THE BUR

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

Volume 12, No. 1 Spring/Summer 2002

PRESIDENT'S MESSAGE

The need for a better understanding of tlze breeding programs and bio-tech programs, and how they can compliment each other, was addressed in Pittsburgh, PA on June I & 2, by a special advisory committee to tlze TACF Board of Directors, appointed by myself, and chaired by Dr. Al Ellingboe, Science Director, TACF. The conzmittee members were Hugh Irwin, Fred Hebard, Paul Sisco, Marshal Case, Dr. Wm. McDonald, Stan Wirsig, Arlene Wirsig, Dr. Charles Maynard, Dr. Wm. Powell, Dr. Scott Merkle, Ana Ronderos and myself.

The main area of common interest was in the genomics. This would allow both programs to better understand what genes ure present and where they are located. This will help both programs tremendously as they go forward creating a blight resistant American chestnut tree.

The second half of the meeting was devoted to trying to see if an ongoing biotechnology tree improvement organization could be formed, to try to cure the many other tree .species problems in tlze future.

The ongoing concept is good, but putting it together has many complications. This will be discussed at the October National Board meeting in Wisconsin. A report of any progress will be made at the TACFNY annual board meeting in Deposit, NY.

LONG LIVE THE AMERICAN CHESTNUT

Herbert F. Darling, Jr.

SCIENCE REPORT

- **Progress at CESF**
- **Three New Developments in Molecular Science Point the Way for Chestnut Research**

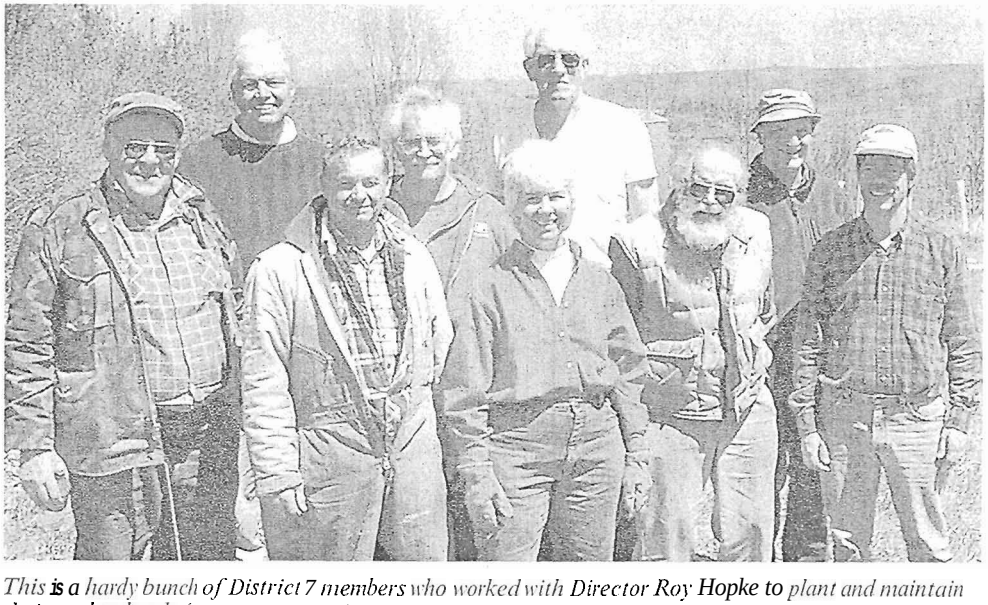
The pace of research since the last annual meeting has been vigorous, and the progress good. For our January 11,2002 research review, Drs. Maynard, Powell and Fernando, of SUNY's College of Environmental Science and Forestry (CESF) updated our pert plan to describe the 5 strategies that they are investigating. They estimate the first fully transform plants by 2004. This pace depends on continued financial support at the same level.

Now, at a review on May 2, CESF reports having 8 vectors, i.e. Possible combinations of genes (also called plasmids). One very promising gene is selected from natural sources: the oxalate oxidase gene from wheat produces gene products that are known to digest one of the weapons of the blight, oxalic acid, that it attacks chestnut with; and the byproduct of this digestion could also trigger the chestnut's own natural defenses.

