

STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION



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*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.



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DEPARTMENTAL NEWS

ANALYTICAL CHEMISTRY

DR. JASON C. WHITE was nominated by the Association of Public Health Laboratories (APHL) as a voting member with expertise in nanotechnology in food to the Food Advisory Committee; this Committee provides advice to the Commissioner of Food and Drugs on emerging food safety issues (June 3); participated in the monthly Laboratory Preparedness Network meeting at the Department of Public Health in Rocky Hill (June 3); attended the 2013 Association of Public Health Laboratories (APHL) Annual Meeting and Environmental Laboratory Conference and presenting an invited plenary lecture entitled "Nanomaterial Use in Agriculture: Benefits and Potential Risks" (200 attendees) (June 3-5); participated with **MS. KITTIPATH PRAPAYOTIN-RIVEROS** and **DR. WALTER KROL** in the annual FDA ISO Accreditation "Face-to-Face" Meeting (June 5-6); met with Professor Saion Sinha of the University of New Haven regarding results from a graduate student project on nanoparticle toxicity to plants (June 11); participated in a USDA AFRI webinar on grant panels and the peer review process (June 18); gave a lecture at the University of New Haven entitled "Nanoparticle interactions with agricultural crops" (6 attendees) (June 19); participated with **DR. BRIAN EITZER, MS. KITTIPATH PRAPAYOTIN-RIVEROS, MS. TERRI ARSENAULT, MR. CRAIG MUSANTE, MR. MICHAEL CAVADINI, DR. WALTER KROL,** and **MR. WILLIAM BERGER** in an FDA ISO Accreditation Conference call (June 20); participated in a USDA AFRI Grant Review Panel in Washington DC (June 25-26); and participated in an NSF Nanotechnology Environmental Health and Safety webinar (June 28).

DR. BRIAN EITZER participated in the NACRW (North American Chemical Residue Workshop) Organizing Committee teleconference call (June 6); and met with Yingqing Deng of the University of Massachusetts regarding the detection of pharmaceutical compounds by LC-MS/MS (June 12).

MR. JOSEPH HAWTHORNE met with Yingqing Deng of the University of Massachusetts regarding collaborative experiments investigating the acute toxicity of nanoparticles to plant species (June 12).

ENTOMOLOGY

MS. ROSE HISKES participated in a State Survey Coordinator conference call for the Cooperative Agricultural Pest Survey Program (CAPS) (June 20); and gave a talk on "Plants Out of Place" to the Orchard Valley Garden Club at the Public Library in Southington (47 attendees) (June 25).

DR. CHRIS T. MAIER was interviewed about the emergence of periodical cicadas by Patricia Gay of the Weston Forum (June 7); was interviewed about the emergence of periodical cicadas by Nancy Schoeffler of the Hartford Courant (June 7); and was interviewed about periodical cicadas by Ed Stannard of the New Haven Register (June 18).



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DR. GALE E. RIDGE led a cicada walk through the Magicicada Preserve on River Road in Hamden. Filmmaker Samuel Orr, who is known for his time-lapse photography, was also visiting the preserve and spent some time with the group (20 attendees) (June 9).



Nymphs climbing a tree at night



Cicada walk group members examining cicadas

Dr. Ridge presented on a webinar about bed bugs to the Connecticut Association for Healthcare at home, staff and administrators in Wallingford (June 12); and the EPA FIFRA scientific advisory panel on which Dr. Ridge had been a member, published its 73-page report titled “Draft product performance data needs assessment for products claiming efficacy against invertebrate pests” (June 18).

DR. VICTORIA L. SMITH met with Bruce Sherman, Ray Connors, Bill Hyatt, and Logan Senack, all of the CT Department of Agriculture, to discuss harmonization of inspection efforts for invasive plants, at the Department of Agriculture in Hartford (June 27).

DR. KIRBY C. STAFFORD III participated in a teleconference of the National Research Support Program review committee (9 attendees) (June 3); was interviewed about the periodical cicada by Denise Buffa, Hartford Courant (June 4); provided a Station update to the Experiment Station Associates on their spring 2013 agricultural tour (34 attendees) (June 11); was interviewed about tick image resources by Patrick Hogan, White-Tailed Deer Magazine (June 18); was interviewed about ticks by Harold Lezy, Journal Inquirer (June 24); was interviewed about tick activity by Amanda Cuda, Connecticut Post (June 25); and participated in and chaired a teleconference call of the multistate activities committee of the Northeastern Regional Association of State Agricultural Experiment Station Directors (June 26).

