

# THE BUR

Volume 8, No. 1

Newsletter of the New York State Chapter of the American Chestnut Foundation, Inc.

Spring/Summer 1998

## PRESIDENT'S MESSAGE

*Under a grant sponsored by State Senators, Mary Lou Rath, Buffalo, John A. DeFrancisco, Syracuse, and Carl L. Marcellino, Long Island, the SUNY College of Environmental Science and Forestry at Syracuse has been authorized to establish an American Chestnut Reforestation Program. The legislation provides for a budget appropriation of \$150,000 per year for three years (1998, 1999, 2000). This funding will ensure TACFNY - SUNY CESF Syracuse's scientific program goal of July 4, 2000 is realistic. We can now have full-time people working in the program.*

*Plans are now being made to see how to mass produce the new trees for the New York State reforestation project which has a goal of 2004 to start planting with Girl Scouts, Boy Scouts, 4-H Clubs, etc.*

*Another major accomplishment this year was the receipt of the very healthy American chestnut seedlings from the NYSDEC Saratoga Nursery. The NYSDEC program under the direction of Mr. Wayne Cooper was responsible for taking the seeds collected by TACFNY members and giving them to the Saratoga Nursery under the care of Mr. John Solan. The first seedlings were planted across the State this year and will be available each succeeding year in very limited supply. I want to personally congratulate Wayne and John for producing such very healthy trees. Even though the nut supplies for the entire State are very small (1995 - 4,000, 1996 - 2,000, 1997 - 7,000), we continue to find new sources which will help increase our gene pool for the future, but our major nut producing trees continue to die at an alarming rate.*

*TACFNY thanks all the people who helped make this program and grants*

*possible. The real reason the American Chestnut Restoration Program will succeed is the cooperation and team work of all parties involved.*

**LONG LIVE THE AMERICAN CHESTNUT!**

*Herb Darling*

## NATIONAL HAPPENINGS

A new American chestnut research breeding farm was dedicated June 6, 1998. It was donated in memory of Glen Price who was greatly interested in the TACF research program. The Glen Price Farm, as it will be known, is about one mile from the present farm at Meadowview Virginia and will be used to expand the cross-breeding program.

Also on June 6, the TACF Development and Scientific cabinets met, as did the national TACF Board of Directors.