These plasmids would also contain promoters, which prompt the genes to produce their defensive products in specific tissues or under specific conditions. Promoters are being tested to limit the plant defense to where the blight hits, in the vascular tissues in the stems of trees, and not in the leaves or nuts. Since the genes being tested should not affect non-target organisms, this is an added protection to beneficial insects that depend partly on chestnut leaves for their survival.

In order to be transformed, trees are usually started in the laboratory from tissues. We have 2 embryo lines that continue to bud new embryos, and there are more sources of embryos. Shoot tips and pollen are other promising tissues.

continued on page 5



This is a hardy bunch of District 7 members who worked with Director Roy Hopke to plant and maintain their seed orchards. (report on page 2)

DISTRICT 4: ALLEN NICHOLS, DIRECTOR

(Counties of Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselear, Schenectady and Schoharie)
607-263-5105 faik@dmcom.net

There have been numerous responses from people who have trees on their property, one where the people have a two-acre stand of pure American chestnuts that keep sprouting and dying. They continually cut out the dead trees for fence posts. Al will be checking these as soon as the leaves come out.

Al has 19 trees that were started from nuts off the five largest trees in the area. These will be planted in two locations where seed orchards have been started from local nuts. Eight of these trees are from nuts that were pollinated with pollen from Dr. Lehy's large tree. Last year they pollinated an isolated tree with pollen from Dr. Lehy's tree, and got 14 viable nuts, of which eight sprouted this spring.

AIS wife, Fran, is doing the Charlie Chestnut program again with her 3rd grade class. This will be the third year, with the class planting the trees in Gilbert Lake State Park at the end of the school year.

A large American chestnut tree, which had died was donated to TACFNY. Al had it transported to a local sawmill with the intention of having it cut into lumber for resale to crafters interested in making items such as hopechests, with the proceeds donated to TACFNY.

DISTRICT 6: T. URLING WALKER, DIRECTOR

(Counties of Jefferson, Herkimer, Lewis, Oneida, and St. Lawrence)
315-782-3153

Tom was overwhelmed with 100 saplings from the DEC nursery. Many were planted by interested friends. The Director of the Conservancy (Zoo) was delighted to establish a small orchard within easy watering distance from his office. 46 were planted by the city and Tom predicts they will be a boon to Watertown because they can use these trees to relocate later in other areas.

Because of Tom's effort in establishing Tree-Watertown, the city has received the title of Tree-City, USA.

Tom expects to visit locations north of Syracuse, where two people have called and indicated that they have some large American chestnut trees. Although these are large trees, Tom is not sure they will have "Supertree" status.

Some years ago St. Lawrence University planted an American chestnut on campus, which is now 12" in diameter. More recently they planted another nearby that reached only 3"-4" before dying of the blight. It's surprising, Tom says, that the larger tree is still healthy.

DISTRICT 7: ROY D. HOPKE, DIRECTOR

(Counties of Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins)
607-648-5512 Snowhawke@juno.com

On April 27, members planted, and did maintenance on their seed orchard. Roy says the trees are coming along well and estimates they will have 75 trees over six feet tall by this coming fall.

The group has installed extended tubes or wire mesh over trees that were being browsed by the deer with good results. It seems to be the case, that when the tree gets beyond 5-5 ? feet tall the deer can't reach it any more. Possibly the wasps, that are infesting the tubes in huge numbers, are giving the trees some protection as well.

Roy says they are beginning to install larger radius wire cages around the trees that are trying to bush out and/or have achieved 5 feet in height or more. If this is successful over the summer, they will install more of these this fall.

DISTRICT 9: BILL SNYDER, DIRECTOR

(Counties of Allegany, Cattaraugus, Chautauqua, Erie, Niagara and Wyoming)
716-839-5456 wasnyder/hort@aol.com

In late March, members manned a booth at a three-day event, Plantasia, sponsored by the Western New York Nurserymen's Association. They had an opportunity to tell the American chestnut story to hundreds of visitors.

In April, over 60 members and guests conducted planting and maintenance of the Zoar seed orchard. The orchard has over 600 trees growing there.

