



THE
AMERICAN
CHESTNUT
FOUNDATION

MARYLAND CHAPTER

Newsletter – September 2008

Chapter Officers:

Ms. Essie Burnworth, President
Dr. Gary P. Carver, Vice-President
Ms. Barbara B. Knapp, Secretary
Ms. Emilie Crown, Treasurer

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Dr. Douglas H. Boucher
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Mr. Paul Eriksson
Ms. Betty Garrand
Mr. James Hill
Mr. David Jacobson
Mr. Ron Kuipers
Ms. Kathy Marnet
Mr. Robert Strasser

YOU ARE INVITED

MDTACF Annual Meeting and Picnic

Saturday, October 4, 2008
10:30 am

Izaak Walton League Headquarters
707 Conservation Lane, Gaithersburg, MD 20878

10:30 Chapter Business Meeting and election of Officers and Board

11:00 to 1:00 "Chestnut Science and Education"

Featured speaker: **Dr. Carolyn Howes Keiffer**,
Associate Professor of Botany, Miami University, Ohio
(See page 4 for additional program details)

1:00 to 2:00 Picnic

WE INVITE MEMBERS AND EDUCATORS FROM THROUGHOUT THE REGION TO JOIN US FOR THIS EXCITING PROGRAM. IF YOU HAVE EXPERIENCE RELEVANT TO TEACHING CHESTNUT RESTORATION SCIENCE, WE HOPE YOU WILL CONTACT US AND PLAN TO SHARE YOUR IDEAS, RESOURCES AND EXPERIENCES.

The Maryland Chapter of The
American Chestnut Foundation

C/o Barbara Knapp, Secretary
21900 Davis Mill Road
Germantown, MD 20876

Newsletter editors: Karen Buchsbaum
and Kathy Marnet
kathymarnet@hotmail.com

Chapter web site: www.mdtacf.org

The Maryland Chapter supports the efforts of The American Chestnut Foundation to restore the American chestnut tree, identifies and preserves American chestnut survivors in Maryland and promotes educational and scientific research efforts directed at restoring American chestnut trees in Maryland.

JOIN THE PICNIC COMMITTEE?

Send a message to
mdchapter@acf.org if you'd like
to help. Thanks!

Report of Nominating Committee

The nominating committee recently nominated officers and board members for the next term:

Officers	Term
President: Essie Burnworth	1 year
Vice President: Gary Carver	1 year
Secretary: Barbara Knapp	1 year
Treasurer: Emilie Crown	1 year

Executive Board	Term
James Coleman*	3 year
Paul Eriksson*	3 year
Betty Garrand*	3 year
Ron Kuipers*	3 year
John Cordts	3 year
Jamie Weaver	3 year
Vince Berg	3 year
Katia Engelhardt	2 year
Laura Lewis	1 year

*indicates incumbent

Save the date

3rd Annual American Chestnut Restoration Feast
Sunday, November 2, 2008

5 – 9 pm
The Comus Inn – Sugarloaf Mountain

Check the web site for details: www.mdtacf.org

Cost: \$100 per person

By check payable to: Maryland Chapter of The American
Chestnut Foundation

C/o Barbara Knapp, Secretary
21900 Davis Mill Road
Germantown, MD 20876

Planting and Pollination a Success

Robert Strasser and Karen Buchsbaum

This spring marked the 5th anniversary of breeding work in Maryland. TACF members and volunteers celebrated this milestone by working tirelessly to make this year the most ambitious planting season to date. With planting efforts spearheaded by Robert Strasser, almost 1500 nuts were planted in 11 Maryland chapter orchards and 3 school orchards. All of the 8 previously existing orchards are now planted to capacity. The main objective of this year's season was planting 20 lines of 'Clapper', and establishing new B2 lines of the 'Musick' sources of resistance. Maryland now has three orchards devoted to growing the chestnuts derived from this source that has showed promise for resistance to *Phytophthora cinnamomi*.

Another exciting development this year was the planting of a field trial of B3F3 nuts at ThorpeWood. These B3F3 nuts come from Pennsylvania and Virginia seed orchards and mark what could be the home stretch in the march towards creating chestnuts that are true breeding for blight resistance. BCF3 crosses are on average 15/16ths American, and are believed to be the final cross required to attain recoverable, strong blight resistance while retaining American phenotypic characteristics in the trees.

With all of the excitement of planting, there was very little time for rest before the start of pollination season. This year, controlled pollinations focused primarily on making new 'Musick' source lines. A few additional crosses of other types were undertaken as well. Six 'Musick' source crosses were made on Maryland mother trees, totaling 350 bags. Two F1 crosses were also conducted on flowers in 38 bags to serve as checks for 2009. One new 'Clapper' source B4 was made using pollen from a tree in Morgantown, WV. The last line created was an experimental intercross line between a 'Musick' B1 tree, TW 50, and a 'Clapper' B3 from Meadowview. This line will serve as a test for recovery of high levels of resistance.

