

Station News A PROGRESS REPORT for staff and Friends of America's first Agricultural Experiment Station



Departmental News

THE CHARTER OAK LIVES ON AT THE GRISWOLD RESEARCH CENTER

By Robert Durgy

This year marked the 375th anniversary of Connecticut. In commemoration of Connecticut's anniversary, several people from different state agencies contacted the Experiment Station to inquire about Charter Oaks at the Griswold Research Center. I've been told that at one time the State Nursery did produce Charter Oaks from acorns collected from the many descendents of the original trees that grow throughout the state. Although several different species of trees from the DEP State Nursery operation still remain at the Center, there are no Charter Oaks.

Left with the prospect of not satisfying these requests, several station scientists suggested that, being a farm after all, we can grow them ourselves. Email messages were circulated to determine a source of acorns from known descendents of the original Charter Oak. While gathering information about trees in state parks,

town greens and historic locations all over Connecticut, someone suggested contacting the true source of knowledge about historic Connecticut trees.

Glenn Dreyer is the director of the Connecticut College Arboretum and author of the book "Connecticut's Notable Trees". After speaking with him about the project, we decided it would be best to collect acorns from the trees with the most documented history, the Charter Oaks of Bushnell Park in Hartford. Two first generation oaks currently reside in the park. With these trees, we not only get seed from first generation descendents, but we are also sure of one tree because of a plaque describing a brief history. Many second generation Charter Oak descendents exist throughout the state but very few are marked.

The most famous Charter Oak in Bushnell Park is the Foot Guard Oak. This first generation tree sits next to Elm Street at the Clinton Street intersection, across from the Department of Environmental Protection building. It was transplanted in 1875 to replace another first

generation Charter Oak that had died. The first was planted in 1871, on the 100th anniversary of the Governor's Foot Guard, thus the Foot Guard oak. It has a huge trunk and wide spread typical of white oaks as old as this.

Prior to visiting this tree, we were warned that finding acorns would prove difficult, not because the tree isn't productive, but because the squirrels are voracious. This was certainly true. Though the acorn production of white oaks seemed to be quite good this year, the number of usable acorns from the Foot Guard Oak totaled only twelve in two trips. But for the purposes of this project, it is important to have acorns from the closest descendant to the original.

The second tree we collected from in Bushnell Park is called the Hoadley Oak, named for its proximity to the Hoadley gate on the corner of Jewell and Wells Streets. The Hoadley Oak is also a first generation tree. It was sprouted from a Charter Oak acorn in 1847 and transplanted to its current location in 1867. The squirrels again limited our harvest, though there were a few more than the Foot Guard.

The final tree we collected from is second generation, planted in 1902 from an acorn obtained in Bushnell Park, but it is not known from which tree. It is planted just one block away in the front yard of Center Church, at the corner of Gold Street and Main Street. This tree had copious acorns, seemingly untouched by the squirrels, probably due to its close proximity to Main Street and a busy bus stop right in front of the church.

The acorns were planted at the Griswold Research Center on October 4th and, as seen in the photo, the plants are well on their way. We have about fifty trees in the ground that should be ready for transplanting in the spring. The Experiment Station is proud to continue this tradition of cultivating our historic Charter Oak.



Administration

DR. LOUIS A. MAGNARELLI welcomed the Landscape Design School class in Jones Auditorium and gave an update on research (November 8); Participated in a meeting of the Invasive Plants Council in Hartford (November 9); welcomed architects to the Station and answered questions on the staff and science initiative related to the Jenkins Building (16 attendees) (November 10); and welcomed participants in a landscape educational course in Jones Auditorium and reported on Station research (28 participants) (November 12).

Analytical Chemistry

DR. JASON C. WHITE participated in the monthly Laboratory Preparedness Network meeting at the Department of Public Health in Hartford (November 1); met with and hosted Special Agent Michael Syrax of the Federal Bureau of Investigation (FBI) who toured the Department facilities and gave a lecture focused on agroterrorism (November 5); led a WebEx conference call with representatives of General Electric Global Research on the potential use of biochar amendments to reduce the toxicity and exposure

associated with PCBs in Hudson River sediments (November 10); attended the Working Lands Alliance annual meeting and luncheon at the State Capitol Building in Harford (November 17); participated with Department staff in a FERN Chemistry Cooperative Agreement (CAP) Laboratory conference call (November 18); met with Dr. John Fontana (Director of the CT Public Health Laboratory) and staff at the Department of Public Health concerning potential expansion of ongoing collaborative projects (November 18); attended a lecture on ricin and abrin given by Dr. Charles McKay (Hartford Hospital) at the Department of Public Health (November 18); and participated in a conference call with representatives of Boos, Allen, and Hamilton on the potential automated data exchange of the Department of Analytical Chemistry sample database with the US FDA database entitled eLEXNET (November 30).