WILLING HANDS ARE NEEDED

Districts are very large and the tasks in each are multiple. If you can spare a little time, call your District Director. In addition to the above, here are the remaining districts, with their directors:

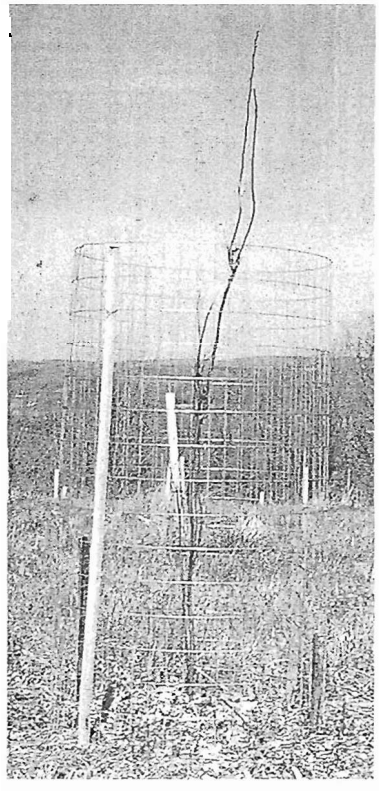
District 1: John Potente, Director (Counties of Nassau and Suffolk) (516) 232-1566

District 2: Margaret Collins, Director (NY City) (718) 445-6436 nychestnut@aol.com

District 3: Frank Munzer, Director (Counties of Duchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester) (845) 266-5138

District 5: Adrien Gaudreau, Director (Counties of Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington) (518) 882-9424

District 8: Chip Leavy, Director (Counties of Chemung, Genesee, Livingston, Monroe. Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates) (585) 293-2540 ccnurs@eznet.net



District 7 is installing wire cages like this to prevent deer from browsing on trees that are trying to bush out.

PLAN NOW!

NEW YORK CHAPTER ANNUAL MEETING OCTOBER 26-28,2002

Flaming logs in the massive fireplace will greet folks as they enter The Chestnut Inn on lovely Lake Oquaga near Deposit, NY for the 12th Annual Meeting of The New York Chapter of The American Chestnut Foundation (TACFNY). The newly decorated 1920's inn is constructed of the then prolific local chestnut timber, and has beautifully grained chestnut woodwork in every room.

For the antiquers, there are even treasured tin ceilings still left in the third floor rooms. Canoes and paddleboats will be available for exercise, and lounging on the dock or terrace or sunporch, just yards from the lake will tempt everyone. (Great for spouses)

Friday evening, October 26, from 7:00 PM on will be exhibit set-up time and informal socializing. Saturday morning, October 27, at 8:00 am will bring registration, coffee, roasting chestnuts, browsing the exhibits and much greeting of friends and chestnut talk. The meeting will begin promptly at 9:00 am with reports, the always-interesting research team's current review from CESF, Syracuse: and workshops. (How many more "green Spots" indicating transformation will they have this year?)

At the chestnut luncheon at noon, featured speaker Dr. Herbert Ardwinckle of Cornell University will discuss his research on disease resistance. An afternoon field trip will lead up to dinner on a vintage train during a scenic excursion through the countryside, and also looking for chestnuts from an early 1900's open-air observation car. Back at the inn around 8:30 there will be member sharing and discussion.

Sunday morning, October 28, there will be an open board meeting with adjournment by noon leaving time for exploration of local things to do and see, and continued chestnut talk.

The registration fee will include the workshops, luncheon, speakers, field trip, dinner and the train ride. It will be $60.00 until October 10, and $65.00 after that time. Reservations for a room at the inn can be made by calling toll free 1-866-467-0002. See below for further information.

The brochure calls our meeting place "A luxury country inn with the amenities of a lakeside resort"; it's not too far for anyone and easy to get to; our local members say it's great; the program looks stimulating; there will be plenty of time for serious – or not so serious – conversation, so… *See you in October!*

In addition to members. we welcome anyone interested in attending.