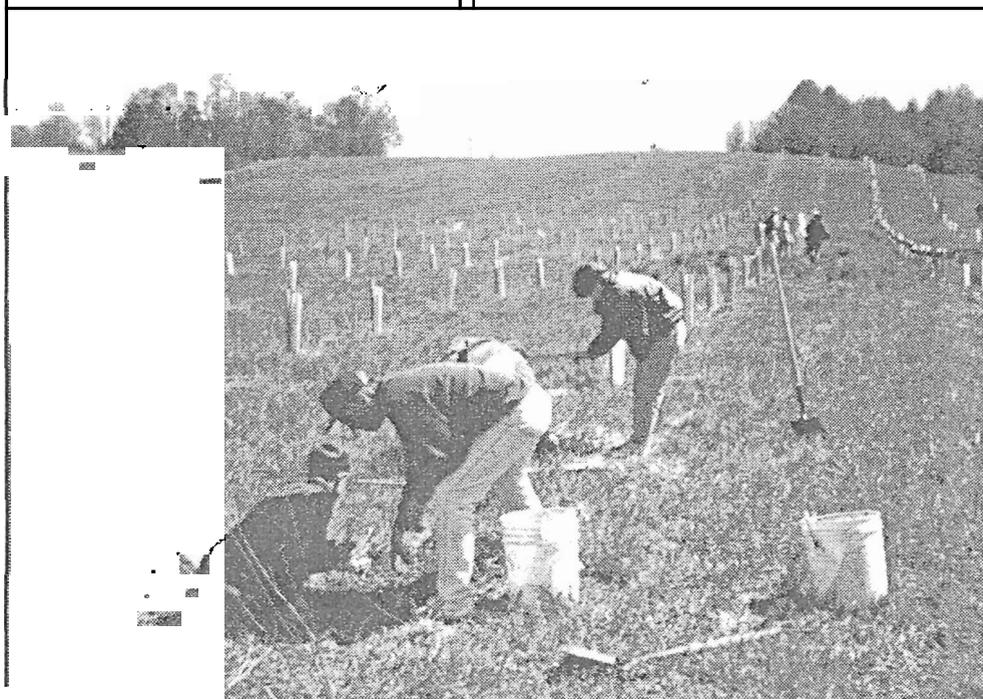
## CURRENT STATUS OF TACFNY SCIENCE PROGRAM

The '97 harvest was 7000 nuts, 500 shared with TACF

For the '98 embryo gathering, Dr. Maynard asks us to determine both parents. For this we cross off from the candidate list any wild trees now represented in the embryo library at CESF (College of Environmental Science and Forestry at Syracuse), and we must also eliminate wild trees in groves, so we will be hunting new lone wild trees.

We will also query our database (Access 97) to locate all plantings, especially the early '91-'94 seed orchards, which are blooming or should be soon. In addition these offer data on the second generation, to see if the parents yield American progeny.

These seed orchards are also provenance tests. As you know, we exchange nuts at our *continued on page 4*



*One hundred fifty new American chestnut seedlings were planted during District 9's spring Planting Day in Zoar Valley. Over 700 trees are located at this site.*

# DISTRICT NEWS

## **DISTRICT 1 ... JOHN POTENTE, DIRECTOR, 516-232-1566**

John reports collecting the first nuts from hand pollinated flowers of a native American chestnut on Long Island.

In a ceremony recognizing the \$450,000 NYState grant, a transgenic seedling was planted in Planting Fields Arbritum on Long Island. In attendance were Chuck Maynard from SUNY's School of Environmental Science and Forestry in Syracuse and, the grant's local supporter, Carl Marcellino, State Senator.

John spread the good word by giving an informative lecture to the Long Island Arboricultural Association at a monthly meeting and giving two slide presentations, one to the Sea Cliff Historical Society (which gave \$100 donation) and the second to the NYState Parks Association annual conference in Huntington, LI. Further, John was able to get coverage in the NY Times with an article giving an overview for the TACFNY and TACF activities and the involvement on Long Island.

## **DISTRICT 6 ... T. URLING WALKER, DIRECTOR, 315-782-3153**

Last fall Tom helped plant five demonstration trees in the Watertown Zoo Conservancy hoping to transplant them to a display area with an informational sign.

In a test program, Tom received eight seedlings from Stan Wirsig to measure the number of years to bloom. Six are still alive. TACFNY supplied 100 seeds to the Wanakena Forestry School in the Adirondacks last fall and this spring Tom checked on them to find many coming out of the ground after a winter insulation of two foot of snow.

Tom has made presentations on behalf of TACFNY at the Watertown Conservancy Wildlife show and to Tree Watertown, an organization formed to promote tree planting and education.

## **DISTRICT 8 ... CHIP LEAVY, DIRECTOR, 716-293-2540**

Because of the limited supply of NY State seedlings this spring no plantings were done. However, Chip is planing to plant at each of the District 8 dedicated seed orchards this fall. Please contact him if you can help.

For information on seedling sales, see a separate article in this BUR.