DR. CHRISTINA ROBB was the organizer and chair for the “Food Analysis” session at the 49th Annual Eastern Analytical Symposium held in Somerset, New Jersey (November 15-18); presented a lecture entitled “ELISA Analysis of Abrin” at the 49th Annual Eastern Analytical Symposium held in Somerset NJ (November 15); met with Dr. John Fontana (Director of the CT Public Health Laboratory) and staff at the Department of Public Health concerning potential expansion of ongoing collaborative projects (November 18); and attended a lecture on ricin and abrin given by Dr. Charles McKay (Hartford Hospital) at the Department of Public Health (November 18).

DR BRIAN EITZER presented a talk entitled “Analysis of Pesticide Residues in Honey Bee Pollen and Wax Comb” at the 49th Annual Eastern Analytical Symposium in Somerset NJ (November 16).

MS. TERRI ARSENAULT selected to become a member of the Course Advisory Group (CAG) for the US FDA Food Emergency Response Network (FERN) Training Course for Gas Chromatography – Mass Spectrometry (GC-MS) (November 15), and was an instructor for US FDA FERN training course entitled “Drug and Poison Screen using Acid and Base Extraction with GC/MSD” in Austin, Texas (November 29-December 2).

Biochemistry and Genetics

DR. NEIL MCHALE taught a mini-course on “Botany for Gardeners” for the Federated Garden Clubs of CT (November 8).

Entomology

MS. KATHERINE DUGAS conducted an ALB/EAB Train the Trainer session for the Plainville Conservation Commission (November 10) and assembled ALB and EAB outreach materials for distribution at the CT Association of Conservation and Inland Wetland Commissions environmental conference (November 13); and spoke on ALB and EAB to the Portland Garden Club (November 17).

DR. CHRIS MAIER spoke about a survey for the European wood wasp and about the brown marmorated stink bug at a meeting of the Cooperative Agricultural Pest Survey (CAPS) Advisory Committee at the Valley Laboratory in Windsor (November 17); spoke about the conservation status of horse and other flies at a meeting of the Invertebrate Subcommittee of Connecticut’s Endangered Species Committee at the Station (November 19); and displayed the Connecticut species of wood wasps in the family Siricidae at a meeting of the Connecticut Entomological Society held at Yale University (30 adult attendees) (November 19).

DR. GALE E. RIDGE was interviewed about bed bugs and travel during the holidays by Channel 3 TV (November 4); launched the CCABB bed bug listserv. It has 280 members serving health departments, housing authorities, pest management professionals, hospitals, colleges and universities, and many other organizations that are involved with bed bugs in Connecticut (November 5); talked about self-protection and bed bugs to staff members of the Dept. of Children and Families (DCF) in Middletown (40 adult attendees) (November 9); spoke about bed bugs to the Bethel Garden Club in Bethel (30 adult attendees) (November 12); was interviewed about bed bugs in schools by the Stamford Advocate (November 16); and was an invited delegate to the congressional bed bug forum in Washington, DC. At the forum, she advocated \$20 million for research, which would be added on to the \$150 million Butterfield-Young

sponsored “Don’t Let the Bed Bugs Bite” bill (H.R. 2248), scheduled to go to the floor of Congress during spring of 2011 (November 18).

DR. CLAIRE RUTLEDGE attended a meeting of the Cooperative Agricultural Pest Survey (CAPS) Advisory Committee and a meeting of the Emerald Ash Borer Preparedness Committee at the Valley Laboratory in Windsor (November 17); and taped an interview on Emerald Ash Borer in Connecticut for Branford Community Television with Lindsey Mathews of the Branford Community Forest Commission (November 30).

