

American Chestnut Cooperators' Foundation

2012 Newsletter

Dear Friends and Cooperating Growers:

GROWERS' REPORTS:

In 2011, we received 137 reports totaling 2,843 ACCF chestnuts surviving. So far this year we have received 10 reports of 230 ACCF chestnuts growing, although drought and other difficulties may be expected to diminish results from these early reports.

This past winter we cut many large chestnuts in the four research plots in which we harvest most of our seed. Most of these chestnuts were early intercrosses, their blight resistance no longer judged to be the best in a given breeding line, or else they were duplicates which were shading much younger chestnuts known or suspected to have superior blight resistance. Cutting some chestnuts improved the quality and temporarily decreased the quantity of seed to be expected in these plots. Thus, smaller numbers occasionally represent progress.

The June 29 wind storm (derecho) took down two bearing trees and also two large grafts. We had heavy losses in the Lesesne to *Phytophthora* and voles. Remaining under our care are 735 chestnuts grown from seed, about half of which are small seedlings, if not brand new this growing season, and so, also highly vulnerable to loss.

HARVEST:

Our 2011 harvest was a bumper crop of the very best, from which we sent 3,070 seednuts to 189 growers in 30 states, D.C., Quebec and Italy, and planted the rest ourselves. **Jane** and **Jim Reilly**, our most outstanding cooperators to date, came from PA to help for two mornings at harvest. Taking turns on the six-foot ladder wielding the 14-foot extension pole pruner, they did the lion's share of the hardest work and returned home with a few bags of burs, which they processed themselves; they then planted over 500.

We cannot promise anything near a similar number of seednuts to volunteers who may be able to help this coming fall, because we never know how many chestnuts we will harvest until the job is done and the chestnuts are out of the burs. We could not even make a reliable estimate by counting the number of swollen burs (if such a thing could be done), because swollen or not, many of them may contain just one, two or no chestnuts at all, instead of the usual three. Whenever there are frequent, heavy rains during the time when female flowers are receptive, pollination tends to be poor.

Volunteers to help at harvest should contact us via email at allaccf@gmail.com . We harvest from nine a.m. till noon on weekdays in the second half of September, and sometimes also in the first few days of October. Precise dates cannot be fixed until September, when we can better predict on which days help may be needed.

Harvest volunteers may take home (in their burs) a much more generous share of the chestnut harvest than the usual allotment sent to growers. We limit growers to 10 each, because getting chestnuts out of the bur is very hard on the hands. In years of surplus, we send extras to growers who have reported reliably and indicated that they could plant and care for more than 10.

GRAFTING:

I made 60 grafts, mostly in March; this was an even earlier spring than last year. Thirteen new grafts survive in six research plots. In five of these plots, my percentage of takes was well above if not at 20%, but the plots out in Giles County ruined my record. There we had two late killing freezes or frosts; I put paper bags over the tops of shelters in which direct-seeded chestnuts were growing and saved most of them. In the case of the grafts, which are already inside shelters covered by shade bags, I thought they might be OK. The only graft of 18 to survive, was one that was made on the unique sprout from its chestnut root; all the other grafts had additional stems which were exposed, so these grafted stocks may have been weakened by the cold shock to prevent success. Next spring, I plan to test this idea by cutting away all extra stems on each chestnut grafted. This will risk loss of some root systems, where a graft fails to grow, but these plots are in a former chestnut forest, containing many more native stocks than it is possible for me to graft.

Ambrosia beetle and blight at the union, where I had neglected to keep it covered with soil, took out three more older grafts. This leaves me with 66 grafts, among which 11 bear nuts.

CRAIGS CREEK WILDLIFE CLEARING VIRTUAL TOUR:

This year's tour is quite different from the usual. We did not plant the original plot, but took over maintenance when it was not reported by the people who had done the planting. This plot illustrates many things, the first being our reason for requiring the Cooperative Grower Agreement Form, to emphasize the long-term nature of a chestnut planting project and the need to retrieve information from each experimental planting. Unfortunately, most of the early plantings of ACCF chestnuts, in fact, the first ten years of distributions to cooperating growers, have been, for our information purposes, lost.

The growers of our early chestnut projects are not the only ones at fault: my seedling records for the early 90's are incomplete, with only the name and state of each grower, plus the number of seedlings and nursery code for the mother tree. At that time, whenever growers did not report, I deleted them completely from the database; it did not occur to me until much later that the name was the only clue I would have for the identity of the chestnuts. (These days, non-reporting or deceased growers are shifted into a separate inactive database of people who do not receive newsletters.)

The USDA-FS gave permission to a Radford church group to plant 20 American chestnut seedlings. Jesse, the technician who made the original butterfly garden and helped the group get started, may be able to give the year, but I am unwilling to send forestry folk on a paper chase. It was in the first or second year when tree shelters came on the market, when everyone was trying them out, so I guess the year was around 1993.

To enter the plot, you park by a forestry gate and walk about a quarter-mile on a mossy trail in deep shade up a very gentle slope where woodland wild flowers bloom throughout the spring, culminating in a June rhododendron show. March through May, tall rubber boots are necessary, unless your broad jump can span two feeder streams three or four yards in breadth; they are mostly dry beds the rest of the year.

