



The TREE URCHIN

Newsletter of the Maine Chapter of the
American Chestnut Foundation



Volume 12 Number 2

Fall 2009

The Mission of the Maine Chapter of the American Chestnut Foundation:

- A. *To protect, conserve, preserve and propagate trees from all-important remaining native Maine American chestnut populations in the state.*
- B. *To restore American chestnuts to a place of ecological and economic importance and self-sustainability throughout their original forest range in Maine.*
- C. *To make blight-resistant American chestnuts available to the people of Maine as soon as possible.*

President's Letter

We have managed to accomplish a great amount of work this summer in spite of the rainy weather in June and July. On June 27 we were able to finish the inoculations at Merryspring and to inoculate the trees in Clark Granger's lower orchard at Weeks Mills. Kendra Gurney, NE Region coordinator for TACF, led an energetic group of volunteers in this inoculation effort. Then a few days later a group of 6, led by Eric Evans and assisted by Harold Mosher, Chuck Marecic, Charlie Hudson, Clark Granger, and Glen Rea, started culling the trees in Clark's upper orchard which had been marked to be cut.

The weather did play havoc with our plans to pollinate more trees to fill out some of our smaller lines as we were only able to pollinate one tree. But this was an important tree as it is located in Embden (Solon) and is in the most northwest part of the natural range of the American chestnut in Maine.

Results will be known this fall, but if this year is not successful we will be back next year. Also next year we have been invited back to the Orono tree by the new owners of 121 N. Main Ave. and this should help to fill out a small line which Harold Mosher is managing. This will be our 5th attempt at pollinating this tree and we have only about 50 seedlings to show for this effort.

continued on page 3



front: Kendra Gurney, Judy Stone, Glen Rea
standing: Eric Evans, Alan Markert, Harold Mosher, Roger Willby,
Gregor Davens, Read Brugger, Charlie Hudson, Ann Rea, and
Becky Rea

Maine Chapter Annual Meeting

The Annual Meeting of the Maine Chapter will be held on **Saturday, October 17** at the Merryspring Nature Center in Camden. The meeting will start at 9:00 am and will conclude at noon. For those who wish to visit some of our breeding orchards, we will go to several in the area in the afternoon. This year we will be providing pizzas and salad for lunch along with a beverage. It is a beautiful location in the beautiful month of October so plan to attend if possible and meet some of your fellow chestnutters. More Annual Meeting Information on page 5

**The Maine Chapter
of the American Chestnut
Foundation Board of Directors**

Officers:

Glen Rea Bangor (President)
Eric Evans, Camden (Vice President)
Joseph Conwill, Rangeley (Treasurer)
Charlie Hudson, Liberty (Secretary)

Directors:

Joni DeCato, Bangor
Bob Frank, Hampden
Henry Leigh, Searsport
Jay Lindsey, Winthrop
Alan Markert, Farmington
Harold Mosher, Hope
Welles Thurber, Belfast
Roger Willby, Bridgton

Contact Us:

Glen Rea, ME-TACF President
231 Buck Street
Bangor, Maine 04401
207 945-6945
glenrea42@msn.com

Eric Evans 207 236-9635 belevans@roadrunner.com
Jay Lindsey 207 377-6174 jlindsey@fairpoint.net

Visit Us online at

The American Chestnut Foundation:

www.acf.org

The Maine Chapter:

www.me-acf.org

Please send correspondence regarding ME-TACF news, the ME-TACF website or The Tree Urchin to TreeUrchin@gmail.com
Newsletter and Web Editor, Chuck Marecic

Sixth Generation, BC3-F3 Seedlings Come to Maine

This past spring the national TACF organization distributed the first highly blight-resistant BC3-F3 seeds/seedlings from the Meadowview Farms to members of TACF. Those with the longest, uninterrupted, membership were given the opportunity to purchase 5 seeds or 2 seedlings for a donation of \$20. In Maine we had two members who were on the list and they took advantage of the offer. Garold Thumm and Bob BaRoss were the lucky recipients and both of them donated their seedlings to the Maine chapter. The seedlings that Dr. Thumm received are now growing in Eric Evans backyard and will be planted next spring at a site to be selected. Bob BaRoss elected to have his seedlings over-winter at a greenhouse in Ohio because they were going to be late in arriving, but should be forwarded to us next spring. The site for these seedlings has not been selected yet. Thank you very much, Bob and Garold.