ACCOMMODATIONS:

The Chestnut Inn at Oquaga Lake's address is 498 Oquaga Lake Rd., Deposit, NY 13754; toll free 1-866-467-0002 or 1-607-467-2500. www.chestnutinn.net

They have different suites with room for more than 2 people, double rooms, and lakeside or woodside views and private bath for TACFNY's rate of $89/night, or 569 for similar rooms with shared bath with the room on the other side. All rooms have a basin in the bedroom. A block of rooms has been reserved for our group, but space is limited with first come, first served. It's recommended that reservations be made early. Complimentary continental breakfast (cereal, fruit, juice, rolls, muffins, toast, coffee, tea, and hot chocolate) is included. There is no elevator, but if you don't need it, it's worth walking up. Call Arlene at (716) 745-7772 if there is a problem.

REGISTRATION FORM

(Please return by October 10)

TACFNY ANNUAL MEETING 2002

Names _____

_____

Address _____

_____

City/State _____ Zip _____

Phone _____

E-Mail _____

Registration Fee before 10110 $60 ($65 after) X No _____

Total Enclosed _____

INCLUDES: Coffee and chestnut breaks, workshops, lunch, speakers, field trip, dinner and train ride.

Please make check payable to TACFNY
Mail to TACFNY, 3747 River Rd.. Youngstown, NY 14174
by October 10,2002

PLEASE CHECK THE FOLLOWING:

DINNER CHOICE (How many for each entrée?)

_____Prime Rib _____Baked Haddock

_____Stuffed Pork Chop _____Chicken Cordon Bleu

_____Vegetarian

_____I will bring chestnuts for the Harvest Exchange.

_____I would like_____chestnuts to take home for planting.

_____Please reserve exhibit space for me.

_____I will help at the meeting.

_____I would like to discuss_____
_____during Member Sharing Time Saturday evening.

Please return your Registration Form before October 10, 2002

TACFNY,
3747 River Rd., Youngstown, NY 14174

AMERICAN CHESTNUT – A MOVING FILBERT VISION

By John H. Gordon, Jr. John Gordon is a successful commercial nut tree grower. His article is based on his years of field experience and observation. He can be reached at www.geocities.com

American chestnut trees are impressive from when we first met. The most comparable tree is the red oak, followed by the saw tooth oak. However the Chestnut Bark Blight (CB) kept this a "moving" vision until no more native chestnut could be found in Amherst in the late 1970's. Now that The NY Chapter of TACF has plantings of NY mother tree lines out and about, we are seeing visions, and moving visions.

So far we are lucky. The Zoar Planting has blight, but also a white bark organism (like tiny curds of cottage cheese) that coat chestnut blight, blight pustules, and lenticels. This limits the blight in a chestnut that grows callous against the blight. I take it that this white organism evolved by invading the large bark pores, lenticels, and was fed chestnut fluids as a fee to bounce invading flora and fauna. (Pimply teenagers should have such a fix.) This organism usually grows in humid areas around Sodus Bay to a visible size, the tiny cheese curd size. Several large trees show this. Under the right conditions this organism seems to swell all over, and even inside chestnut bark where blight, living bark, and white organism live in proximity like in the Wilson Road tree, Zoar. Then conditions dry, and it disappears, almost. Speculation is that our chestnuts with enough resistance to begin callusing against a canker (chestnut's natural defense), and an assist from bouncer organisms that eject the blight (eat it), may survive quite a bit of injury until conditions arrive unfavorable to chestnut.

We have to find a way of inoculating our chestnut groves with organisms, which kill off chestnut blight the same way mushroom spawn is killed by an invading infection. One of these organisms is a white organism (this time a white fluff, but likely the same organism above) that attacks the fruiting bodies of Eastern Filbert Blight (EFB). It makes sense that a fungus, whether fairy rings of mushrooms, or canker pustules on trees, only live so long until they are attacked by other invaders. The reason I feel the EFB white organism is the same CB white organism is that it surfaced on EFB infected seedlings soon (noticed in two years) after I brought in bark chips with CB white organism, and dug the chips into the margins of the CB cankers. The black EFB pustules were covered with fuzzy white stuff much more quickly than CB cankers were likewise invaded. However, the natural spread of EFB white organism to chestnut has kept CB to low incidence (few red pustules). This natural spread is far easier than me moving bark chips. The CB white organism comes and goes with wet or dry seasons, but as long as I am growing filbert to find EFB immunity, the EFB white organism will be spreading far and wide, moving into CB cankers, and probably hiding unobserved in most every lenticel. This may be how in nursery stock it moved to the Zoar Planting. Soon the humid conditions in the deep tree shelters caused the white organism move up, and cover lenticels and bark.

