

American Chestnut Cooperators' Foundation

February 2024

Dear Friends and Cooperators,

GROWER REPORTS

Thanks to all who have submitted annual reports and large tree reports. Data collected from your reports is paramount to continuing our efforts to restore the American chestnut as a pure species to its native range. Thousands of surviving, durably resistant and maturing ACCF chestnuts are the result of our founding members' commitment to their theory that American chestnuts have inherent resistance and will survive as a pure species. Decades of positive results would not have been possible without Lucille Griffin's passion and work as well as your reports and your continued work and dedication.

As always, we look forward to your reports which we are happy to receive any time.

2023 HARVEST

We harvested all nuts from the ground and picked from open burrs this year, saving our trees from significant stress that results from pruning burrs out. Regular nut collection allowed only a small percentage of nuts sacrificed to the birds and squirrels. 2023 gave us yet another successful harvest, again yielding thousands of nuts – more than enough to fill Cooperators' requests.

NEW CLEMENTINA ORCHARD

Our President, Ed Greenwell, has announced his exciting plan to establish a new orchard in Tennessee, named after his great, great, great grandmother. The 5 acre plot is ideally situated on an east-facing slope. He reports variation in the site's soil horizon but the site has the desired dominantly well-draining soil with no considerable obstacles for root growth. He plans to conduct multiple trials there, researching resistance to blight, Phytophthora, and gall wasp. Deer are the major "predator" for a new chestnut planting in that area, so with wisdom, he has already planned solar electric fencing as protection for the young chestnuts. Updates to follow!

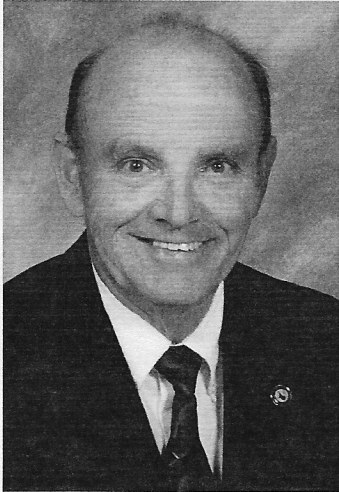
FIELD NOTES

Maintenance work in the winter and early spring may include pulling resilient weeds from chestnut cages, mulching, transplanting nursery seedlings to their permanent site, or pruning larger chestnuts. *Over the winter, Lucille has been weeding dandelions near and inside her cages and discovering mole holes to fill.*

This dormant season is prime timing for transplanting and pruning to minimize spread of disease and protect delicate tissues while they are still active. Please refer to the Planting Instructions for details about transplanting seedlings. (These instructions have been included with the newsletter in the past and are also available online. Go to accf-online.org, click on the Webrary link on the left and find the "Planting Instructions" title. If you would like a hard copy, we are happy to send one. Request via email to jenny@accf-online.org or by mailing a note to our PO Box.)

For pruning information, see the Pruning Information resource included with this newsletter.

Dedicated to the restoration of American chestnuts



Remembering Dave McCurdy

We thank this long-time member of the ACCF Board of Directors for his decades of dedication, leadership and contributions.

David Kenneth McCurdy, Jr. was a Pennsylvania native, born in Norristown on April 26, 1941. While growing up, Dave developed an interest in forest trees and went on to earn a bachelor's degree in forestry from North Carolina State University. He joined the staff of the Clements State Tree Nursery, operated by the West Virginia Division of Forestry, located in Columbia, West Virginia, where he served as Superintendent for 41 years. Dave was inducted into the West Virginia Agriculture And Forestry Hall of Fame for his outstanding contributions to the "establishment, development, advancement and improvement" of the agricultural and forestry industries in West Virginia and the nation.

Work at the nursery involved growing seedlings of many forest tree species for sale in support of reforestation, surface mine reclamation, and soil conservation projects. One focus area became blight resistance of the American chestnut. Dave worked extensively with Bruce Given, a forester and tree grafting expert with the West Virginia Department of Agriculture and a founding member of the ACCF research program, who created the chestnut breeding orchard at Clements Nursery. Dave became an ardent supporter of ACCF and worked with ACCF research scientists to generate both open and closed pollinations in this orchard in their attempts to retain and combine potential genetic diversity in blight resistance among the progeny. Nursery staff planted nuts resulting from these pollinations, established a breeding orchard with the progeny, and distributed seedlings for ACCF to its network of Cooperating Growers from the early days through 2007.

Dave was a long-term member of the ACCF Board of Directors and served as both Vice President and President of the Board. In this capacity he helped guide the organization toward its record of success in breeding pure American chestnut trees with durable blight resistance. Sadly, Dave passed away December 2, 2019, in Raleigh, North Carolina, where he and his wife, Barbara, moved following his retirement.

Thanks to Dave's work, at least 100 thousand seedlings were reared, distributed, and planted throughout the American chestnut's native range and far beyond.

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FOUNDERS SECTION

We are pleased to introduce a new segment of our newsletter, sharing insights and wisdom from the founders of ACCF. This issue features an excerpt from our 2011 newsletter written by Lucille Griffin:

“We have imagined all-American chestnuts growing in each new forest opening on ideal sites in the whole eastern forest formerly occupied by American chestnut. We will need lots of help to accomplish this, and we believe seasoned chestnut growers will be most able to create successful forest projects.

