removed.

**Chapter 3 : When Dad Cuts Down the Chestnut Tree by Pam Ayres**

*"When Dad Cuts Down the Chestnut Tree" Written by Pam Ayres and Illustrated by Graham Percy. This is one of my favourite stories to read to children when the opportunity arises to introduce the concept of man's impact on the natural environment.*

Barrels Cabinets In addition, in some parts of the world, Chestnut wood is burned and used as a fuel source. Interesting Facts Chestnut trees can save you a lot of money if you enjoy eating the fruit. When you do, look for glossy, firm nuts that feel heavy. Lighter nuts are a sign of age and drying. Chestnut trees are commonly found in large parks and other public green spaces where they house myriads of woodland creatures, especially birds and squirrels. The farmers would then pull off pieces of the bark and chew on them to ease toothaches. The blight enters the Chestnut tree and can kill it by destroying its vascular system. Today, the serious disease can be cured if caught early. Unfortunately, Chestnut blight is not the only disease that affects the species. Other fungus-related diseases that attack the Chestnut tree include: Caused by excessive exposure to moisture, root rot can infect leaves and force them to drop prematurely. Infected Chestnut trees also develop dark spots on the bark. This common Chestnut tree disease presents itself as small, white spots that grow as the infection spreads. Chestnut Care Healthy Chestnut Tree While they may appear large and intimidating, Chestnut trees are relatively easy to grow. However, it is a good idea to the follow these simple tips if you want your Chestnut to prosper on your property: The soil should be fertile and have good drainage to avoid root rot. Space the trees at least 20 feet apart from each other as they need room to grow. Do not plant the large trees under power lines. Save planting until spring as excessive cold can kill young trees. Select an area on your property that receives full sunlight. Add some compost to the base of the tree to avoid weeds. Finally, to produce a large crop of chestnuts, fertilize the tree during its first growing season.

Chapter 4 : When Dad Cuts Down The Chestnut Tree: Pam Ayres, Graham Percy: calendrierdelascience.c

*The item When Dad cuts down the chestnut tree, by Pam Ayres ; illustrated by Graham Percy represents a specific, individual, material embodiment of a distinct intellectual or artistic creation found in Brigham Young University.*

Growing the American Chestnut Tree Wiped out by blight in the early 20th century, resistant hybrids of the American chestnut tree are making a comeback. Their rapid growth and productivity make them an excellent addition to any homestead. I planted my chestnut trees here in New Paltz, N. My largest and quickest-to-bear tree, now 12 years old, was actually grown by planting a Chinese chestnut. The tree has both a height and spread of about 20 feet, and it yields more than half a bushel of chestnuts every season. Planning and Early Care Chestnut trees need abundant sunlight six or more hours of direct summer sun and fertile, well-drained and slightly acidic soil. Generally, plan on giving a chestnut tree about 40 feet of room in all directions. Chestnuts are primarily wind-pollinated, so the two or more pollenizers need to be within about feet of each other. This promotes growth of a single, upright main stem by pinching back, bending down, or cutting off any competitors for that top position. Select major scaffold limbs growing off the main stem, spacing them a foot or more apart up along the central leader. Scaffold limbs should originate from a spiral arrangement as much as possible so that no limb is directly above the one below it. Start the lowest scaffold limb high enough that you can mow under the tree. After the central leader reaches 6 to 8 feet in height, cut it back to a side branch to allow subsequent tree growth to spread wide. Chinese chestnut trees have naturally good form, so not much pruning is needed to get the growth described here. Within 50 years, the disease had infected almost all American chestnut trees. Continue Reading Chestnut blight kills only the aboveground portion of chestnut trees, so infected trees that are killed back to the ground resprout only to become infected again, keeping the fungus active. Unless some naturally blight-resistant American chestnut trees are found hidden in an eastern forest many people have been looking , native chestnuts would grow into timber-size specimens with good edible nuts only in areas in the Midwest and West that have been shielded from the spread of chestnut blight. It can be difficult to know whether the infective agent is present in your area. In Europe, the chestnut blight organism has been controlled by infecting the organism with a virus that weakens it so that trees can better resist it. Harvesting Chestnuts For better and for worse, chestnuts come inside prickly burrs, each more or less the size of a tennis ball depending on the variety and the growing conditions and housing one to three nuts. When chestnuts are ripe, burrs either drop to the ground, nuts within, or open to release the nuts and then drop themselves. Either way, you end up with the ground full of spiny burrs, so shoes are a must when walking under chestnut trees. Squirrels will gather nuts that have been released from burrs, so I pick ripe nuts and fallen, full burrs from the ground every day or two. I help things along by knocking loose burrs off branches with a pole, or by shaking whole limbs. Unopened, dropped burrs will mature and open at cool temperatures with high humidity. After you remove the nuts, you can use the burrs as mulch in areas where you want to deter squirrels, raccoons, and other tender-footed pests. Post-harvest Necessities The easiest part of growing chestnuts is growing the trees and harvesting the nuts. More deliberate attention is needed to get those nuts into condition for eating. You need three things: The first step is to mow beneath the trees to make finding dropped nuts easier. Chestnut weevils lay eggs in burrs in mid to late summer and are common throughout North America. The larvae hatch, eat, then exit the nuts after they drop. The weevils overwinter for one to three years in the soil before emerging and laying eggs again. Tiny holes in chestnut shells are the goodbye wave of the weevil. My goals are to limit weevil population buildup and keep in edible condition those nuts in which weevils have laid eggs. I reduce the weevil population by picking up fallen nuts daily or at least every other day to prevent weevils in infested nuts from entering the soil. Letting chickens or guinea hens forage beneath trees also helps keep weevil populations in check. To do this, put the nuts after they have been removed from their burrs in water held at degrees for 20 minutes. Immediately after their water bath, dry the nuts in the sun between wire mesh screens, or somewhere outside that is safe from squirrels. When the nuts are dry, refrigerate them, or store them in a dry, cool spot less than 40 degrees. Chestnuts are unique among nuts in that their nutmeat is high in carbohydrates, rather than high in oil. The nuts are rather bland at harvest, but

