

STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION



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STATION NEWS *PUTTING SCIENCE TO WORK FOR SOCIETY*

The mission of The Connecticut Agricultural Experiment Station is to develop, advance, and disseminate scientific knowledge, improve agricultural productivity and environmental quality, protect plants, and enhance human health and well-being through research for the benefit of Connecticut residents and the nation. Seeking solutions across a variety of disciplines for the benefit of urban, suburban, and rural communities, Station scientists remain committed to "Putting Science to Work for Society", a motto as relevant today as it was at our founding in 1875.



VOLUME 1, ISSUE 10

Departmental News

Administration	2
Analytical Chemistry	2
Entomology	3
Environmental Science	4

OCTOBER 2011

Forestry and Horticulture	5
Plant Pathology and Ecology	6
Valley Laboratory	7
Journal Articles Approved	8





STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

DEPARTMENTAL NEWS

ADMINISTRATION

DR. LOUIS A. MAGNARELLI spoke about the financial status of the Station to nursery growers in Windsor (September 13); attended a meeting of the Working Lands Alliance in Windsor, CT and gave a report on services provided by the Station (September 13); attended a meeting of the Invasive Plants Council in Hartford, CT and spoke about a bamboo problem (September 13); welcomed officers of the Federated Garden Clubs of Connecticut to Jones Auditorium and spoke about the Station's budget (September 19); welcomed participants of the Landscape Design Course to Jones Auditorium and spoke about the Station's budget (September 20); was interviewed about bond funds for the Griswold Research Center by Mark Davis of WTNH-TV (September 23); and was interviewed about bond funds for the Griswold Research Center by Judy Benson of The Day (September 23).

MRS. JOAN IVES-PARISI speaker at the Purchasing Card Meeting held in Rocky Hill at the Veterans Home (approximately 150 Purchasing Card Administrators) (September 14). Spoke on the advantages of using the PCard for commodities and services, time, and money saved for Business Offices.

ANALYTICAL CHEMISTRY

DR. JASON C. WHITE participated in the monthly Laboratory Preparedness Network meeting at the Department of Public Health in Hartford, CT (September 12); attended the 8th International Phytotechnologies Conference in Portland, OR and presented two lectures entitled "Nanomaterial contamination of agricultural crops" (190 attendees) and "Persistent organic pollutant contaminated soil - Is phytoremediation possible" (25 attendees) (September 13-17); presided over the annual Editorial Board meeting of the *International Journal of Phytoremediation* (26 attendees) (September 15); was elected President of the International Phytotechnology Society at the 8th International Phytotechnologies Conference in Portland Oregon (September 16); served on an NSF Review Panel in the Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET) for grants focusing on the environmental health and safety of engineered nanomaterials (September 19); and hosted Dr. Nicolai Jablonowski of the German research institute Forschungszentrum Juelich GmbH (September 26-27).

DR. BRIAN EITZER presented a talk entitled "The Role of Pesticides in Honey bee Decline" at the monthly Laboratory Preparedness Network meeting at the Department of Public Health in Hartford (20 attendees) (September 12); attended the Thermo Scientific Symposium on "Separation Science and Mass Spectrometry" in Westborough, MA (September 13); participated in a FDA FERN Chemistry Cooperative Agreement (cCAP) Laboratory conference call (September 15); along with **DR. KIMBERLY STONER**, presented a webinar entitled "Routes of Exposure of Bees to Pesticides" to the Environmental Fate and Effects Division of the US EPA on (70 attendees) (September 27); and participated in the FDA FERN cCAP Exactive users group call (September 28).

DR. WALTER KROL participated in the FERN Northeast region conference call (September 13); received a 5-year recognition award from the Association of Official Analytical Chemists (September 15); received a 25-year service award from the American Chemical Society (September 21); and presided as Secretary at the New Haven Section American Chemical Society Executive Board Meeting (September 29).

MS. TERRI ARSENAULT participated in a workshop on packaging and shipping of Division 6.2 Infectious Substances Category A and B and Dry Ice that was sponsored by The Connecticut Department of Public Health BioResponse Laboratory and Hartford Hospital (September 30).



STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

MR. CRAIG MUSANTE participated in a workshop on packaging and shipping of Division 6.2 Infectious Substances Category A and B and Dry Ice that was sponsored by The Connecticut Department of Public Health BioResponse Laboratory and Hartford Hospital (September 30).