Chestnut blight is usually, but not always, a surface condition. It is easy for us to spot CB. EFB white organisms easily find. invade. and kill CB unless CB moves too deep too fast. EFB white organism finds, invades. but does not kill off all EFB cankers because EFB runs deep into the filbert wood often outpacing the white organism. Rutgers is testing EFB and filbert resistance. When Rutgers asked for my samples, they asked for black pustules, uncontaminated with the white organism. After looking high and low for black pustules free of white organism, I decided this was near impossible in February-March. What I sent was cankers with little or no white, and few black pustules. My advice is to start the EFB from the infection deep in the wood.

I moved six 3-ft. filbert bushes with a few signs of white pustules to the south side of the Zoar planting during our planting day in April 2000. By planting day 2001, only one bush was alive, not the success I expected. To do it again I would put out a hedge of EFB free bushes. The notion persists that the white organism should be CB white organism, and be tested by being spread to filbert from chestnut. The filbert will be inoculated with EFB; the CB white organism will travel to the filbert to be made the permanent viable source of CB white organism. (We should watch for it on native chestnut trees, and repeatedly establish it on the margins of chestnut blight cankers, so that it spreads in the groves, and then to filbert.) Repetition proves this experiment, and should improve the CB white organism. The filbert will spread it far and wide which is their "bouncer" fee in a chestnut grove. The filbert should probably be rotated out and in the chestnut groves to be sure the CB white organism is not being degraded.

District 9's planting and maintenance day in late April had the helping hands of over 60 people including a Boy Scout Troop. The Zonr seed orchard has over 600 American chestnuts.

SCIENCE REPORT (CONT'D)

continued from page 1

CESF is also tuning their 4 transformation methods; the gene gun, electroporation (an electric shock opens the cell membranes for gene entry), agrobacterium-mediated transformation, in which bacteria inject the genes for us, and die afterwards, and microinjection of DNA. The best settings on these instruments are being investigated.

They will attempt to transform pollen grains by microinjections. The pollen grains will then be placed on the pistil, to exert their pollen tubes from the stigma to the ovary and enter the stigma, to go down to the ovary. The germ nuclei in the germinated pollen can be seen and microinjected through the tube wall before it is used for pollination. It is also possible to inject the ovary, so that the DNA can be picked up by the growing pollen tube.

Our focus now is to raise the degree of transformation. This is a three-part process; first it is necessary to transform as many cells as possible in the original tissue. Then those cells carrying the new genes must be grown back to a whole plant, regenerated plants are then checked as carefully as possible to make sure that every cell in every part of the plant has the new genes.

The next major goal in the pert plan is to have a transgenic tree by 2004. This would quickly be followed by work to determine the most efficient transformation method.

The first hoped for trees will be few and expensive and must be used, first for extensive testing. Proof of blight resistance will require several trials, with dozens of treelets. Then it will be necessary to establish a propagating system that can supply everyone at a steadily lowering cost.

Much ordinary pollen now is wasted, because it's so abundant on larger trees, but the first transgenics we get may have only 2-6 catkins the first year they bloom. Still, there are thousands of grains on a catkin that can go a long way with care.

Some transformation of cells is seen now, in various tissues. CESF has a microscope with a black-light lamp (UV) illuminating the transformed cells, which glow green, and the e are other tests for detection of transformation.

Dr. Danilo Fernando is asking for more pollen this year. Some early pollen from Fred Hebard's American trees in Virginia, and, a little later, mature pollen, to compare results from the northern sources. Our own pollen-gathering crews will be out.

Meanwhile, some exciting developments have been announced. First, Dr. Paul Sisco attended a meeting in San Diego of over a thousand scientists interested in the development of plant, animal and microbial genomes. His report says, "It appears that all the vascular plants share essentially the same set of genes, and that the obvious differences between plants are a result of how these genes are regulated rather than of differences in the genes themselves."