after a few days in the refrigerator, some of the starches change to flavorful sugars. For long-term storage of nuts, avoid both mold and excessive drying. Mold will render nuts inedible, while excessive drying hardens them. Hardened nuts are still edible and can be ground into flour or reconstituted by soaking or cooking in water. My favorite way to prepare them is to make a slit along one side of the shells, roast them, peel off the shells and eat the nuts while still warm. Roast chestnuts in an oven or toaster oven at degrees for about 30 minutes, or in a pan over a woodstove or fire. Chinese chestnuts are generally hardy to Zone 5, but some are hardy to Zone 3. European and Japanese species are hardy to Zone 5, and American chestnuts are hardy to Zone 3. Chinese chestnuts are the most blight-resistant, the Japanese chestnut is slightly resistant, and the two others are more susceptible to blight. At the extremes in tree structure are the American chestnut, which is tall and upright, and the Chinese chestnut, which has wide-spreading branches. The nuts of different species are equally variable. American chestnuts are small, have an easily removable pellicle the thin brown skin around the nutmeat, and are the sweetest of the edible chestnuts. European species have a variable, usually mild flavor, and Japanese chestnuts are sometimes bitter. Chinese chestnuts have a smooth, subtly sweet flavor. Good flavor, growth habit, and blight resistance all make a strong case for planting Chinese chestnuts or their hybrids. In fact, many chestnut varieties are hybrids representing two or more species, and tree form and size will, to some degree, reflect that parentage. Great Chestnut Varieties Colossal: It is moderately susceptible to blight. This variety is a hybrid of American and Chinese chestnuts. Seedling trees with an upright growth habit consistently bear medium to large, sweet nuts. It produces medium to large nuts that ripen early. A Chinese variety with large nuts that peel well. Nuts are easy to peel, have an excellent, sweet flavor, and an excellent keeping quality three to four months. Delayed graft failure, in which the graft seems to be successful but breaks off after a few years, can be a problem with this variety. This pure Chinese variety has an upright habit and ripens midseason. It yields medium to large nuts with a slight edible peach fuzz on them.

### Chapter 5 : WHEN DAD CUTS DOWN THE CHESTNUT TREE! « "FLIGHTS OF WHIMSY"

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### Chapter 6 : Chestnuts: Growing the American Chestnut Tree | MOTHER EARTH NEWS

*Get this from a library! When dad cuts down the chestnut tree. [Pam Ayres] -- What is so special about a chestnut tree? A brother and sister pose the question for each other - and find some inspirational answers in this charming book that is both story and first nature study.*

### Chapter 7 : When Dad cuts down the chestnut tree - Brigham Young University

*"When Dad Cuts Down the Chestnut Tree" is a story that points out both positive and negatives of having a tree and possibly cutting it down. This story also portrays the love for nature, no matter what size.*

### Chapter 8 : When Dad cuts down the chestnut tree by Pam Ayres | LibraryThing

*A father is going to cut down the chestnut tree in the yard and the children are excited because of all the fun they will have when the tree is cut down (climb on the tree, use the wood to build toys and a fort, etc.).*

### Chapter 9 : Chestnut Tree | All About Chestnut Trees

*When Dad Cuts Down the Chestnut Tree by Pam Ayres, G. Percy (Illustrator) starting at \$ When Dad Cuts Down the Chestnut Tree has 2 available editions to buy at Half Price Books Marketplace.*