Up Coming Events:

Saturday, **September 8**, Wonder of Wood 2009 at the University of Southern Maine, Portland from 9 am to 3 pm.

Friday, **September 25** to Sunday **September 27**, Common Ground Fair in Unity. Come visit us at our ME-TACF booth in the Environmental Concerns tent.

Sunday 3:15 to 4 pm Presentation by Glen Rea.

Saturday, **October 17**, Maine Chapter Annual Meeting at Merryspring Park, Camden, from 9 am to noon.

Visit to orchards in the area during the afternoon.

Friday, **October 23** to Sunday, **October 25**, TACF Annual Meeting in Pittsburgh, PA.

Friday, **October 30**. Senior College presentation by Glen Rea at University of Maine, Orono.

Please check our website www.me-acf.org for news updates, and details. Thanks.

Helen Powell (1923 -2009)

In the past eighteen months we have lost 4 stalwarts of our program. In Jan. 2008, Ivan Booker died, and this was followed by the death of Louis (Slim) Powell a few weeks later. Then in Jan. of this year we lost Austin Jones, and on July 18 we said goodbye to Helen Powell. Slim and Helen could not give much physical support but they were there to encourage us and to provide monetary support. After Slim died, Helen kept asking what we needed for our chapter that she could buy for us. At Meadowview there are "Legacy Trees" which people, companies and state chapters can sponsor with a gift of \$10,000. Maine and Georgia are the only two state chapters with a Legacy Tree, and ours is because of Helen Powell. With typical "Maine modesty" she asked that the gift be anonymous. So if you visit Meadowview, please look for the Maine tree and remember the Powells. Also this summer we were looking at orchard ladders to help in our controlled breeding program. These ladders can cost up to about \$500 each and she insisted that we should have at least four of them so we could get our work done faster and better. There are many other examples of their generosity but they would not want to see us dwell on the specifics too much, but rather concentrate on the chestnut trees. We thank you Slim and Helen and you will be remembered with fond memories.

President's Letter (continued from page 1)

We will institute a more aggressive program with re-locating the squirrels about the time the seeds ripen. They manage to get there a few hours or days before we do and harvest the seeds in the burs.

We lost another strong supporter of our program when Helen Powell passed away on July 18. There is a separate tribute to her in this issue.

We have several events coming up which will help promote our program, including a display in Portland at the Wonder of Wood exposition, and the Common Ground Fair.

Glen Rea
 President, Maine Chapter
 The American Chestnut Foundation

Some Photos of the Great Deer Hill Chestnut Tree "Massacree" of July, 2009.



The Orchard
 (far left)

"General"
 Clark Granger
 (center).

Harold
 "Chainsaw"
 Mosher
 (right).



Harold, Glen, and Eric getting ready to go a-roguing at Deer Hill orchard!

Glen marking the next victim.

Eric deciding the plan of attack.

Breeding Program Update

This summer the Maine Chapter has made steady progress in our breeding program. In the Spring URCHIN, I reported that we were near completing our goal of planting and growing 20 lines of third-back-cross trees (BC-3) for each of the two sources of blight resistance, called Clapper and Graves. But some of those 40 lines are not thriving, so we decided to continue our routine of making BC-3 trees this year. In July, Glen Rea pollinated one native Maine American chestnut tree in Embden (Somerset county) with pollen from a second-back-cross tree in the TACF research farms in Virginia, to add another line of third-back-cross trees (BC-3) to our breeding orchards. This tree is the most northwesterly of all the trees we have “captured” in our breeding so far, so will be a valuable addition to our genetic diversity if we can get a good harvest next month. We had intended to pollinate several others this year, but lack of female flowers and difficulties with timing prevented it. We will try again next year.