## **DISTRICT 9 ... BILL SNYDER, DIRECTOR 716-839-5456.**

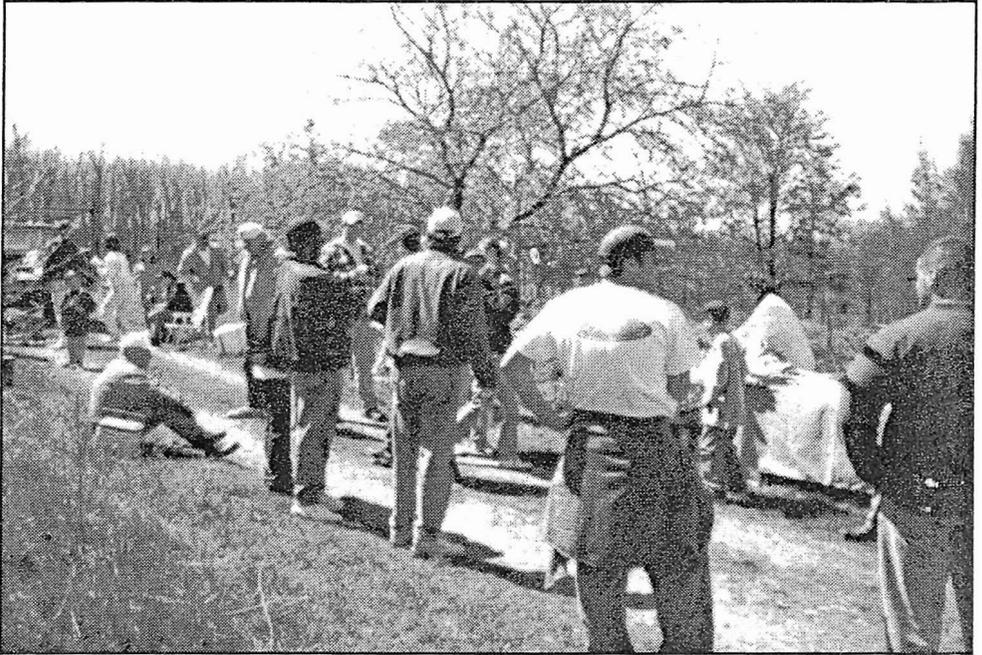
The eighth annual Chestnut Day planting was held on April 25 at the cheshut

plantation on Zoar Valley Multiple Use area in Erie County. Over 60 people attended the event including 20 students from a Buffalo State Biology class.

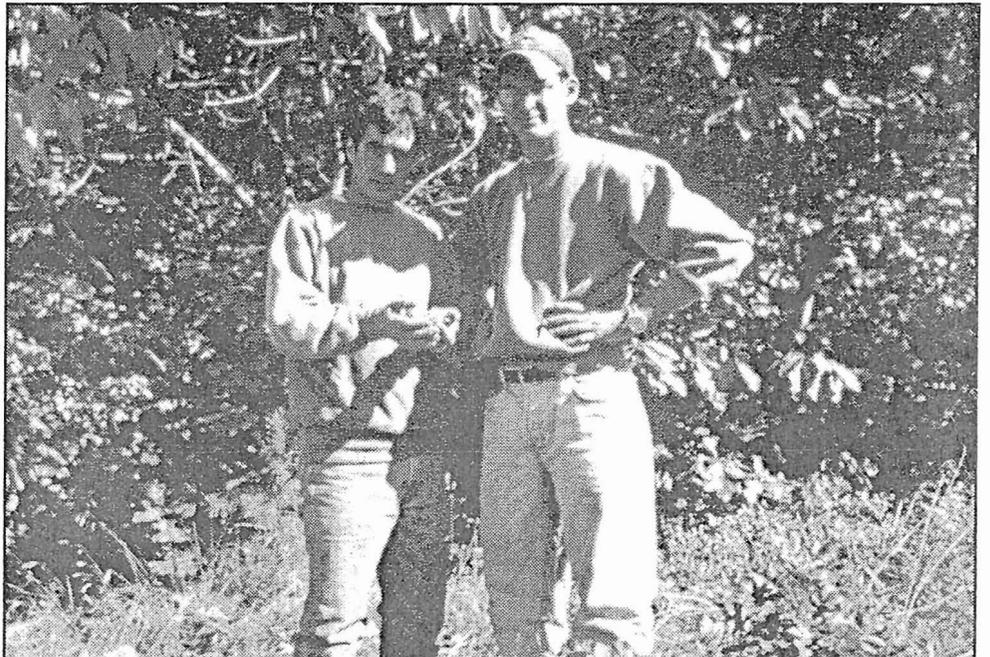
One hundred fifty-two trees were planted to replace seedlings that died. This year's effort was to do maintenance in the existing plantation.