DR. VICTORIA L. SMITH participated in a planning meeting on Emerald ash borer regulatory preparedness, held at Connecticut Forest & Park Association headquarters in Rockfall (8 participants) (November 3); moderated and participated in the Fall Meeting of the CT Cooperative Agricultural Pest Survey (CAPS) meeting at the Valley Laboratory in Windsor (15 participants) (November 17); participated in a meeting on Emerald ash borer emergency response at the Valley Laboratory in Windsor (30 participants) (November 17); participated in a meeting of the Yale Biosafety Committee in New Haven (30 participants) (November 18); and participated in the National CAPS Conference, held at the Marriott Downtown in Kansas City, MO, by helping with meeting facilitation by taking notes in 2 sessions and chairing a meeting of National Plant Board representatives (220 participants) (November 30 - December 3).

DR. KIRBY C. STAFFORD III, with arborist James King, spoke about the Asian longhorned beetle and Emerald ash borer and developing a train-the-trainer session for scout camp leaders at a meeting of Connecticut leaders of the Boy Scouts of America in Killingworth (November 1); participated in an EPA Lyme Disease Prevention Network conference call (November 9); represented the Station at the Connecticut Farm Bureau Luncheon in South Windsor (November 5); participated in a meeting of the state Cooperative Agricultural Pest Survey (CAPS) committee at the Valley Laboratory in Windsor (8 adult attendees) (November 17); participated in an Emerald ash borer preparation meeting at the Valley Laboratory in Windsor (31 attendees) (November 17); participated in a conference call of the Forest Pest Outreach and Survey Project (November 18); was interviewed about the role rodents and brush play in Lyme disease by Vinti Singh of the Danbury News Times (November 19); attended a meeting of the Connecticut Entomological Society at Yale University (November 19); and with DR. LOUIS A. MAGNARELLI, attended a results-based accountability training session in Hartford (November 29).

DR. KIMBERLY A. STONER gave the keynote address, “Carrying Forward the Values of NOFA,” at the Annual Meeting and Harvest Festival of CT NOFA, and was honored for her 20 years as a member of the Board of Directors of CT NOFA. She was given a lifetime membership in CT NOFA, and five hives of bees were donated to Heifer International in her honor (60 attendees) (November 6); led the review and revision of *NOFA Standards for Organic Land Care: Practices for Design and Maintenance of Ecological Landscapes* as the chair of the Standards Review Committee of the NOFA Organic Land Care Program. This revision will be the 5th edition, which CT NOFA will publish in January 2011 (15 attendees) (November 12-13).



DR. KIMBERLY STONER presenting the keynote speech at the CT NOFA Annual Meeting on November 6, 2010.



Presentation to **DR. KIMBERLY STONER** of her lifetime membership in CT NOFA and a card acknowledging a donation to Heifer International in her honor.

On left, James Roby, president of CT NOFA; center, **DR. KIMBERLY STONER**; on right, Bill Duesing, executive director of CT NOFA.

Environmental Sciences

DR. THEODORE ANDREADIS was interviewed about the end of the mosquito and arbovirus surveillance program for the 2010 season by Amanda Cuda, of the Connecticut Post and Marc Sims from Connecticut Public Radio (November 9); and presented an invited seminar to the Department of Biology at the Clark University in Worcester, MA, entitled *West Nile virus: a retrospective look at an emerging mosquito-borne disease in the western hemisphere* (November 10).

DR. PHILIP ARMSTRONG attended the 59th Annual Meeting of the American Society of Tropical Medicine and Hygiene held in Atlanta, GA and gave an oral presentation entitled *Quantification of eastern equine encephalitis virus in field-collected mosquitoes to evaluate their role as bridge vectors* (November 3-7).

MR. GREGORY BUGBEE presented a seminar entitled *Using GIS in the Surveillance and Management of Aquatic Vegetation* at A CT DEP wetlands commissioners workshop held at Housatonic Community College in Bridgeport (November 4); presented two seminars on *Soils* and *Composting* as part of the Federated Garden Club's Garden Study School held in the Jones Auditorium (November 8); presented a seminar entitled *Using GIS in the Surveillance and Management of Aquatic Vegetation* at A CT DEP wetlands commissioners workshop at the UCONN campus in Torrington (November 16); spoke on *Using GIS in the Surveillance and Management of Aquatic Vegetation* at GIS day at Central Connecticut State University November 17); and spoke to a group of students from Post University on "*Soil Testing and Invasive Aquatic Plants* (November 22).