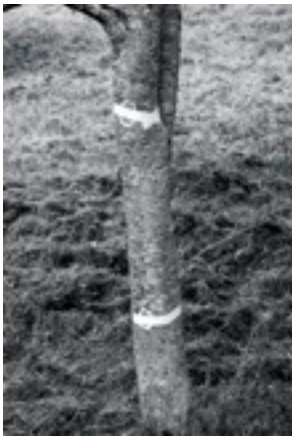
Is there a mature native American chestnut tree that you could help us pollinate next year? Here is what we are looking for:

1. Native-Maine American chestnut—not horse-chestnut, and not planted from a non-Maine source. See the following website for I.D. information: <http://www.mindspring.com/~psisco/www/overview.html>
2. Bloomed this year and last, and makes burs.
3. We haven't already captured it in our breeding program. Here is a list of the towns of location of our trees captured so far: Albion, Atkinson, Belfast, Bradford, Buxton, Camden, Center Lovell, Damariscotta Mills, Dexter, Dixfield, Dover-Foxcroft, Exeter, Frankfort, Freedom, Jay, Leeds, Limerick, Mariaville, Montville, Morrill, Nobleboro, Orono, Paris, Pownal, Rockport, S. Bristol, Sebec, Sunset, Temple, Topsham, Wilton, Winthrop, Yarmouth.
4. It is accessible by a bucket-truck or a lift towable by a 4-WD truck.
5. Even if you don't know of such a tree, and want to help with any pollination....

If you think you can help us with this, please contact me (236-9635, belevans@roadrunner.com) or Glen Rea (945-6945, glenrea42@msn.com).

Until this year we had inoculated BC-3 trees in three of our breeding orchards with live lab-grown blight fungus to evaluate their resistance to Asian chestnut blight:

1. Merryspring Park orchard in Camden in 2007.
2. Phil Groce's orchard in Union in 2007.
3. Deer Hill Farm orchard plot #1 in Weeks Mills in 2008.



The inoculation was accomplished by first drilling small holes in the bark of the trees. A small plug excised from a culture dish of the fungus was put into the hole and a piece of tape placed across the site to keep the plug in place. If the tree has little or no resistance, the fungus will take hold and form a canker that spreads outward from the inoculation site. In the case of a tree that has resistance, the size of the canker will be much smaller, since the fungus will not grow as fast or as easily.

This spring TACF Pathologist Fred Hebard and TACF New England Regional Science Coordinator Kendra Gurney completed the selection process in the Merryspring and Groce orchards, based both on small canker size and on good American chestnut form.

Then Maine chapter volunteers rogued these combined lines to the best three trees in each of the four lines there. The trees that we have kept appear to have moderate blight-resistance consistent with the theory of the program—the trees have walled off the blight infections (cankers) and look like they will continue to out-grow the cankers, whereas the cankers of the trees we rogued were growing fast enough to girdle and kill the tree. This July, many of the “keepers” bloomed and pollinated each other. We will collect these seeds—the first intercross

generation, called BC3-F2—in October and plant them in our first seed orchards next spring. According to the current TACF thinking (the genetic model), about 1/64th of the BC3-F2 seeds will grow into trees that are highly blight-resistant like their Chinese great-great-grandparent. We expect to start harvesting fully blight-resistant American chestnuts from those trees in Maine about 8-10 years from now.

continued on page 11

Annual Meeting of the Maine Chapter of the American Chestnut Foundation

On Saturday, October 17, 2009 we will hold our annual meeting at the Merryspring Nature Center in Camden, Maine from 9:00 am to noon. We hope that all members and prospective members can attend. This Year's Invited Speaker Clark A. Granger, PhD will present:

Prospects for the Return of American Chestnut in Maine: *the Perspective of a Forest Pathologist, Tree Farmer, and Chestnut Breeding Orchard Manager.*