For the second exciting development, you should get a copy of the April Scientific American. Look at the cover and the first 2 pages on the proteomics article. Here is the gist of the article, which indicates that proteins control the cell chemistry more than we guessed:

It's known that there are thousands of proteins used in life processes, but that only 20 amino acids, the building blocks of proteins, are used to build the tissues of the working animal and plant body: parts of the membranes, hormones, enzymes. And plants also build and use about 250 non-protein amino acids.

The first 2 pictures in the article show how molecules might pass electric charges from point to point and modulate them. It's as if we used only 20 chips to make all known computed models; these molecules are electric circuits.

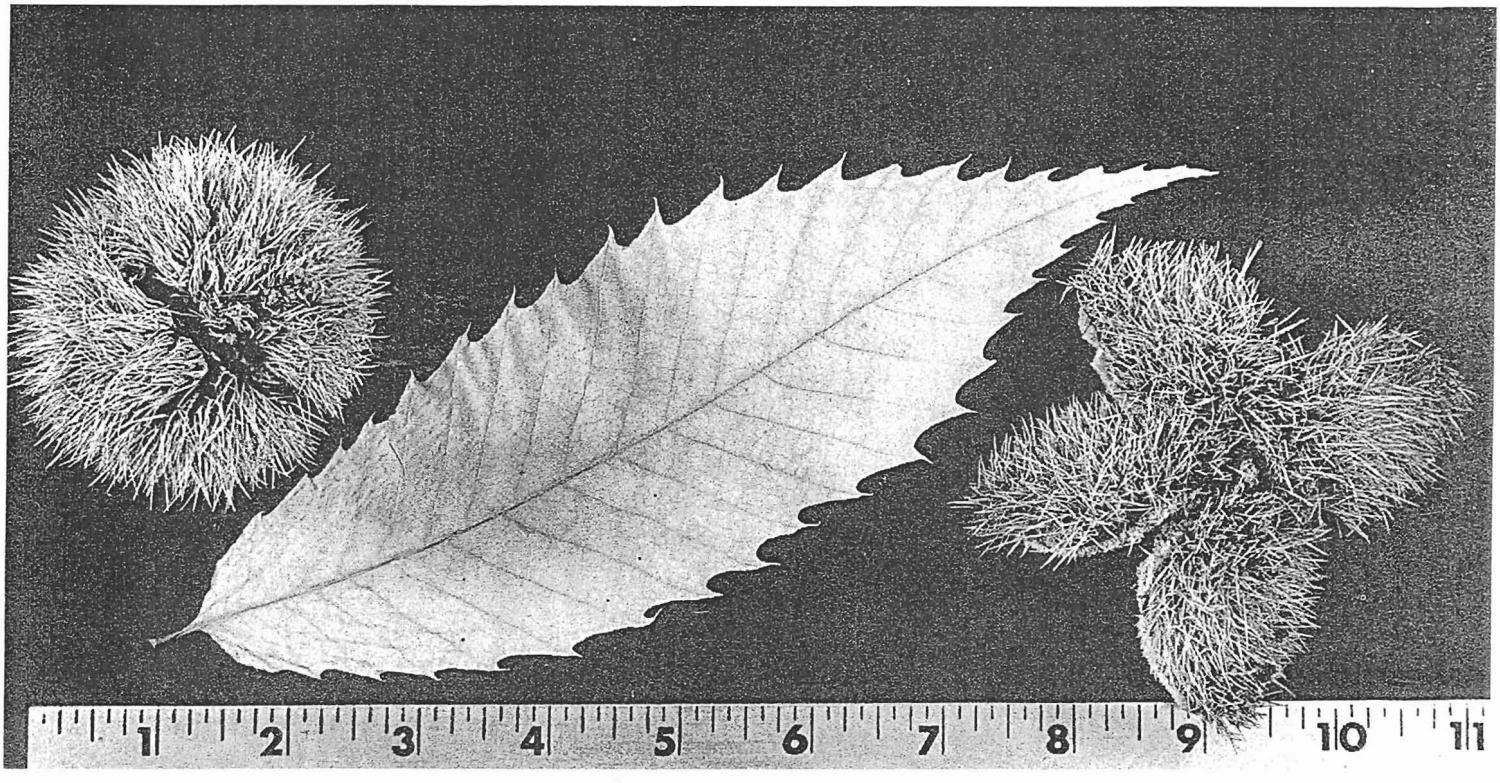
Working with genes, we have found that all cells have about the same genome, which is the list of genes in a creature. Scientists must now 1.) Identify all the proteins made in any cell, tissue or organism; 2.) Determine how the structure forms electrical networks; 3.) Draw the picture of each protein, to see how drugs (perhaps new molecules, or new plant extracts) might jam or direct them, for health benefits. An accurate test for ovarian cancers' presence has been developed.