ENTOMOLOGY

MS. KATHERINE DUGAS staffed an informational table on the Asian longhorned beetle and Emerald ash borer at the Woodstock Agricultural Fair in Woodstock, CT (September 3 & 5); staffed an informational table on the Asian longhorned beetle and Emerald ash borer at the Hebron Harvest Fair in Hebron (September 11); attended the Hamden Farmers Market in order to educate attendees about the risk of moving firewood and forest pests (September 16); assisted the Middlesex County Master Gardeners at a table in the Discovery Tent and distributed information about garden pests and invasive species at the Durham Fair in Durham, CT (September 23 & 24); staffed the CAES booth in the Connecticut Building at the Big E in West Springfield, MA (September 27).

MS. ROSE HISKES staffed a forest pest and CAES booth at the Hebron Harvest Festival in Hebron, CT (September 9); gave talks on "Insect Pests of 2011" and a "Forest Pest Update" at the Nursery and Landscape Research Tour at the Valley Lab in Windsor, CT (20 attendees) (September 13); gave a talk and walk on invasive plants at Boulder Knoll Farms in Cheshire (6 attendees) (September 17); participated in an Emerald ash borer workshop in New Paltz, NY (September 23); and staffed a forest pest and CAES booth at the Big E in West Springfield, MA (September 27).

MR. IRA KETTLE manned informational/educational tables with displays on honey bees, Asian longhorned beetle, and Emerald ash borer (a lot of information was passed out about these insects!) for Friends of Harkness at Harkness Park in Waterford, CT (1,058 visitors to the tables) (September 11); gave a honey bee presentation at the Apples and Honey Festival held at the Jewish Community Center in Woodbridge, CT (155 people visited the table) (September 18); manned a table with displays on honey bees with Mr. Stephen Sandrey, who manned a table with displays on the Asian longhorned beetle and Emerald ash borer for Celebrating Agriculture at the Woodstock Fairgrounds in Woodstock, CT (552 attendees) (September 24).

DR. CHRIS MAIER displayed new entomological literature at a meeting of the Connecticut Entomological Society in Jones Auditorium (September 16).

DR. GALE E. RIDGE spoke on managing bed bugs in their shelters to the Connecticut Coalition Against Domestic Violence in Bridgeport (80 attendees) (September 8); spoke on managing bed bugs in their shelters to the Connecticut Coalition Against Domestic Violence in Wethersfield (80 attendees) (September 13); was interviewed about the reemergence of bed bugs in the United States by The Patch (September 16); spoke about the biology and behavior of bed bugs and self-protection for staff members to the Child Study Center staff at Yale University (60 attendees) (September 16); with **DRS. ROBERT E. MARRA, CLAIRE E. RUTLEDGE,** and **GOUDARZ MOLAEI,** staffed several display tables on ticks, bed bugs, mosquitoes, Emerald ash borer, Asian longhorned beetle, and plant pathology research at the East Rock Street Festival in New Haven (5,000 visitors) (September 17); was filmed working with her bed bug colony for the forthcoming Connecticut Health Department bed bug training video (September 21).



East Rock Street Festival



STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION



Health Department bed bug video

DR. CLAIRE E. RUTLEDGE gave a talk titled “Emerald Ash Borer Update” at the Nursery and Landscape Research Tour held at the Valley Lab in Windsor (20 attendees) (September 13); staffed a display table on Emerald ash borer and Asian longhorned beetle at the East Rock Street Festival in New Haven (5,000 visitors) (September 17); and staffed the CAES booth and answered questions about the Emerald ash borer and Asian longhorned beetle at the Big E in West Springfield, MA (September 27).

DR. VICTORIA L. SMITH presented a talk titled “Progress in Regulation: *Phytophthora ramorum* and Chrysanthemum White Rust (CWR)” at the Nursery and Landscape Research Tour held at the Valley Lab in Windsor (20 participants) (September 13); participated in a meeting of the Yale University Biosafety Committee in New Haven (25 participants) (September 15); and in cooperation with USDA-APHIS-PPQ, certified cold storage and controlled atmosphere storage facilities at Blue Hills Orchard, for importation of apples to Israel (September 26).

