

American Chestnut Cooperators' Foundation

2001 Newsletter

Send your report via [Grower Report Email Template \(accf-online.org\)](mailto:accf-online.org) or to
2667 Forest Service Road 708
Newport, Virginia 24128

Dear Friends and Cooperating Growers:

HALL OF FAME

In July, 2001, John Rush Elkins, was inducted into the West Virginia Agriculture and Forestry Hall of Fame, recognized for his life-long dedication to American chestnut restoration. A founding member of the ACCF, John was active in American chestnut research, breeding, grafting and speaking out, long before our organization was chartered in 1984. Professor of Chemistry at Concord College, WV, his research focuses on studying the roll of the various tannins in chestnut bark as they may relate to blight resistance, with the goal of discovering chemical markers for blight resistance which would permit very early selections and speed up breeding progress.

NEW SEEDLING PRICE

The nursery has changed the price and bundling of bare-rooted American chestnut seedlings for distribution beginning in late November: it is **\$30 per bundle of 50**, including mailing. We are encouraging growers to order the full bundle and share any surplus with friends and neighbors. Orders of 25 and fewer will cost \$15. Please remember to include your report of the numbers of surviving chestnuts and dues of \$20, unless both are up to date.

NATHAN PEASE

Like many other growers, Ed Greenwell planted a bundle of seedlings when he first joined our organization. Among these was one which contracted blight early, and the dark orange canker circled the 1/4 inch main stem. But then it began to swell and healed itself within that growing season. A few years later, another canker appeared on the same tree, now grown to an inch in diameter, and the healing process took over once again. Ed documented these observations with photographs, named the tree Nathan after his son (Pease is the mother tree), and has created a Web page.

This tree demonstrates a higher level of resistance than our breeders have seen among original source trees, and it has manifested the resistance at a much earlier age than we had considered probable.

To rule out the possibility of a hybrid from stray pollen, Ed sent ten leaves, which he collected in July in full sunshine, with several immature leaves included in the sample, mounted bottom-side up on cardboard for microscopic examination. Gary found only American characters.

Ed has made some Nathan nut grafts which we have planted at Virginia Tech in medium and high elevation sites for observation and testing.

So far, only one other grower has reported similar observations to us. We wonder how many other trees like this are growing unobserved and unreported.

OTHER INTERNET RESOURCES

Ed's Web site illustrating **Nathan's progress** <https://www.accf-online.org/nathanblight.htm>

Ed's mirror site, same as ACCF Web site sponsored by Virginia Tech, in case you cannot get through to the original:

<https://www.accf-online.org/>

The Tennessee ACCF site, also by Ed: [American Chestnut : A Tennessean's Version of an American Chestnut Page \(accf-online.org\)](#)

ACCF Links page, by Ed, featuring a June 2001, photo of me with a granddaughter **pollinating a 2.5-year-old Miles graft:** <https://www.accf-online.org/links.html>

Report now via our **NEW REPORT FORM** at [Grower Report Email Template \(accf-online.org\)](#)

BLIGHT FREE

All the chestnuts we send out are blight free; this is a requirement for sending them through the mails. However, “blight-free” is just a temporary condition. We try to prolong it as much as possible by protecting the young seedlings from injuries to the bark (through which the blight fungus could gain entry) to permit them to reach 1.5

inches dbh before their first blight attack. The larger size is more favorable for expression of blight resistance. Nathan is an exception to this rule.

BLIGHT RESISTANCE

It is a common misconception that blight resistance is the same thing as immunity. Just as none of us is immune to the flu, no chestnuts are immune to the blight. All the chestnut seedlings and seednuts which we send out to growers will get the blight, providing they live long enough and are not planted in the far West, beyond the reach of this disease. **Blight resistance is a reaction of some chestnuts to a blight infection.**

Most American chestnuts die within a year or two of blight infections which usually make sunken cankers that spread rapidly to girdle the stem and kill all growth above the canker; these chestnuts are highly blight-susceptible.