The clearing at the top of the trail is about 200 yards, north to south, and 20 yards, east to west. The poor chestnuts get only an hour or two of direct sun at midday. This is not enough for American chestnut, which thrives in full and morning sun: without sufficient sun, they cannot grow at the normal rapid rate, and they cannot flower or bear nuts. Most important, shade breaks down blight resistance.

When the planting was made we were not aware of that last fact, nor did anyone know that tree shelters are unsuitable for raising American chestnut seedlings: the space inside the shelters is too narrow for the large leaves; this causes seedlings to grow deformed or spindly. Even worse, the damp enclosed space within the tubes makes an ideal incubator for the blight fungus. The children and their parents put up six-foot tree shelters here to protect their chestnuts.

After the project had gone unreported for a few years, I checked up on it myself, because it is just a half-mile from our house. Since it appeared abandoned, I adopted it, because I didn't want the children to return years later and find no chestnuts. First, I removed all the shelters (cut them into 8" lengths to recycle for use protecting grafts or direct-seeded chestnuts) and installed a deer fence, made of rebar posts and 10# test fishing line, hung with bright flagging to ward off the deer. This fence needs mending nearly every time I check it; in such a woodland environment where the deer run wild it is an impractical and imperfect deterrent. A little at a time, we carried in wire protection cages.

The Forest Service had planted autumn olive which is invasive, no longer recommended. A combination of loppers and poison contain it, barely. Eight of the original chestnut planting survive, although all but one are scrawny specimens even though perhaps twenty years old. One, which now gets much more sun has grown over 24 feet tall; its first blight canker shows a swollen, blight-resistant reaction. Over the years 2003 through 2010, I have planted by direct-seeding many chestnuts with better expectations than the original ones planted; 20 of these survive, but most are very small. This plot will not produce nuts until a storm, insects or woodcutters take down more of the shading oaks to the east. We have seen such things happen, so we continue to maintain this plot in hopes that one day its chestnuts may be released.

AMBROSIA BEETLE and perhaps other pests, as well:

Wherever we had ambrosia beetle damage last year, we sprayed all grafts, once a week or after each rain with permethrin, beginning in March instead of April, because of the early spring weather. Rain washes away the spray, and the weekly duty is quite a chore when you have so many places to cover. Much later in the spring we learned about Bayer Advanced, a rather expensive systemic treatment which is supposed to last for 12 months and known to kill many pests, among them, gypsy moth and emerald ash borers, so we switched to this for a trial against ambrosia beetle. It was somewhat inclusive, only because we had already used permethrin and started the treatment too late; however, we had no ambrosia beetle damage in any of the grafts treated with Bayer Advanced, so we shall use this product again, depending on the weather, in April or March, 2013, on all grafts and hope to report a perfect result next year. This chemical is mixed in a gallon of water, its strength calculated according to the diameter of the stem to be treated. If it works, it would be a most convenient solution.

Where gall wasp was a big problem last year, we had virtually none this year, although we spotted two Chinese chestnuts in town which were heavily infested with this pest. We did find a few deformed galls in the Martin American Chestnut Planting, and on one branch of a big graft in our yard, pinched them off and destroyed them.

In the ongoing war against voles, we ran out of Prozap at the same time as the store's supplier, so we have been trying an organic product, Plantskydd, which is advertised to deter rabbits and other small critters for up to a year. This sounds too good to be true, but nevertheless we have been sprinkling it inside cages or down the holes, as we discover new tunnels. Next year we may try it exclusively in one plot, for a controlled experiment.

OUTSTANDING COOPERATORS:

Special thanks to **Mark Miller** and his crew from the **USDAFS Blacksburg Ranger Station** for cutting down quite a few very large trees, mostly tulip poplars, which used to shade the first two or three rows of chestnuts in the Hotine plot and probably were also responsible for delaying nut production on some large mature chestnuts. We thank the **Mary Moody Northern Foundation** and **Virginia Tech** for plot maintenance on Salt Pond Mountain. Thanks again to **John Buschmann** for supporting ACCF research and plot maintenance in the Lesesne. Many thanks to **Rick Gendreau, Carol Croy, Kyle Boardman, Vicky & Eli Lewis**, in addition to **Jane &**

Jim Reilly, for volunteer help at harvest last fall. Kyle and Eli also set up a bat house, about 10 feet up a tree, which grows just above a small chestnut plot near a watering pond, a likely place for bats to live and help control insects.

At this time of year, many growers have to water new seedlings or risk losing a sizable investment in chestnut work. This duty done, on the way home, I listen to Pavarotti; the beautiful music he made lasts forever. I have found it to be a perfect accompaniment to my chestnut thoughts and plans, while driving to and from the chestnut plots: an inspiration going, followed by a reward for the return trip. The best aria on this, my best CD, ends with the words, “di dolore morore,” expressing what will happen if you forget to water your seedlings through the drought. Our chestnuts cannot last forever. May some of them last at least 200 years; may their progeny last forever.

We look forward to reading your reports and thank you for your work.

Respectfully submitted,

Lucille Griffin, Executive Director

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Dedicated to the restoration of American chestnuts