DR. KIMBERLY A. STONER participated in a meeting of the Urban Agriculture Working Group of the New Haven Food Policy Council at Gateway Community College-Long Wharf in New Haven (10 attendees) (June 13); and presented a workshop on native bees and methods to protect and conserve them, assisted by **MS. TRACY ZARRILLO**, at Massaro Farm in Woodbridge (10 attendees) (June 22).

MS. TRACY ZARRILLO participated in the 2013 White Memorial BioBlitz as taxonomic team leader for the bee working group—18 species of bees were recorded (June 1); and assisted **DR. KIMBERLY STONER** give a talk about native bees at Massaro Community Farm in Woodbridge (10 attendees) (June 22).



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ENVIRONMENTAL SCIENCES

DR. THEODORE ANDREADIS was interviewed about the start of the State Mosquito and Arbovirus Surveillance program for the 2013 season by Marc Sims, Connecticut Radio Network (June 3); was interviewed about the start of the mosquito trapping and testing program and the projected outlook for the 2013 season by the Connecticut Patch (June 13); was interviewed about passage of House Bill 6441 restricting the use of methoprene and resmethrin for control of mosquitoes by John Burgeson, Connecticut Post, Greg Ladgee, New Haven/Hartford Advocate, and Mathew Cambell, WFSB TV3 (June 24); was interviewed about passage of House Bill 6441 restricting the use of methoprene and resmethrin for control of mosquitoes by Marc Sims, Connecticut Radio Network (June 25); was interviewed about the Stations research and surveillance programs on mosquitoes and mosquito-borne diseases and the forecast for the 2013 season by Marc Sims, Connecticut Radio Network (June 26); was interviewed about the abundance of mosquitoes this summer and its impact on anticipated West Nile virus activity by Amanda Raus NBC30 (June 26); and was interviewed about the Stations research and surveillance programs on mosquitoes and mosquito-borne diseases and the forecast for the 2013 season by Harlan Levy Journal Inquirer (June 28).

MR. GREGORY BUGBEE with **MS. JORDAN GIBBONS** presented the findings of our aquatic plant survey of Moodus Reservoir at a town meeting in East Haddam (50 attendees) (June 3); participated in a committee including members from CT DPH and CT DEEP that is drafting protocol for protecting the public from blue-green algal toxins in lakes (June 4); participated at a meeting of the Connecticut Aquatic Nuisance Species Committee at Avery Point in Groton (June 6); hosted 15 students from the Bridgeport Horticultural Training Program and discussed soil testing and lawn care (June 6); spoke on *Techniques for controlling nuisance aquatic vegetation* at the annual meeting of the Lake Quassapaug Association (60 attendees) (June 26); and spoke on "How drawdown during reconstruction of the Bashan Lake dam will effect variable watermilfoil" at a town meeting in East Haddam (Approximately 75 attendees) (June 27).

DR. JOSEPH PIGNATELLO participated in a NSF grant review panel (CBET-Environmental Engineering) held in Arlington VA (June 6-7).

MR. MICHAEL THOMAS Hosted the Northeast Regional Meeting of the Dragonfly Society of the Americas in Griswold, CT (47 attendees) (June 21-23).

FORESTRY AND HORTICULTURE

DR. JEFFREY WARD participated in a Research Working Group for the Governor's Council for Agricultural Development in Hartford (June 10); participated in a Connecticut Invasive Plant Council meeting in Hartford (June 11); administered practical and oral examination to arborist candidates for the Connecticut Tree Protection Examining Board (June 12); and met with Tim and Jennifer Sprague in Somers to discuss managing oak decline (June 25).

DR. ABIGAIL MAYNARD with **DR. DAVID HILL**, was interviewed by Rosemarie Anner of Edible Nutmeg magazine about Brazilian vegetables and the New Crops Program (June 24).

DR. SCOTT WILLIAMS met with South Central Connecticut Regional Water Authority Forester Bill Van Doren to demonstrate forestry sampling protocols (June 6); met with University of New Haven graduate student Moises Torrent regarding supervising a graduate research project involving seed dispersal by white-tailed deer (June 7); and supervised the "Science Tent" at the Town of Guilford's Baldwin Middle School's Outdoor Adventure Day (75 students) (June 20).

MR. MICHAEL R. SHORT with **Mr. JOSEPH P. BARSKY** staffed a display entitled "CAES Research at The White Memorial Foundation" at BioBlitz 2013 at The White Memorial Foundation in Bantam. (120 attendees) (June 1); and was job-shadowed by Eliza Alder, a recent Biology graduate of The University of Southern Maine (June 24-28).