Some of you are raising a few or several yard chestnuts, some are making large orchards and others are making forest groves. If you are in the first category above and have run out of yard space, we urge you to consider branching out and putting your experience growing chestnuts to use in a forest setting on public lands. A few of our cooperators are already doing this; we need many more to join them. State and Federal foresters make very good cooperators; they welcome volunteer forest improvement projects and help with site selection.

When you work near a forest service road, the same pickups, motorcycles and SUVs, carry woodcutters, hikers, campers or hunters past you. One will stop to ask what you are planting. American chestnuts you say, and often you have a new friend. After a few years on the job, most of the passersby, as well as nearby cabin dwellers wave and many express thanks for your work. It is the best job in the world.”

Board members Ed, Joyce and Jenny contributed to this newsletter.

Respectfully Submitted,

Jenny Abla, Vice President

jenny@accf-online.org

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Please Send Correspondence and Information Requests to:

ACCF, PO Box 102, Ridgecrest, NC 28770

Send Donations to:

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ACCF is a 501(c)(3) organization.

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PRUNING INFORMATION

Pruning should be done during the dormant season to minimize spread of disease and protect delicate tissues while they are still active. The onset of fall marks the beginning of the dormancy window for deciduous trees; however, depending on the weather, full dormancy might occur later. To be safe, *the most ideal time to prune trees is in winter*, especially if the trees are stressed, compromised or susceptible to pests and pathogens. (The exception is non-deciduous trees. Evergreens do not go fully dormant and should be pruned during the growing season for best results.)

Pruning during dormancy is an advantageous practice for several reasons. This is the time when vascular tissues are relatively inactive, so the chance of disease and pathogen transmission is greatly reduced. Insects are less likely to be alive or active, and reduced sap flow will limit any active insects' attraction to fresh pruning wounds. Additionally, pruning when leaves are absent allows you to see the tree's branching structure as well as any damage that should be corrected, enabling you to make the most strategic cuts per individual tree.

If you have chestnuts larger than three feet tall, you may want to assess their need for pruning.

It is very possible that your chestnuts *do not* require any pruning; however, here are some things to look for that may indicate a need to prune:

1) Awkward or undesirable growth

- *Branches growing back toward the tree trunk instead of spreading outward*

This is usually a growth response following light availability, but this growth is not ideal for mature tree structure or for adequate airflow in the crown of the tree. It is best to correct this kind of growth when a tree is younger so that the tissue/canopy loss is minimal and the pruning wound is small.

- *Branches that grew so close together that they have made contact*

Branches that rub together create a wound in the cambium that can attract insects and/or become an infection site for a pathogen. When these redundant branches leaf out, they will be in competition for resources because they overlap and will reduce air circulation for that part of the tree.

- *A younger tree that has competing leaders (codominant leaders)*

This means that there is more than one vertical stem. If the tree continues to grow with more than one leader, large branch growth will occur on the outer side of each codominant leader, instead of the tree directing more balanced growth all the way around. This imbalance of weight in the

crown increases as the tree grows, compounding the likelihood of instability and strain at the union of the multiple leaders, and the likelihood that the tree will break and split at that location. In the case your tree has codominant leaders, you can remove all but the strongest, most upright one, which will promote upward growth of the single leader and more desirable, stable form.

If your chestnut is large or mature and has codominant leaders, it is not in the best interest of the tree's health to remove one. Measures can be taken to reduce the risk of splitting at their union by: keeping that area clear of leaves and debris and potentially cabling the two leaders together (especially if your chestnut produces lots of nuts and you notice branches weighed down when burrs are on). If this is the case for one of your trees, I am happy to help you find an arborist to install a non-invasive dynamic cable (which will not girdle the stems and will allow reasonable movement to prevent breakage).

- Branches or sprouts growing close to the ground

Branches growing close to the ground block air circulation between the ground and the tree crown. They also make the tree susceptible to fungal infection by spores that splash up to the low branches and leaves during rainfall. To remedy this issue, you can prune the lower branches off using this ratio: 15-20% of total tree height for space to ground.

Example: a 5 ft tree should have at least 1 foot of clean trunk near the ground.

2) Sprouts growing around the base of a larger trunk or from the root system of the tree

This is a phenomenon known as basal sprouting which is an *indicator of stress*.

If your chestnut is producing basal sprouts, consider/look for the following situations that may be inducing stress:

- Is there a wound, damage or canker on this tree?
- Is there thick grass or are there many weeds growing close to the tree?
- Has the ground been compacted close to the tree?
- Is the chestnut growing in dense or clay soil that stays waterlogged after rainfall?
- Is this tree on a slope with hardened ground, so that water cannot penetrate the soil surface before moving down the slope?
- Do you have an insect infestation on this chestnut in the spring or summer?
- Are there animals burrowing near this tree?

Action you can take in the case of basal sprouting: attempt to address the stressor and prune the sprouts back to the ground.