Besides providing the membership a

hands-on learning experience in tree planting taught by professionals, the chestnut plantation offers an opportunity for people to see what American chestnut trees look like. Ultimately these trees will provide tissue and, later seed, that can be used for experimental purposes in the quest to find a tree resistant to the chestnut blight.



*At the conclusion of the Zoar Planting Day, the 60 workers enjoyed an old fashioned picnic with roasted hot dogs and marshmallows.*



*John Potente, left, Long Island District Director holds seeds resulting from the first hand-pollination of an American chestnut on Long Island.*

## TEACHER ENTHUSIASM RESPONSIBLE FOR THE PROLIFERATION OF OUR EDUCATIONAL PROGRAM

Over 60 teachers began using the completed Charlie Chestnut Education Program during the 1997 - '98 school year. Our supply of specimens was fully consumed in the process and we will be grateful to any one that can volunteer over the next several months in collecting materials to help accommodate next years teachers.

This was our first year of implementing our program after several years in development and testing. Fundraising efforts have already helped establish our goal of providing 200 curriculum kits for use by 3rd to 5th grade classrooms during the next season.

In addition we are starting to see our program spread beyond Western New York where it was created. Once again, our thanks goes out to Barbara Ann Newton for presenting our program at the annual meeting of the Science Teachers Association of New York State (SDTANYS). Children in Highland Falls, Bronx, Olean, Auburn, Painted Post, Unadilla, Lake George, Fulton, Coming, and Owego are now contributing to New York's success in restoring the American chestnut.

Special thanks to the Catskill Forest Association and Buffalo Audubon Society for their interest and support. Mr. Richard Sloman, the Catskill Forest Association and the O'Connor Foundation have set the stage for the growth of our education program in the counties of Broome, Chenango, Delaware, Greene, Otsego, Schoharie, Sullivan and Ulster. The Buffalo Audubon Society introduced our curriculum to teachers active with their Audubon Adventures program. Many have chosen to utilize the curriculum in their classrooms.

In the years ahead, more teachers will become aware and excited about providing their students a real opportunity to make a meaningful contribution in helping restore the American Chestnut. As part of the education program, nearly every class chooses to grow seedlings in their classrooms. We will need to have many potential planting sites identified for students and their families to plant those seedlings. It will be a challenge for our members and supporting organizations to help identify these sites, facilitate plantings, and water the seedlings in the first critical year after transplanting.

As our "in-school" program is beginning to show signs of success, preparations are being made to facilitate the involvement of Boy Scouts and Girl Scouts. A very special thanks to Dr. Robert Milks for his work in producing our first draft for a regional merit badge for American Chestnut Restoration. When a merit badge and its requirements can be approved and made available through Scouting we hopefully will have found another very good way to help our seedlings out of the classroom and into the field.

## YOU CAN SPONSOR A TEACHER'S KIT

We find that many teachers do not have the funding to buy an Educational Teacher's Kit. If you would like to help make the \$30 Kit available to a 3rd thru 5th grade teacher, please return the coupon below.

Yes I would like to sponsor a Teacher's Kit. I am enclosing a check for :

\_\_\_ \$10, \_\_\_ \$20 \_\_\_ \$30

If you would like the Kit to go to a specific teacher, please attach appropriate information.

My Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Make checks payable to TACFNY and mail to Mrs. Arlene Wirsig, TACFNY Treasurer, 3747 River Road, Youngstown, NY 14174.

## HAVE YOU EVER SEEN AN EMBRYO GROWING?

You'll have that chance on October 24, 1998 at the TACF New York Chapter's Annual Meeting. It will be held at the College of Environmental Science and Forestry (CESF) in Syracuse, and we are invited to visit the laboratories where the exciting genetic research is being conducted on the American chestnut.