DR. KIRBY C. STAFFORD III was interviewed about the impact of Tropical Storm Irene on insects by Judy Benson of The Day (September 7); participated in a meeting with the architects on the design of the new Jenkins-Waggoner Laboratory (September 15); participated in a meeting with USDA Undersecretary Edward Avalos at the Valley Laboratory in Windsor (September 15); was interviewed about the new disease described by Yale in Emerging Infectious Diseases that may be caused by *Borrelia miyamotoa* by Judy Benson of The Day (September 19); attended the Open House and seminars at the U.S. Forest Service to celebrate new green construction of the Forest Service facility in Hamden (September 21); with **DR. THEODORE G. ANDREADIS**, participated in a meeting of the Advisory Council for the Peabody Fellows Biodiversity and Human Health Program on a new Yale Science Education Partnership Award (SEPA) grant from NIH (September 28); and participated in a meeting with the architects on the design of the new Jenkins-Waggoner Laboratory (September 29).

DR. KIMBERLY A. STONER taught a course segment on “Techniques for Growing Vegetables” for the Garden Study School with Bill Duesing of CT NOFA in Jones Auditorium (20 participants) (September 21); hosted Gary Casabona and Kathryn Zaromski, visitors from the Rhode Island office of the Natural Resources Conservation Service. Tracy Zarrillo, Ellen Bulger, and Krystian Madrid demonstrated our techniques for assessing alternative floral resources on farms and for collecting wild bees in a systematic quantifiable way. We discussed opportunities for the NRCS to do before-and-after bee monitoring to evaluate the effectiveness of incentive programs for farmers to provide pollinator habitat (September 21); and with **DR. BRIAN D. EITZER**, presented a webinar to the U.S. Environmental Protection Agency called “Routes of Exposure of Bees to Pesticides.” The organizers estimated that 60 people attended in the conference room and 15 additional people saw the presentation online. The Powerpoint file will be posted online by the EPA (September 27).

ENVIRONMENTAL SCIENCE

DR. THEODORE ANDREADIS was interviewed about the occurrence of two human cases of West Nile virus in residents of Bridgeport and New Haven by Amanda Cuda, Connecticut Post



STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

and Marc Sims, Connecticut Public Radio (September 8); was interviewed about the impact of the hurricane and associated flooding on mosquito populations and West Nile virus by Judy Benzen, The Day (September 13); was interviewed about the impact of the hurricane and associated flooding on mosquito populations and West Nile virus by Brian Burnell New England Cable News, Ken Hogan WFSB TV and Chris Woodside Stonington-Mystic Patch (September 14); was interviewed about the impact of the hurricane and associated flooding on mosquito populations and West Nile virus by Bob Miller, Danbury News Times (September 15); and attended an Advisory Committee meeting of the Yale Peabody Museum Fellows Program on Biodiversity and Human Health to discuss the NIH funded grant, *Climate and Patterns of Vector-Borne Disease: Development of Translational Science Curricula* (September 28).

MR. GREGORY BUGBEE was interviewed by George Linkletter of Newtown Public TV on Invasive Aquatic Plants in Lake Candlewood (September 16); and presented a seminar on *Lawns and Lawn Alternatives* to the Federated Garden Club in Jones Auditorium (September 20).

DR. GOUDARZ MOLAEI presented an invited lecture entitled, *Global Emerging & Reemerging Epidemics of Arboviruses* to the Department of Biology, Southern Connecticut State University (September 14); presented an invited seminar entitled, *Discerning Mosquitoes and Their Catholic Counterparts That Govern the Transmission of Arboviruses in the USA* to the Connecticut Entomological Society (September 16); and participated in the Second Annual East Rock Festival on Orange Street and informed visitors about works on food testing, and vector-borne zoonotic diseases conducted at the CAES (September 17).

DR. JOSEPH PIGNATELLO presented a poster presentation, *Sorption of the Antimicrobial Sulfamethazine to Black Carbon (Biochar)*, at the Annual Meeting of the American Chemical Society in Denver, CO (September 1).

MR. JOHN SHEPARD was interviewed about mosquitoes and West Nile virus by Mara Lavitt from the New Haven Register and Martin Waters from WQUN at Plant Science Day (August 3).

FORESTRY AND HORTICULTURE

DR. JEFFREY WARD interviewed about impact of hurricanes on trees by Judy Benson of the New London Day (September 7); met with Dr. Virginia Maxwell and Jessie Hammond (University of New Haven) to discuss collaborative clandestine grave research (September 9); participated in a Connecticut Urban Forest Council meeting in New Haven (September 9); spoke on homeowner tree care to the Garden Club of Madison (41 attendees) (September 13); administered practical and oral examination to arborist candidates for the Connecticut Tree Protection Examining Board (September 14); spoke on pruning trees and shrubs for the Long Hill Garden Club in Trumbull (53 attendees) (September 26).