We thought that knowing the sequence of our genes would tell us how the proteins that they make, operate. (The human genome is 3 billion letters long. This length contains 40,000 genes, for an average length of 75,000 ladder rungs, i.e. Nucleotides). But the proteins are much more complicated. Even when we know the sequence of a protein, it doesn't easily show how it is built or connects with other proteins. Also proteins add sugars and fats to themselves and thus change shape and function.

We thought that one gene made one product, but we find that somehdw a gene can make different proteins. "In spite of this", the article says, "we expect to list our proteins within 2 years", and, "the first thing to learn is what other proteins each one works with".

Thirdly, the book, "Machinery of Life", by David S. Goodsell, shows how the hemoglobin molecule changes its shape and the docking sites' charge when it acquires the first oxygen molecule in the lungs. The first oxygen molecule to enter the iron ion's influence needs the most energy to get in; the next 3 each require less. Any animal with a heart needs to carry in as much oxygen as possible, in to the cells, in one beat of its heart. To be a winner in the contest of life, it must be designed for maximum efficiency, and we are marvels, with this cramming on oxygen for the deeply-buried cells. (also yanking C02, out, with the same molecule)...and we are marvels in many other ways like this one.

Don't you find it exciting and challenging to see this new field develop? Man's ability to fight off new diseases is growing fast, as it must to protect our native plants and animals against the flow of imported pests. Note the recent discovery of "sudden Oak Death". in California. caused by Phytophthera Ramorium. Early reports say it attacks the red oak family. It's here in North America now. So is the Nile Virus, and we keep saying to each other that once we save the American chestnut, we must save half a dozen more traditional and valuable trees that are under attack.



THE REWARDS FOR "SUPERTREES" CONTINUE

As noted in our column "Reward Update", the promotion to find new "Supertrees" created wonderful response, but a limited potential. Because there was so much interest, TACFNY is continuing the "Supertree Rewards" program through 2002.

TACFNY will pay $100 for the first 10 American chestnut trees over 18" DBH and $50 for the first 10 over 14"DBH. The trees must bc in NY State, found during 2002, and not previously recorded by TACFNY. It is necessary that the property owner allow 'access for identification, pollination and/or seed collection.

For identification materials write for TACFNY's "Identification Bulletin" or visit the following websites: www.acf.org and the botany section of the Buffalo Museum of Science web page www.buffalomuseumofscience.org/bot _ chestnut.html/chkey.htm.

To claim your reward, send a twig with a few leaves and, if possible, several leaves from different areas of the tree to: Dr. Richard Zander, TACFNY, c/o Missouri Botanical Garden, P.O. Box 299, St. Louis, MO, 63166-0299. If you have questions, please direct them to your District Director.

"SUPERTREE" REWARD

2001 UPDATE

The preliminary results of last year's promotion offering rewards for finding American chestnut trees over 14" DBH (Diameter at Breast Height) demonstrated plenty of interest, but few genuine American chestnuts.

TACFNY District Directors received over 250 inquiries, of which 41 justified field inspection. Of these 15 proved to be other species, and 12 were American chestnut but under the 14" DBH minimum. (Hopefully these will avoid the blight and grow to "Supertree" size). In the 14" to 18" DBH category, nine must wait to be verified after spring leafing and 2 qualified as true American chestnuts. (Their discoverers will receive $50 each.) Only one possible tree is in the over 18" group, and must await leafing for final verification and the potential for a $100 reward.