Use a sterilized cutting tool and make a clean cut as close to the soil as possible. The purpose of pruning in this case is to prevent any basal sprouts from growing large enough to compete for resources with the main trunk. It is prudent to remove basal sprouts when they are small to minimize the pruning wound area and to prevent the tree expending too many resources to grow these sprouts rather than healing and using its resources in the main trunk.

If the source of stress is a mechanical or storm damage injury or a lethal, sunken blight canker, and if the chestnut is young, you may want to let the healthiest sprout become the main trunk and prune all other sprouts, as well as the original trunk, away. *Lucille uses this situation as an opportunity, removing the less-than-ideal tree's former main stem and grafting into the best looking sprout in the spring.*

3) Dead or damaged branches

It is a good idea to prune damaged branches back to the nearest node or the branch collar to eliminate ragged wounds which can become a site for insect or pathogen entry. Pruning dead branches may help the chestnut compartmentalize a wound or infection and quickly redirect resources to the healthy parts of the tree.

The most important things to remember when pruning are:

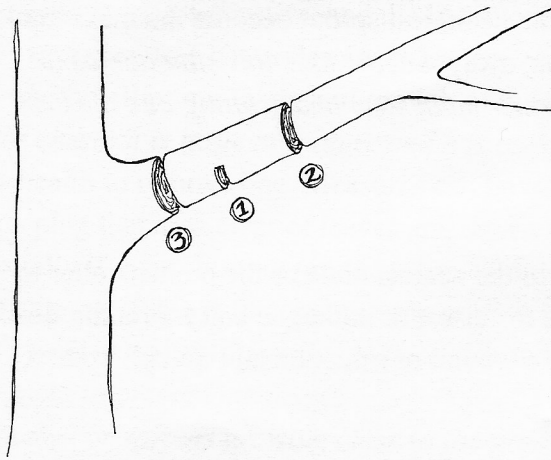
- **Identify the strategic location and angle of the 'ideal cut' to allow for the quickest compartmentalization/healing of the pruning wound:**

- When removing an *entire* branch, this location will be *just outside* the branch collar.
- When removing *part* of a branch, this location is *just outside* the nearest node (location of the nearest bud, branch or twig).

It is important to preserve the branch collar, and nodes by making pruning cuts "just outside of" these locations because they house important cells designated for new growth and signaling to the rest of the tree.

(See pruning diagram on next page)

- **Use sharp, sterilized tools (hand saw or hand pruners).**
Alcohol wipes or spray Lysol work well for sterilizing tools.
Many of the companies that make hand saws and pruners sell replacement blades for their tools and/or offer send-in services to sharpen blades.
- **Make clean cuts.**
Consider making practice cuts on a different tree or plant if you want to perfect your technique before making cuts on your chestnuts.
- **Leave the pruning wound open (*do not seal it*).**



Removing an Entire Branch:

First, identify where your final cut will be made, just outside of the branch collar (where the taper stops at the branch's union with the trunk).

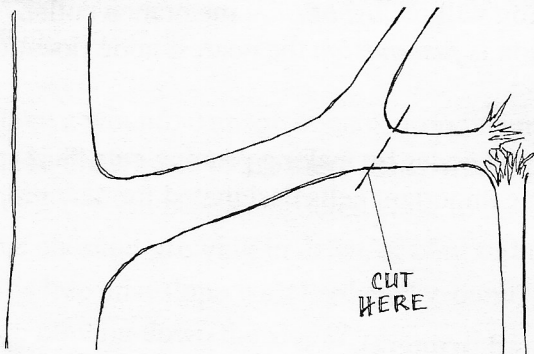
When removing an entire branch, it is helpful to use the following three cut method:

1- The *first cut* you make will be an undercut. This will stop the bark from peeling when you remove the weight of the branch in the next step. The undercut goes $\frac{1}{3}$ of the way through

the branch. This cut should be made several inches outside of where your final cut will be made.

2- The *second cut* you make is to remove the weight of the branch to enable you to make a clean final cut. Make this cut a couple inches outside of the undercut.

3- The *final cut* should be easy to make now that the weight of the branch has been removed. Cut at the place you identified, just outside of where the taper stops. Try to make the cut as clean as possible. (Use a clean, sharp saw.) The ideal cut leaves the smallest amount of surface area wound; cut at an angle that leaves a circular face rather than an ellipse.



Removing Part of a Damaged Branch:

First, identify where the nearest intact bud, twig or branch is. This will become the new signaling location for the remaining branch once you remove the damaged portion.

-Follow the steps listed above for a larger branch. For a smaller branch (if you are able to cut off the damaged part of the branch with

hand pruners rather than a saw), there is no need to use the three cut method. However, if there is a long length of branch between the break and the location for the final cut, OR if the angle you need to make the cut from is awkward, you may want to cut most of the damaged part off first to make the final cut easier.

-Your (final) cut should be just outside the taper at the twig or branch and should be on a line that is as parallel as possible to the remaining branch. (If you are *cutting to a bud*, cut straight through the branch about $\frac{1}{4}$ inch outside of the bud.)

Please feel free to email me with any questions about pruning or other fieldwork:
jenny@accf-online.org