Clark provides an important and valuable perspective to our American Chestnut Restoration Project. He has spent over 40 years working as a Forest Pathology diagnosing forest diseases, designing and publishing integrated pest management programs, and designing forest disease survey, monitoring and assessment programs. During his tenure with the Maine Forest Service (1979-2006) as a Forest Pathologist, Entomologist, and Nursery Manager, he has also planned, directed and administered forest pathology programs, directed the Maine Forest Service Divisions of Insect and Disease Management and Community Forestry, as well as, supervised operations at the State Forest Nursery. He has written and edited over 100 scientific publications, and delivered hundreds of talks and lectures. He was appointed by the president of the American Farm Bureau Federation to communicate the forestry needs of northeast farmers at national level meetings. He has also managed the Granger Family Farms since 1979 for which he has received the Maine Outstanding Tree Farmer 2003, as well as, the Northeastern United States Outstanding Tree Farmer 2003. In 2004, he received the Lifetime Achievement Award from the Maine Nursery Association.

Meeting Agenda:

- 9:00 Welcome (coffee, tea, juice, etc. provided)
- 9:30 Business Meeting
- 10:00 Clark A. Granger, PhD, invited speaker, "Prospects for the Return of the American Chestnuts in Maine."
- 11:00 Project Updates
- 12:00 Lunch (provided by ME-TACF)

After lunch, we will tour local breeding orchards.