DR. MARTIN GENT attended the Annual meeting of the American Society for Horticultural Science near Kona HI (September 24-28); organized and moderated a colloquium on "Advances In Understanding Plant Metabolism Related to Crop Quality and Composition" (September 24-28); presented a talk on "Composition of hydroponic lettuce: Effect of time of day, plant size, and season" (September 24-28).

DR. ABIGAIL MAYNARD judged fruits and vegetables at the North Haven Fair (September 8); discussed the New Crops Program at the Hindinger's Farm in Hamden (September 9); discussed the New Crops Program at the Stone Garden Farm in Shelton (September 12); discussed the New Crops Program at Rose's Berry Farm in South Glastonbury (September 14).

DR. SCOTT WILLIAMS was voted Adjunct Professor in the Department of Natural Resources and the Environment at the University of Connecticut (September 2); participated in a Connecticut Urban Forest Council meeting in New Haven (September 9); was elected Treasurer of the Connecticut Urban Forest Council (September 9); was interviewed about the relationship between blacklegged ticks and Japanese barberry by Ben Holbrook of the Darien News (September 21); gave a talk about wildlife in Connecticut to incarcerated youth at the Manson Youth Institution, Cheshire, CT (18 youth attendees, 2 employees) (September 21); along with **JOSEPH P.**



STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

BARSKY and **MICHAEL SHORT**, collected and provided seed from *Berberis x ottawensis* to Massachusetts State Botanist, Bryan Connolly (September 23).

PLANT PATHOLOGY AND ECOLOGY

DR. SHARON M. DOUGLAS participated in a conference call of NEPDN diagnostic laboratories (September 6); was interviewed about the impact of Tropical Storm Irene on fall foliage by John Burgeson of the Connecticut Post (September 7); was interviewed about Tropical Storm Irene's impact on crops in Connecticut by Judy Benson of The New London Day (September 8); assisted the CT Tree Protection Examining Board with administering the oral exam to candidates for the arborist license (September 14); participated in the monthly meeting of the CTPA Board of Directors (September 15); met with Rae Bicheu, a senior at Yale University, to discuss research and service of the Department of Plant Pathology and Ecology and CAES (September 19); gave a presentation titled "Understanding plant diseases" as part of the Federated Garden Club's Garden Study School in Jones Auditorium (14 adult attendees) (September 20); was interviewed about fall color and how it will be affected by foliar diseases of trees, especially maple, by Bob Miller of the Danbury News-Times (September 22); and was interviewed about the unusual warm weather and its impact on crops and fall color by Bridgette Ruthman of the Waterbury Republican-American (September 26).

DR. WADE H. ELMER was interviewed about Sudden Vegetation Dieback by Rae Bicheu, a senior at Yale University (September 19); and participated in the State Advisory meeting for Agricultural Science and Technology at the Sound School in New Haven (September 22).

DR. YONGHAO LI gave a talk titled "Common and New Diseases in 2010-2011" at the Nursery and Landscape Research Tour at the Valley Lab in Windsor (14 adult attendees) (September 13); spoke about plant disease problems at the CCTGA's Annual Field Day held at Cedar Ledge Tree Farm in Mansfield (45 attendees) (September 17); and participated via conference call in a committee meeting of a graduate student, Jonathan Black (M.S. candidate), of the University of Tennessee (September 20).

DR. ROBERT E. MARRA hosted an information table at the East Rock Street Festival on Orange Street in New Haven. Included in the materials offered was information on the PDIO, fact sheets covering a myriad of common problems of trees, shrubs, and vegetable gardens, and an informational display on the use of tomography to nondestructively assess the internal condition of trees (5,000 visitors) (September 17).