The sources in our breeding program are chosen following trials in which they exhibit low levels of resistance to blight fungus inoculations. **Resistance is manifest in swollen cankers, and slow, shallow canker growth which does not penetrate the cambium, so the chestnut survives.**

To identify resistant individuals, we need to observe our trees regularly, record signs of infection, and measure the progress of blight cankers as well as the overall health of each tree. Thus, **the first sign of blight is the beginning of the test, and not a reason to abandon or destroy a chestnut seedling.**

TO PACK OR NOT TO...

Mud packs can cure blight cankers at or near the base of a chestnut, by putting the cankers virtually underground, into an environment where antagonistic soil organisms kill the blight fungus. To work this cure, the mud pack should be applied early in the infection, before blight has reached the cambium. However, the cure is just temporary. If the tree has no resistance, it will eventually be killed by other blight infections further up the trunk.

When the stem in question is a new sprout on a root system whose previous stems were blight-killed, mud-packing is generally not worth the effort, unless this is your only chance to get chestnuts for eating.

When the resistance of a tree is unknown, a mud pack applied to the first blight infection would prolong our ignorance concerning the tree's value for breeding

purposes. The choice is up to the grower. If the stem is less than 1.5 inches dbh, a mud pack would give it the time to grow larger and a better chance to express resistance.

In the case of grafts, where the level of resistance is already known, we always pack mud around low, early blight cankers, because other stresses related to site, weather, and season may have temporarily overwhelmed the tree's resistance.

The easiest way **to make a mud pack**: use one, or two tree shelters (wired side-by-side) around the base of the tree, pack it full of soil from that area, water and cover the top with moss or leaf mulch. The height of the tree shelter depends upon the position of the blight canker, which should be at least 3 inches below the top of the mud pack. Any branches in the way of the pack must first be pruned.

GROWERS' REPORT

I have a total of 76 seedlings growing in 9 sites. The tallest is Pie, outside our dining room window around 20 feet tall, blighted since its 1999 test, with swollen cankers inoculated with hypovirulence in 2000. Ed Greenwell reports 165 chestnuts growing in 3 sites, with the tallest at 12 feet. **As of 2/11/02, with 103 reports received, this year's total for survivors from all ACCF plantings is 2,761.** This number will be updated, as your reports come in. Following the 2000 growing season, 69 cooperators sent reports of 2,142 American chestnut survivors. We thank you all.

Last year we sent 3,768 seedlings and 8,235 seednuts to cooperating growers in 33 states, Ontario, and Mexico.

TO FERTILIZE OR NOT TO...

To this frequently asked question, I say, **don't** do it. Any mistake in mixing or applying fertilizer results in tree death. We have many volunteers from nuts the squirrels planted in three of our plots. The past 2 years, they have made better growth than my pampered direct-seeded nuts, which I even treated to tree stakes this year.

OUTSTANDING COOPERATORS

Larry Sherertz, Sheriff of Rappahannock County, (VA) organized a distribution of 500 American chestnuts, sponsored by the local Lion's Club and spoke out for our breeding program on National Public Radio in an interview with Noah

Adams. Through Larry's efforts we have gained many more good cooperating growers.

Evelyn Smith (WV) recognized an ideal American chestnut site on the slopes along the driveway leading to her retirement community, organized and sponsored a planting there and has spread the word, to delight the other residents.

John Buschmann (VA) has continued to help us with maintenance and supplied the cages and stakes to protect the new grafts and seedlings at our Lesesne project in cooperation with the Virginia Division of Forestry. He is also active recruiting new members from the Richmond area to our program.

Ken James (NY) continues diligent maintenance and extension of the largest American chestnut forest revival project.

Charles Lytton, Giles County 4-H Leader, (VA) expanded his work with area school children. In addition to bringing many bus-loads to help us harvest the Martin American Chestnut Planting and distributing seednuts to area school growing projects, he organized many spring field trips to the places where these chestnuts have been planted to get the children more involved in the planting, maintenance and reporting processes.