Without the assistance of a bucket truck, pollinations were conducted using ladders on relatively accessible mother trees, and from the ground at ThorpeWood, Sugarloaf Eastfield, and WMREC. The core pollination team consisted of Essie and Burnie Burnworth, Tom Ladson, Karen Buchsbaum, Gina Staley, and a few other enthusiastic helpers who took special interest in learning about the process.

Of special note during pollination activities was the presence of Thomas Nassif, who is making a documentary film on chestnut restoration using footage taken in the field in Maryland and Virginia this year. We are looking forward to seeing the results of his efforts and encourage all who can make it to attend the Chestnut Festival organized by his father Joe in Rowlesburg, West Virginia on October 12th.



Left: Frederick County teacher Gina Staley assists with pollination at ThorpeWood

Right: Stanback intern Thomas Ladson applying hypovirulence treatment to blight cankers on an American chestnut.

Hypovirulence Treatments at Sugarloaf

Essie Burnworth

On July 2 and 3, Laura Russo and Tom Ladson, the Virginia and Maryland Chapters' summer interns, evaluated and re-treated cankers in the East Field at Sugarloaf Mountain. Treatments with a hypovirulent "soup" last August appeared to have helped heal some of the cankers on many of the chestnuts in East Field. We re-photographed each canker to have a before and after photo, and then we re-treated each canker that seemed to still have active areas. New cankers were noted, photographed, and treated with the same "soup" formulation that was used last summer.

We were delighted to confirm that some of the cankers definitely seemed to have benefitted from the hypovirulent mixture. When one or more of the seven isolates in the "soup" combines with the blight fungus in the canker, a virus infects and weakens the original fungus. This weakening enables the tree's own defenses to prevail and may lead to callus tissue growing over the canker.

Evaluation and re-treatment of cankers in West Field was begun as part of a general workday at West Field on July 12. Remaining cankers treated will be evaluated and re-treated if necessary before the end of July.

Barbara Knapp's champion American chestnut was also treated by Tom Ladson on July 10. He noted that most of the cankers on the main trunk appeared to be healed or healing. Five of the hypovirulent isolates in the "soup" were originally developed by Dr. Donald Nuss at the University of Maryland's Biotechnology Institute to treat the cankers on this champion tree. The remaining two isolates were made by Mark Double at West Virginia University to treat cankers on an American chestnut tree in the Green Ridge State Forest.



Carroll County School Plantings: A Growing Partnership

Karen Buchsbaum

On the morning of April 28th the rain was coming down in sheets. At times the rain was coming down so hard it seemed to be bouncing off the pavement. It was the kind of weather made for curling up under a blanket with a good book. For several lucky Carroll County students, this was not to be the case.

North Carroll, Francis Scott Key and South Carroll High Schools, along with Northwest Middle school were chosen to participate in an exciting project, which involves planting chestnut orchards on school grounds. The goal of these orchards and complementary curriculum is to deepen the students' understanding and appreciation of the important ecological and cultural role played by the American chestnut. Students have been given the opportunity to learn all about the American chestnut, and a chance to participate in historic breeding and restoration work led by The American Chestnut Foundation.

By 8:15 am on planting day, several students from South Carroll's Science Research course were already outside preparing the site of a future chestnut orchard. Several of these students were in attendance at an earlier planting at Hashawha, Carroll County's outdoor school. The experienced students teamed up with students new to chestnuts. Together they planted about 30 Chestnuts in a little over an hour. A few brave students who were working on chestnut research projects stayed behind to help finish up.

That same afternoon, the AP Environmental Studies class at North Carroll High school planted their orchard. Despite warnings about the weather from teacher Hannah McNett, there were several students wearing sweatshirts and flip flops. One student even donned a suit. This didn't seem to discourage the students, who were all quite eager to get dirty. The students organized themselves into teams, and were incredibly efficient and well focused. North Carroll was the largest school orchard to be planted, and it was all done and cleaned up by the end of the class period.

A week earlier, students at Northwest Middle school also buckled down in the bad weather to plant an orchard. Their enthusiasm and hard work greatly overshadowed the dark clouds looming above. With the help of Hashawha educator Matt Lustig, the students were able to plant a sizeable orchard, despite some technical problems.

Faculty and staff at all of the schools were very clearly dedicated to providing students with the opportunity to take part in meaningful educational experiences. Recent pressures to perform well on standardized test have led many school systems to abandon hands-on and outdoor learning activities. According to county science coordinator Brad Yohe, Carroll County schools have done just the opposite, by supporting Maryland curriculum standards with enriching, practical experience for students.

For the past few years, Carroll County has been using a chestnut curriculum that is taught in the 7th and 10th grades.