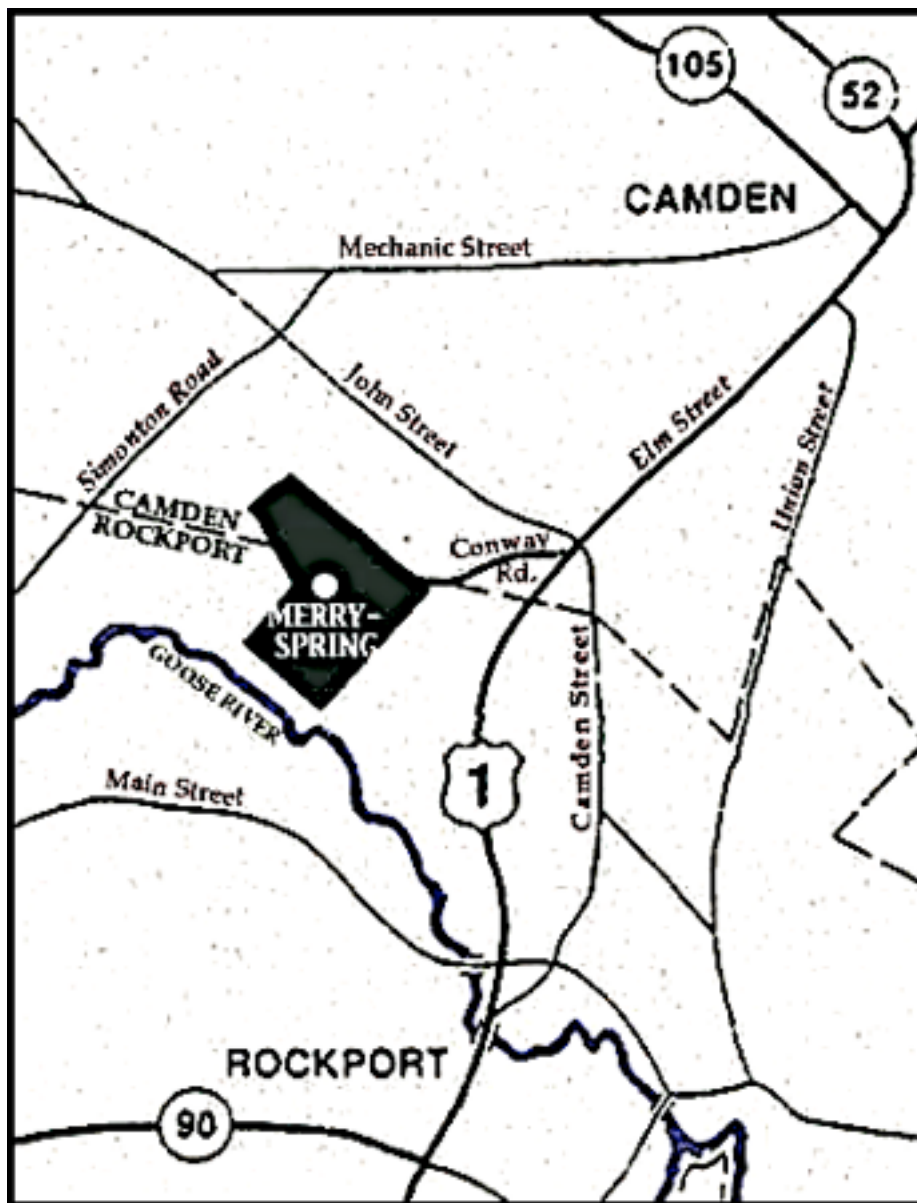


Directions to Merryspring

Merryspring sits at the end of Conway Road, just 3/10 of a mile off U.S. Route 1 at the Camden/Rockport town line in Maine. For more information about Merryspring, go to www.merryspring.org.

From the **south** and **west**, take Route 90 off Route 1 in Warren. This will rejoin Route 1 in Rockport, at which point you turn left and proceed northerly for about 1 mile. Conway Road will be a sharp left at the top of a hill, just in front of the Subway restaurant.

From the **north**, take Route 1 through the town of Camden. From the center of town, it's about 6/10 of a mile to Conway Road on your right.



ME-TACF Multi-Purpose Form

Maine Chapter of The American Chestnut Foundation

VOLUNTEERING We need your help! As our ME-TACF Chestnut breeding and education program grows and our activities expand, we very much need the assistance of our volunteers. Whether or not you have a particular talent or skill, we would like to hear from you. We will provide training!

I like the following kinds of tasks (check all that apply):

- Outdoor work Work at events such as fairs Give formal presentations Telephoning
 Work with children Help with mailings Writing Fundraising Library Research
 Organizing Other (please specify) _____

I am available (check all that apply): Weekdays Weekday evenings Weekends On short notice

I have experience/expertise in: _____

MEMBERSHIP Your membership is important to The American Chestnut Foundation. When you join, you express your commitment to our mission of restoring chestnuts to Maine forests. Membership in TACF includes subscriptions to its quarterly newsletter *The Bark*, its twice-yearly *The Journal of The American Chestnut Foundation*, and membership in the Maine Chapter. Other membership benefits include discounts on Maine-native American chestnut seeds and seedlings and the opportunity to purchase blight-resistant seeds and seedlings when they become available. We offer three Maine-native seedlings with each new membership.

Your membership in TACF supports all the Foundation's breeding, research, education, and publicity projects. For TACF membership support levels of \$40 or more, \$15 is forwarded to the Maine Chapter. Please consider making an additional contribution to the Maine Chapter to support our mission to produce blight-resistant American chestnut trees most adaptable to Maine's forests by selecting a ME Chapter Sponsorship Level in the right-hand column below. Thank you.

TACF Membership Support Levels

Enclosed is my TACF membership support of:

- Gold Leaf, \$1000
 Silver Leaf, \$500
 Bronze Leaf, \$250
 Green Leaf, \$100
 Regular, \$40
 Other, \$ _____

Make **TACF Membership** check to: **TACF**

TACF Membership Total \$ _____

Maine Chapter Sponsorship Levels

My contribution to the Maine Chapter :

- Breeding Orchard, \$1000
 Mother Tree, \$500
 Seedling, \$100
 Seed, (other) \$ _____

Make **Maine Sponsorship** check to:

Maine Chapter -TACF

Chapter Sponsorship Total \$ _____

Total Amount Enclosed \$ _____

CHESTNUT SEEDS AND TREES FOR SALE

Indicate your interest in buying the following native-Maine American chestnuts by checking your selection(s). We will contact you for payment later. We offer a 30% member discount. (All shipping costs are extra).