DR. GOUDARZ MOLAEI attended the Annual Conference of the Pennsylvania Vector Control Association, and presented an invited talk entitled, *To Bite or Not to Bite: Host-Feeding Patterns of Mosquito Vectors Governing Epidemiology of West Nile Virus in Northeastern USA* (November 15)

MR. JOHN SHEPARD AND MR. MICHAEL THOMAS spoke to a group of students from Post University about mosquito biology and the state mosquito trapping and testing program (November 22).

Forestry and Horticulture

DR. JEFFREY WARD lead a talking tour of Van Wie/Santa Croce property to discuss forest management for the Branford Land Trust (12 attendees) (November 13).

DR. ABIGAIL MAYNARD visited Hindinger's farm in Hamden and discussed the New Crops Program (November 2).

DR. WILLIAM NAIL met with Gary and Gayle Schulte at Lockwood Farm to discuss soil preparation, cultivar selection, and other vineyard establishment issues for their property in North Mystic (November 4); participated in the annual meeting of NE-1020: Multistate Evaluation of Winegrape Cultivars and Clones as outgoing Secretary and Chair-Elect in Traverse City, MI (November 7-8); visited with David Verhassalt

of Saltwater Vineyard in Stonington with Mark Chien of Pennsylvania State University to discuss the growing season and strategies (November 18); visited with Mike McAndrew of Stonington Vineyards in Stonington with Mark Chien to discuss the status of the vineyard and review the 2010 growing season (November 18); visited with Richard Burris and Howard Bursen of Sharpe Hill Vineyard in Pomfret with Mark Chien to tour the vineyard and winery and discuss new cultivar selections (November 18); and participated in a regional grower meeting at Greenvale Vineyards in Middletown, RI (November 19).

DR. SCOTT WILLIAMS moderated the “Urban Wildlife Issues” session at the Connecticut Urban Forest Council’s 22nd Annual Conference in Wallingford, CT (50 attendees). (November 3); attended the Safe Capture International, Inc.’s workshop on humane capture and handling of animals through chemical immobilization, Bridgeport, CT. (November 4-5); and fulfilled the requirements and was deemed a “Certified Wildlife Biologist” by The Wildlife Society. (November 10).

MR. MICHAEL R. SHORT administered the Forestry Equipment Identification exam at the FFA Forestry Career Development Event at UCONN, assisted by Elizabeth White and Caroline Ariori (28 students) (November 5).

Plant Pathology and Ecology

DR. SANDRA L. ANAGNOSTAKIS spoke about her butternut research to a Botany class from Quinnipiac University in Jenkins Conference Room (6 adult attendees) (November 3).

DR. SHARON M. DOUGLAS gave a presentation titled “Introduction to plant pathology” and organized a visit from Dr. Daryll Borst’s Botany class from Quinnipiac University (6 adult attendees) (November 3); participated in a conference call of the Northeast Plant Diagnostic Network (NEPDN) to discuss CAES’ role in hosting the upcoming NEPDN meeting in New Haven in February 2011 (November 3); gave a keynote presentation titled “Disease diagnosis and eco-friendly management” at the Tree Care Industry Expo 2010 held at the David L. Lawrence Convention Center in Pittsburgh, PA (850 attendees) (November 11); and gave a presentation about molecular and serological tests used in diagnosing plant diseases and organized a visit from George Baldwin’s Genetics and Biotechnology II class from The Sound School (8 students and 1 teacher attended) (November 29);

DR. WADE H. ELMER gave a talk titled “Ecological and pathological significance of the Genus *Fusarium* in Connecticut” to a Botany class from Quinnipiac University in Jenkins Conference Room (6 adult attendees) (November 3); presented a biology seminar titled “Sudden Vegetation Dieback in Connecticut’s salt marshes” at Central Connecticut State University in New Britain (25 adult attendees) (November 15); participated in a meeting of the State Advisory Council for Agricultural Science and Technology at Lyman High School in Wallingford (12 adult attendees) (November 16); and spoke about “Sudden Vegetation Dieback in Connecticut’s salt marshes” to students visiting the Station from George Baldwin’s Genetics and Biotechnology II class from the Sound School (8 students and 1 teacher attended) (November 29).