South Carroll High School Science Research students at Hashawha orchard planting

The curriculum includes the natural and cultural history of the American chestnut, chestnut restoration, and genetics. The genetics portion of the curriculum includes a gel electrophoresis lab, as part of the MD biolab created by the University of Maryland Biotechnology Institute. An expanded High School curriculum is expected to be available to schools in the future. A new 6th grade program will introduce students to concepts that will be explored more in depth as the students advance through school. It is hoped that these new orchards will help solidify the concepts learned in the classroom and promote environmental stewardship.

Through the emergent partnership between schools and The American Chestnut Foundation, the potential for growth of both the students and the trees is quite tremendous.

Karen Buchsbaum has been working with the Maryland Chapter as an intern while pursuing her M.S. in Environmental Education through the Audubon Expedition Institute. She and her husband Eli Roth recently settled in Frederick, Maryland, a short distance from many of the Maryland orchards, after graduating from St. Mary's College of Maryland. Be sure to look in the next issue of TACF's The Bark for more about Maryland's wonderful interns.

Receive Event Notices and Newsletters Online:

In order to conserve resources and communicate more efficiently, The MD-TACF would like to use email to send out information to members. Please send an email with your name, email address and contact phone number to Betty Garrand, Membership Chair, at BettyGarrand@aol.com. Your privacy will be protected and our membership list is not shared.

The current newsletter is available in color at <http://www.mdtaf.org/NewsEvents/currentnewsletter.html>. In the future we hope to eliminate mailing to people who are able to receive the newsletter online. We use a listserve to send information about MDTACF events and new newsletter availability. Anyone is welcome to join the list, and we strongly encourage members and friends to sign up and keep addresses current. You can add, delete or change your listserve information at: <http://mrs.gale.fates.org/mailman/listinfo/mdtaf>.

CHESTNUT SCIENCE AND EDUCATION
 A REGIONAL WORKSHOP
 PRESENTED BY THE MARYLAND CHAPTER OF
 THE AMERICAN CHESTNUT FOUNDATION (TACF)

Saturday, October 4, 2008

11:00 am to 2:00 pm

Izaak Walton League National Headquarters
 707 Conservation Lane
 Gaithersburg, MD 20878

Featured Speaker: Dr. Carolyn Howes Keiffer

Associate Professor of Botany, Miami University, Ohio
 A leader in both chestnut research and K-12 education

- LEARN FROM PIONEERING EDUCATORS WHO USE THE AMERICAN CHESTNUT STORY TO CREATE QUALITY LEARNING EXPERIENCES
- SHARE YOUR EXPERIENCES AND CHALLENGES
- EXPLORE HANDS ON CHESTNUT MATERIALS
- TAKE HOME NEW CHESTNUT SCIENCE RESOURCES
- SHAPE THE FUTURE OF TACF EDUCATION INITIATIVES BY HELPING TACF LEARN THE NEEDS OF EDUCATORS WHO SEEK TO USE CHESTNUT RESTORATION SCIENCE IN THEIR TEACHING

WE INVITE TACF MEMBERS AND EDUCATORS FROM THROUGHOUT THE REGION TO JOIN US FOR THIS EXCITING PROGRAM. IF YOU HAVE EXPERIENCE RELEVANT TO TEACHING CHESTNUT RESTORATION SCIENCE, PLEASE CONTACT EDUCATION CHAIR KATHY MARMET AT kathymarmet@gmail.com/540-253-5205 AND PLAN TO SHARE YOUR IDEAS, RESOURCES AND EXPERIENCES. PARTICIPANTS WILL INCLUDE:

- Black Hill Regional Park's Chestnut Learning Box
- Sandy Burk, author of Let the River Run Silver Again!
- James A. (Jim) Egenrieder, Virginia Tech faculty, Chestnuts in Schools Partnership
- Judy Plaskowitz - Carroll Co teacher trainer for MdBioLab Chestnut Tree lab
- Matt Lustig - Outdoor educator at Carroll Co. Hashawha outdoor school
- Caroline Dufour Appalachian Trail Conservancy Land and Resources Coordinator – A.T. MEGA-Transect and chestnut project

SEE WWW.MDTACF.ORG FOR ADDITIONAL PARTICIPANTS AND DETAILS

**Directions to Izaak Walton League National Headquarters
 707 Conservation Lane, Gaithersburg:**

From the south—Take I-270 North. Take the Clopper Road/MD-117/West Diamond Avenue exit, EXIT 10, toward MD-124 West/Quince Orchard Road. Turn left onto West Diamond Avenue/MD-117. Turn sharp right onto Muddy Branch Road. Turn right onto Conservation Lane.

From the North —Take I-270 South. Merge onto Quince Orchard Road/Md-124 South via EXIT 11. Turn left onto MD-117/West Diamond Avenue. Turn sharp right onto Muddy Branch Road. Turn right onto Conservation Lane.

Participants are welcome to attend a brief MDTACF Annual Meeting at 10:30 am. This education workshop includes a picnic lunch from 1:00 to 2:00 pm. NO CHARGE-OPEN TO ALL.