- \$20 for ten Seeds \$10 per Seedling in pot \$40-80 for 4-8 ft. tree in root-bags

Name: _____

Address: _____

City/State/Zip: _____

Telephone: _____ Email address: _____

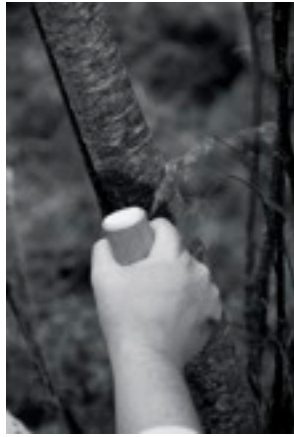
Please return this form to: ME-TACF; c/o Glen Rea; 231 Buck St.; Bangor, ME 04401 THANKS!

To return this form, please fold and tape closed. If you are sending a check, please use an envelope. Thanks!

Place
Stamp
Here

Maine-TACF Membership
c/o Glen Rea
231 Buck Street
Bangor, ME 04401

In June 2009 we inoculated two more sets of trees—80 trees in a younger line at Merryspring that we had planted in 2002, and about 100 trees in two lines in plot #2 at the Deer Hill orchard that we planted in 2003. We will evaluate and then rogue those orchards next year.—Eric Evans, Breeding Program and Science Director



**METACF
Volunteer
Handwork**



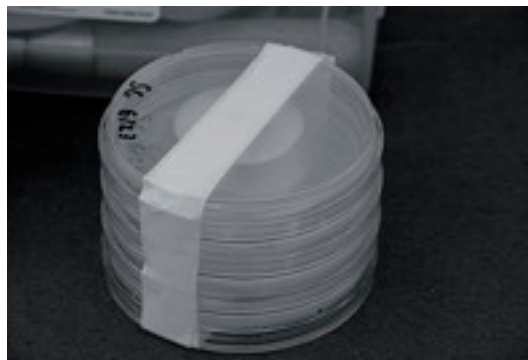
Inoculation Day at Merryspring and Deer Hill Orchards, June 2009 photos by Chuck Marecic

Publicity, Education and Membership Committee (PEM)

Since our Spring edition of the URCHIN, there have been several events which have helped to get our message to new audiences. In May of this year Glen Rea gave a power-point presentation to the Lions Club in Bangor, and in July he gave a lecture at Beal College to the Forest Ecology class. Also in July, Ann and Glen Rea presented our displays and literature at the Penobscot River Revival Day in Bangor. The orchard at the Penobscot Experimental Forest (PEF) in Bradley continues to attract a good number of people. It is now on the tour that the USFS conducts for visitors, and a few weeks ago a group of German foresters had a chance to observe our fine orchard and take pictures of these fast growing trees. At the annual cook-out at PEF in August, which is held for staff and volunteers, Glen Rea was able to talk with John Brissette (Regional Manager of the US Forest Service) and members of the faculty at Univ. of Maine. The Forest Service has agreed to provide us with 10 acres of land to be used for our seed orchards at PEF. Mr. Brissette also said there is land available on US Forest Service property in Southern Maine if we wished to have a seed orchard near York. Eric Evans and Harold Mosher gave a presentation about our breeding program at Merryspring Park, Camden, in July.

Don't forget to check out our Maine Chapter website at www.me-acf.org.

Blight Resistance: Only the strongest will survive.



To the left, a ME-TACF grown BC3-F1 tree from the Merryspring Orchard.

Above, petri dishes of lab grown blight inoculant.

To the right, a two year-old canker on a tree with moderate blight resistance.

Finance Committee Report

The balance in the Chapter's checking account continues to show a positive balance, with funds being higher now than at the beginning of the year. We continue to receive a very generous donation from the Spellissey Foundation, and we also received generous donations from Helen and Slim Powell over the past 18 months. Without these donations we would be solvent, but we would not be able to conduct the type of program that we now have the opportunity to conduct. The pollination program, which is our most expensive item, did not require as much money as in the past since we only pollinated one tree this year. Because of the support from the US Forest Service and the Univ. of Maine in providing land for our seed orchards, we will not need to acquire our own land for these orchards. Sales of seeds were not as great as in the past, but Eric Evans did bring in an additional \$910 income from selling 14 4-yr-old 6-ft tall whips in 12" root bags from including 7 now planted at Coastal Maine Botanical Gardens in Boothbay (www.maine gardens.org).