DR. FRANCIS J. FERRANDINO gave a talk titled “Grape powdery mildew” to a Botany class from Quinnipiac University in Jenkins Conference Room (6 adult attendees) (November 3).

MS. MARY K. INMAN gave a talk titled “Pruning woody ornamentals” to the conservation committee of the Fairfield Garden Club in Fairfield (19 adult attendees) (November 18).

DR. YONGHAO LI gave a talk titled “Plant disease diagnostics” to a Botany class from Quinnipiac University in Jenkins Conference Room (6 adult attendees) (November 3).

DR. ROBERT E. MARRA staffed a table and presented posters on two research projects, one titled “The population genetics of the perennial canker fungus, *Neonectria ditissima*,” and the other titled “Use of sonic and electrical impedance tomography to assess internal decay in trees” at the annual Connecticut Urban Forest Council meeting in Wallingford (168 adult attendees) (November 3); and spoke about *Phytophthora ramorum*, Sudden Oak Death, and Molecular Diagnostics to seniors visiting the Station from George

Baldwin's Genetics and Biotechnology II class at The Sound School (8 students and 1 teacher attended) (November 29).

Valley Laboratory

DR. CAROLE CHEAH gave an update on CT's biological control program for mile-a-minute invasive weed for 2010 at the CAPS meeting at the Valley Laboratory, Windsor (15 people). (November 17).

DR. RICHARD COWLES gave a guest lecture "Bed bugs," for a non-majors entomology class, Eastern CT State University, Willimantic, (12 attendees) (November 5); presented a 3-hour lecture "Insect and mite pests of trees and shrubs," to a horticulture class at Naugatuck Valley Community College, Waterbury, (15 attendees) (November 8); spoke to the Garden Gate Club of Mansfield, on the subject "Facts and fallacies of organic agriculture," (20 attendees) (November 15); and attended the Emerald Ash Borer Summit at Captiva Island, FL, and presented "Bark absorption of systemic insecticides" (20 participants) (November 30).

DR. JAMES A. LAMONDIA was interviewed about Valley Laboratory services and research by Julian McKinley, editor of Patch.com (November 3).

DR. TODD L. MERVOSH participated in a meeting regarding management of mile-a-minute weed in New England at the USDA-NRCS office in Tolland (November 4); hosted a follow-up meeting of the invasive plant symposium planning committee at the Valley Laboratory (November 19).

Journal Articles Approved November 2010

Bharadwaj, Anuja and Kirby C. Stafford, III. *Tenebrio molitor* (Coleoptera: Tenebrionidae) as a model for the bioassay of *Metarhizium anisopliae* (Hypocreales: Clavicipitaceae) against *Ixodes scapularis* (Acari: Ixodidae). *Journal of Economic Entomology*.

Huang, Shaoming, **Gourdarz Molaei**, and **Theodore G. Andreadis**. Reexamination of *Culex pipiens* hybridization zone in the eastern United States by single nucleotide polymorphism markers. *American Journal of Tropical Medicine and Hygiene*.

Magnarelli, Louis A., Steven J. Norris, and Erol Fikrig. Serum antibodies to whole-cell and recombinant antigens of *Borrelia burgdorferi* in cottontail rabbits. *Journal of Wildlife Diseases*.

Nail, William R. Mature Vine Training. *USDA Grape Extension Website (eViticulture.org)*.

Nail, William R. Fruit Sampling. *USDA Grape Extension Website (eViticulture.org)*.

Nail, William R. Annual Cycle at the vine. *USDA Grape Extension Website (eViticulture.org)*.

Ostiguy, N. and **Brian D. Eitzer**. Overwintered brood comb honey: Colony exposure to pesticide residues. *Journal of Apicultural Research*.

Short, Michael and Scott C. Williams. Effectiveness of Deer Repellents in Connecticut. *Connecticut Nursery and Landscape Magazine*.

Ward, Jeffrey S. Crop Tree Management in Farm Woodlots. *Connecticut Weekly Agricultural Report*.

Ward, Jeffrey S., Scott C. Williams, Worthley. Japanese Barberry: When Good Plants Become a Problem. *Frontiers*.



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