Blight resistant genes are being constructed and tested in Dr. William Powell's Molecular Biology Laboratory. Dr. Charles Maynard's Laboratory is where we will see plantlets being grown from chestnut embryo tissue - not the nut - and being transformed with the blight resistant gene constructs.

Another highlight will be a field trip to the CESF Experimental Station where some of these chestnut seedlings have graduated and are growing outdoors "in the real world" (And, Chuck and Bill may put us to work).

In addition to the meeting, Syracuse is an interesting city with good shopping in Armoury Square and some unique things like the Salt Mine Museum and the Bumett Park Zoo. This can make it a great fall getaway for you and the family.

Save the weekend of October 23-25, and watch for details of our annual get together.



*The complete educational teacher's kit contains 14 different items some in quantities. It includes: the 75 page teacher's manual, two videotapes, actual American chestnut and beech leaves, burs and nuts and even kitchen tongs for handling the prickly burs. The cost to produce each kit is \$30.*

The Bur  
New York State Chapter  
Of the American Chestnut Foundation Inc.  
c/o Buffalo Museum of Science  
1020 Humboldt Parkway  
Buffalo, NY 14211

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**TACFNY SCIENCE** (continued)  
annual meeting, so that each planter has a selection of nuts from all of the big wild trees (or of most, if he takes a small sample). We now have dozens of such plantings across New York State, and through relatives and friends, a few in Massachusetts and Pennsylvania, some with nuts derived from Ontario and Illinois.

This is done to give us an early indication of how far in latitude or altitude chestnuts can be moved. One factor, mismatch in blooming, would be a serious problem for natural movement of resistance genes through the forest. We need early indications on many other factors. (And we hope later to foster introversion with wild American chestnut survivors, to gather their variability).

About 18 months ago, embryo cultures from the 1996 bur collection were transformed with DNA containing antimicrobial peptide genes. Ever since, the embryo cultures have been kept on special growth medium "selection medium" that allows transformed cells to grow but gradually kills the wild type cells that have not taken up the new genes. After 18 months and more than 20 cycles of selecting survivors and discarding wild types, the surviving embryos are now able to grow vigorously on the selection medium and are virtually certain to have taken up the new genes.

The Syracuse researchers have now regenerated slightly over one hundred shoots grown from two embryos transformed with the pCWEA1 construct and are now testing different treatments to

root and acclimatize them into whole plants. Once the transgenic plants are rooted, acclimatized, and grown to a 4mm shoot diameter, they will be ready for initial pathogen-resistance tests previously optimized in Dr. Powell's lab.

Work has also been progressing on acclimatization and field establishment of non-engineered plantlets over the winter. Dr. Xing produced more than 30 acclimatized plantlets over the winter. Ten have been planted near Syracuse and 10 were recently shipped to Herb Darling for planting on a second test site near Buffalo.

*S.S. Wirsig*

## SEEDLINGS ' FOR FALL DELIVERY

Chip Leavy reports their complete American chestnut seedling supply was sold out this spring. He apologises to those who he couldn't help but the quantity available was reduced from expectations from losses to root rot caused by wetter than normal soil conditions. Chip reports they have started 1500 seedlings for delivery in the fall of '98 and spring of '99. Please check with him in the early fall - 457 Palmer Road. Churchville, NY 14428, 1-716-293-2540.

Through the generous support of:

## The A. Lindsay & Olive B. O'Connor Foundation, Inc.

TACFNY will be accelerating the implementation of our education program within the schools of Broome, Chenango, Delaware, Greene, Otsego, Schoharie, Sullivan, and Ulster counties in the Catskill region of New York State.

## Teachers and Volunteers are Needed!

We are now accepting new 3rd to 5th grade teachers on the waiting list for our next production run of the Charlie Chestnut Educational Kit.

Help is needed to collect specimens of leaves, burs, seeds, and small cross sections of tree trunks & limbs over the next several months.

Additional help will be required to package all the materials into individual kits as provided to teachers.

If you can help with any of the above tasks please contact TACFNY President, Herb Darling at (716) 632-1125.

## IN MEMORIAM

*John Rowan  
John Adams*