PEM and Finance Reports
submitted by Glen Rea

Breeding Project Report (continued from page 4).

In the Deer Hill plot #1 orchard, Kendra made the initial ratings of the cankers this June, and then we did a preliminary rouging of the worst 2/3 of the 200 inoculated trees in July. We will re-rate the remaining trees in October, then make the final selections and finish rouging after that. The “keepers” will pollinate each other next year for the first BC3-F2 generation there.

Here is my best guess for a **timetable of progress toward blight-resistant Maine-adapted American chestnuts**,

* *Make third-back-cross seed (BC3) by pollinating ME-natives with BC2 pollen from Meadowview: 1997-2010*

* *Plant third-back-cross trees in breeding orchards: 1999-2011*

* *Inoculate BC3 trees to test for blight-resistance: 2007-2017*

* *Select BC3 trees from test for blight-resistance: 2008-2018*

* *Cross selected BC3 trees with each other to make first-intercross generation, BC3-F2: 2009-2022.*

* *Plant BC3-F2 seeds in “seed orchards”: 2010-2023*

* *Inoculate BC3-F2 seedlings, then select for full blight-resistance: 2012-2025*

* *Select and cull: 2013-2026*

* *With open pollination, begin BC3-F3 seed production from seed orchards, expected to breed true for full blight-resistance: 2019 MANY YEARS.*

* *Formal testing, systematic forest plantings: 2020-2035*

* *Limited distribution &/or sale to members: 2020*

That’s Easy to Say!.....



In the 10-year history of the Maine Chapter we have been working primarily on the first two items of the time-line shown above. But as we move into the next and final phases of the breeding program, our work demands will increase several-fold. How will we manage and accomplish that? The obvious answer is that we need to double or triple our membership and our lists of committed and enthusiastic volunteers. So, we are asking everyone reading this to picture a future with thriving American chestnuts regaining their place in Maine’s forests. Then fill out and return the volunteer-membership form so that we know how and when to call on you to help with this exciting work. If you are already on our volunteer list, please pass this on to a friend with whom you want to share this work.

For starters, here is a description of the major jobs for next coming year. Exact dates depend on Mother Nature. If you send in a volunteer form, you can simply refer to the following letters:

- A. At the **Common Ground Country Fair** (MOFGA, Unity) at our booth, spread the word to fair-goers about the return of American chestnuts: 18 people in 3-hour shifts, **September 25-27**.
- B. Harvest BC3-F2 seeds in Merryspring orchards: 5 people one half day in October.
- C. Inoculate 100+ trees in Highmoor orchard in Monmouth with live fungus to test for blight resistance: 10-15 people one day in June 2010.
- D. In Merryspring orchard in Camden and Deer Hill orchard in Weeks Mills: rogue trees, cut and haul to burn piles: 5-10 people one day in July 2010.
- E. Routine tree care and measurements in 11 breeding orchards in Monmouth, Camden, Hope, Union, Unity, China, Lovell, Veazie, Morrill, and Bradley: 4-6 people one day in October and June in each location.
- F. Manually pollinate several native American chestnut trees: teams of 2-3 people one or two half-days in July in each location to be announced.
- G. Develop seed orchards in several locations in Maine: see our website for announcements
- H. Publicity committee chair: one person to take responsibility for press releases, media articles, presentation coordination, etc.
- I. Volunteer coordinator: one or two people to maintain volunteer lists and assist work team leaders in staffing work parties
- J. Other publicity and education-related activities year-round: volunteer-coordination, chapter annual meeting production in October, regional meetings, presentations at fairs and club meetings, chestnut growing and demonstrations for school groups, upgrade slide shows and booth displays, etc.

Breeding Program Report
submitted by Eric Evans

ME-TACF
231 Buck Street
Bangor, ME 04401

U.S. Postage Paid