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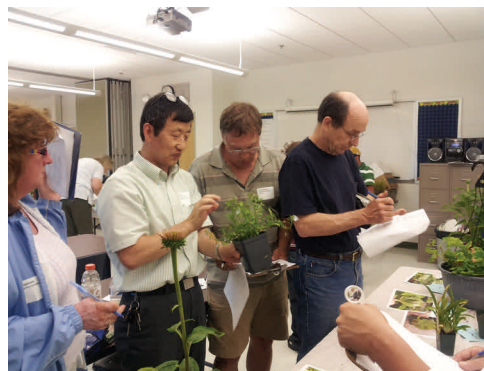
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PLANT PATHOLOGY AND ECOLOGY

DR. SANDRA L. ANAGNOSTAKIS served on a grant review panel for Plant Breeding grants at the National Institute of Food and Agriculture in Washington, D.C. (June 24-28).

DR. SHARON M. DOUGLAS gave a presentation on “Boxwood blight—A new disease for North America” to the Southbury Garden Club at the Southbury Public Library (52 attendees) (June 7); participated in the monthly meeting of the CTPA Board of Directors to plan the summer meeting, at The Farmington Club (June 11); assisted the CT Tree Protection Examining Board with administering the oral exam to candidates for the arborist license (June 12); and was interviewed about impatiens downy mildew and implications for the future of this popular bedding plant by Nancy Crevier of the Newtown Bee (June 21).

DR. WADE H. ELMER co-organized and spoke about “Diagnosing and identifying root diseases” at the Diagnostic Workshop, sponsored by the Connecticut Greenhouse Grower’s Association, and held at Southington High School Vo-Ag Center (40 participants) (June 26).



Drs. Wade Elmer (left photo) and Yonghao Li (right photo) assisting growers during the practical diagnostic exam at the Diagnostic Workshop.

DR. YONGHAO LI gave a talk on “Downy mildew of impatiens” at Chamard Vineyards in Clinton, as part of the ESA Tour (30 attendees) (June 11); gave a talk titled “How to diagnose foliar diseases” and assisted with hands-on disease diagnosis at the CGGA Workshop on Diagnosing Plant Diseases and Disorders held at Southington High School Vo-Ag Center (40 participants) (June 26).

DR. ROBERT E. MARRA participated, as Local Arrangements Chair, in a phone conference to discuss planning for the upcoming October meeting in Southbury of the Northeastern Division of the American Phytopathological Society (June 3); met with the West Haven Tree Commission to discuss the upcoming street tree inventory (June 18).



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JOURNAL ARTICLES APPROVED JUNE 2013

- Andreadis, Theodore G.,** H. Takaoka, Y Otsuka, and **Charles R. Vossbrinck.** Morphological and molecular characterization of a microsporidian parasite, *Takaokaspora nipponicus* n. gen., n. sp. from the invasive rock pool mosquito, *Ochlerotatus japonicus japonicus*. Journal of Invertebrate Pathology.
- Huang, S., D. J. Smith, **Goudarz Molaei, Theodore G. Andreadis,** S. E. Larsen, and E. F. Luccchesi. Prevalence of dog heartworm (*Dirofilaria immitis*) infection in *Aedes, Culex* and *Culiseta Mosquitoes from North San Joaquin Valley, California, USA*. Journal of Medical Entomology.
- Peterson, Richard B.,** H. Eichelmann, V. Oja, A. Laisk, E. Talts, and **Neil P. Schultes.** Functional aspects of silencing and transient expression of *PsbS* in *Nicotiana benthamiana*. American Journal of Plant Sciences.
- Peterson, Richard B.,** V. Oja, H. Eichelmann, I. Bichele, and A. Laisk. Occurrence and implications of invariant chlorophyll fluorescence distinct from photosystem I emission in developing C₃ and C₄ leaves. Photosynthesis Research.
- Pignatello, Joseph J.,** M. Uchimiya, S. Abiven, and M. W. I. Schmidt. Evolution of Black Carbon Properties in Soil. Chapter in *Biochar for Environmental Management*, J. Lehmann and S. Josephs, Eds.
- Pignatello, Joseph J., Jason White,** and **Wade Elmer.** Biochar in Agriculture and Pollution Remediation. CHS Newsletter, Connecticut Horticultural Society.
- Parker, K. M., **Joseph J. Pignatello,** and W. A. Mitch. Influence of salinity on triplet-state natural organic matter loss by energy transfer and electron transfer pathways. Environmental Science and Technology.
- Williams, Scott C. and Michael R. Short.** Evaluation of eight repellents in deterring Eastern Cottontail (*Sylvilagus floridanus*) herbivory in Connecticut. Human-Wildlife Interactions.

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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

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