Curt Davis (KY) gave permission to print his American chestnut memories, a wonderful tale which is too long for this newsletter, but you can find it in first place on the Lore page of our Web site.

Joyce Foster (WV) and **Laurie Spangler** (VA) sent forms and addresses of grant-makers which support work similar to ours. Although we did pursue these leads and other sources, the jinx has not been broken.

Carl Mayfield (VA), **Violet Pesinkowski** (NY), **Shelli Lodge-Stanback** and **Bradford G. Stanback** (NC) have been extremely generous in support of the graduate student research at Virginia Tech. Thanks to them, and to all of you who included extra donations with your dues, we are covered for the first year of a three-year program, with an annual budget of \$15,500.

FEWER SEEDNUTS

Last winter we cut many bearing chestnuts which did not pass resistance tests in the Martin American Chestnut Planting. Stump sprouts from these trees will be used as grafting stocks for high-altitude testing of new resistance sources and the second-

generation all-American intercrosses, also. We estimate the bearing chestnuts which remain may produce about 1,000 seednuts (in contrast to last year's harvest over 5,000). While I am not permitted to predict a higher percentage of resistant individuals among this year's nut crop, I am unable to totally dampen this expectation.

We harvest seednuts in three additional planting and grafting plots, where I estimate we may collect up to 3,000 more nuts. Mountain Lake and two other areas were hard hit by a very late freeze which seems to have suppressed production of female flowers. Quite a few trees which bore many nuts in 2000, will bear few or none this fall.

For these reasons we shall be sending **only 15 seednuts to each grower**. Twenty minutes in water at 120 F kills immature weevils in the chestnuts, then we begin mailing seed in early November.

CHESTNUT HARVEST

The culled chestnuts have been dragged into the woods on the edges of the Martin American Chestnut Planting. This wood should be useful to craftsmen or gardeners. Let me know if you are interested, and we can arrange an appointment for you to cut and carry off some chestnut wood. This offer is available to any member who gives an extra donation to ACCF research. The nut harvest in this planting is usually the last week in September through the first week in October.

GRAFTING REPORT

Below you will find the results reported so far from this and previous years of grafting:

<u>Grafter</u>	<u>Total Surviving</u>	<u>(new in 01)</u>	<u>State</u>	<u>Technique</u>
Carole Agee	1	(1)	VA	Bark
Ed Greenwell	119	(82)	TN	Nut & Bark
Ken James	78	(20)	NY	Whip & 4flap
Carl Mayfield	18	(2)	VA	Whip & Nut

Lucille
Flute

81

(19)

VA Whip, Cleft, Bark,

Each graft into an existing root system, can place another blight resistant individual on an ideal American chestnut site (in a cove receiving the drainage of surrounding slopes and full morning sun, in well-drained, sandy loam soils, at altitudes below 2,500 feet). Once you have such a site under management for American chestnut, you too will be forever looking forward to the next spring. Remember, **every chestnut which succumbs to the blight is not a loss**: it is your opportunity to graft another blight-resistant chestnut.

Grafting invitation: learn chestnut-grafting techniques at Virginia Tech in April of 2002, by appointment on a morning of your choice (no Tuesdays). This invitation is open to all members who send an additional donation to support ACCF research. Please respond in February, suggest two dates (from which I could choose one) and indicate how many grafts you plan to attempt, so that we may have enough scionwood on hand to share with you.

We send best wishes for all your American chestnut projects and look forward to reading your reports.

Respectfully submitted,

Lucille Griffin, Executive Director

Other ACCF Directors

Dave McCurdy, President, Superintendent, Clements State Tree Nursery, WV

John Rush Elkins, Secretary/Treasurer, Professor of Chemistry, Concord College, WV

Ed Greenwell, Director of TN chestnut projects, Electrical Engineer, Cookeville, TN

Dedicated to the restoration of American chestnuts