HISTORY OF NY STATE'S LARGEST "SUPERTREE"

In 1994 the largest "Supertree" in NY State. was discovered in Niagara County. Dubbed "Nagel One" it measured a full 22.8" DBH. Two years later it lost its title to the "Tarbox" tree by almost a full inch. The new tree measured 23.4". However, by 2001, both of these two giants of the forest had succumbed to the deadly blight that continues its devastation.

Now, the "Supertree" title falls to the reigning "Friendship" tree discovered in 1999. Its DBH is 18.5" which is close, but does not exceed, the previous two champions.

TACFNY hopes, through the Reward program, to locate trees of over 14" DBH to broaden the diversity of its genetic pools adapted to conditions of NY State.

GOOD LUCK, DR. ZANDER

Dr. Richard Zander, TACFNY's taxonomist for many years, is moving. Richard and Pat, his wife, will soon be living in St. Louis, MO and working with the Missouri Botanical Garden. However, he will continue to give tree identification services to us until the end of 2002. Beginning August 1, 2002 please send leaves and twigs to the following: Dr. Richard Zander, TACFNY, c/o Missouri Botanical Garden, P.O. Box 299, St. Louis, MO, 63166-0299.

We appreciate all the efforts, skills and time Richard has contributed to TACFNY and we are sorry to lose him. All our best wishes, Richard. We will miss you.

ATTENTION PLANTERS

Since 1994 our harvesters have brought identified nuts to each annual meeting's harvest exchange whence they went out to many refuges, where some of them might live long enough to receive resistant pollen. This may be a few years yet, but we need to know now for planning. Could you let us know your situation, also new finds of mother trees, or hybrids. Please give your address, including e-mail, and the location of your seed orchard if different, by GPS, a dot on a topo map, (the Delorme Book for NY is excellent), or a plot you draw. with north indicated. This would be very helpful. Please send reports to Stan Wirsig at swirsig@localnet.com , all lower case, or at 3747 River Rd., Youngstown, NY 14174, or call 716-745-7772.

NATIONAL MEETING

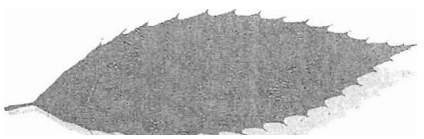
Check the "Bark" for information on the National Meeting in Wisconsin, October 19 and 20, 2002.

IN MEMORIUM

Memorials have been received in memory of

Clarence Merrill

Dorothy Salisbury



THE BUR

IF YOU HAVE FRIENDS WHO ARE INTERESTED IN OUR GOAL OF RESTORING THE AMERICAN CHESTNUT, PLEASE GIVE THEM THIS APPLICATION.

Membership Application

Enclosed is my membership support of:

- ___ Gold Leaf, $1,000
- ___ Silver Leaf, $500
- ___ Bronze Leaf, $250
- ___ Green Leaf, $100
- ___ Regular, $40
- ___ Student, $15
- ___ Other $_____
- ___ Special Gift to NY State Chapter $ _____

Total Amount $ _____

Enclosed is an additional contribution in the amount of $_____ in support of the New York State chapter's activities.

Name: _____

Address: _____

City/State/Zip: _____

Telephone: _____ E-mail: _____

❑ This is a gift membership from: _____

Address: _____

Membership includes subscriptions to *The Bark* and *Journal of The American Chestnut Foundation* and enrollment in the New York State Chapter. The Chapter publishes the *Bur*, helps guide research at CESF, and includes nine Districts for local involvement in maintaining the American Chestnut gene pool. Please make check payable to: The American Chestnut Foundation, P.O. Box 4044. Bennington, VT 05201-4044. TACF is a 501(c)(3) non-profit organization. Escept for the member services portion of your contribution (valued at $15), your gift is tax deductible to the full extent allowed by law.

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

NON-PROFIT
ORGANIZATION
U.S. POSTAGE

BUFFALO, NY
Permit No. 2964

Bill Snyder, Director of District 9, leads his willing helpers into the Zoar seed orchard for a day of planting and maintenance.