East Rock Festival 2011

The Experiment Station participated in the *Second Annual East Rock Festival on Orange Street* on Saturday, 17 September 2011. The festival, which ran from 11AM until 8PM, took place on four blocks of Orange Street between Willow and Cottage Streets, New Haven. **DR. ROBERT MARRA** (Biology & Zoonotic Diseases), **DR. GOUDARZ MOLAEI** (Center for Vector Biology & Zoonotic Diseases), **DR. GALE RIDGE** (Department of Entomology), and **DR. CLAIRE RUTLEDGE** (Department of Entomology) were on hand to talk with visitors about research and public service activities at the Experiment Station, which include diseases of trees and shrubs, the nondestructive assessment of internal decay in trees, human diseases caused by vectors such as mosquitoes, ticks, and other arthropods such as bed bugs, and invasive forest pests. They fielded numerous questions and distributed fact sheets, coloring books, and other literature to interested citizens. The CAES staff also displayed a poster on the joint collaborative works by the Department of Analytical Chemistry with the US Food and Drug Administration through the Food Emergency Response Network. This is the first year that the Station participated in this event, having been invited because of the Station's history as a part of the East Rock neighborhood and the importance of the Station's contributions to agriculture, forestry, and human health. Visitors of all ages examined specimens of mosquitoes, ticks, bed bugs, Asian Longhorned Beetle, and Emerald Ash Borer, as well as cross-sections of trees with internal decay. Attendance at the festival was estimated by organizers to be about 5,000 people, including at least 1,000 young people.



STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION



VALLEY LABORATORY

DR. CAROLE CHEAH gave a short presentation on biological control of mile-a-minute and hemlock woolly adelgid in Connecticut for the Pesticide Credit Tour at Plant Science Day (46 people) (August 3); and gave a poster presentation on biological control of mile-a-minute weed for the Valley Laboratory Nursery and Landscape Research Tour (20 persons) (September 13).

DR. RICHARD COWLES presented the field exhibit "Bark application of systemic insecticides" at the Nursery Field Day, Valley Laboratory (15 attendees) (September 13); spoke to the Connecticut Christmas Tree Growers' Association meeting, Mansfield, CT (35 attendees) (September 17); and conducted with two "pest walks" with Dr. George Hudler to train attendees of the Sentinel Plant Network in pest observation and diagnosis at the Arnold Arboretum in Boston, MA (40 attendees) (September 22 & 23).

DR. JAMES LAMONDIA was interviewed about strawberry research and the plant patent for Rubicon strawberry by Bob Pollack for the Connecticut Academy of Science and Engineering Newsletter and Station Associates Newsletter (September 7); welcomed participants and spoke about biology and management of foliar nematode pathogens of nursery and landscape plantings as a part of the Valley Lab Nursery and Landscape Research Tour (20 persons) (September 13); examined candidates for the Connecticut arborist license and participated in the quarterly meeting of the Connecticut Tree Protection Examining Board in New Haven (September 14); and met with grant cooperators Drs. G. S. Abawi and B. K. Gugino in Middletown, NY to plan a series of SARE soilborne plant pathogen workshops (September 28 & 29).

DR. DE-WEI LI attended the Pan-American Aerobiology Association 2011 Aerobiology Symposium in San Diego, CA and made an oral presentation "Christmas trees and airborne fungi in residences" (30 people in audience) (August 7 - 9); and attended The 6th International Scientific Conference on Bioaerosols, Fungi, Bacteria, Mycotoxins in Indoor and Outdoor Environments and Human Health in Saratoga Springs, New York and made an oral presentation "What does the development of fungal systematics mean to DNA-based methods for indoor mold investigations?" (120 people) (September 6 - 9).

DR. TODD L. MERVOSH prepared a display of invasive plants and native plants and provided information at the Suffield Land Conservancy exhibit at 'Suffield on the Green' (~ 150 people) (September 10 & 11); organized the meeting and talked about "Weed control in container-grown ornamentals" at the Nursery & Landscape Research Tour at the Valley Lab (20 attendees) (September 13); and spoke about "Weed management in Christmas trees" at the fall meeting of the Conn. Christmas Tree Growers Assoc. in Mansfield, CT (40 attendees) (September 17).



STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

JOURNAL ARTICLES APPROVED SEPTEMBER 2011

Ahrens, John F. Weed control practices in the northeastern United States. Proceedings of the 10th Biennial Christmas Tree Research and Extension Conference

Dingman, Douglas W. Paenibacillus larvae 16-235 rDNA Intergenic Transcribed Spacer Regions: DNA Fingerprinting and Characterization. Journal of Invertebrate Pathology

Eitzer, Brian D. and Kimberly A. Stoner. "Movement of soil-applied systemic insecticides into the pollen and nectar of squash (*Curbita pepo*); Are concentrations high enough to impact pollinators?" Environmental Toxicology and Chemistry

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*Putting Science to work
for Society.*



Entrance to The Connecticut Agricultural Experiment Station in New Haven on Huntington Street



Main Laboratories, New Haven



Lockwood Farm, Hamden



Griswold Research Center, Griswold



Valley Laboratory, Windsor

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

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