

Station News A PROGRESS REPORT for staff

and Friends of America's first Agricultural Experiment Station

Departmental News

CONNECTICUT BED BUG FORUM

By Dr. Gale E. Ridge

On March 17th, the Connecticut Bed Bug Forum was held at the Station where 180 delegates from local health departments, housing authorities, pest control companies, researchers, educators, manufacturers, and distributors met to discuss the coordinated management of bed bugs in the State of Connecticut. In a half day program filled to capacity, participants also had the opportunity to listen to a number of lectures about bed bug biology, research, control, and management.

Gale E. Ridge organized this event in cooperation with Pamela Kilby-Fox, Connecticut Department of Public Health, Diane Jorsey, Connecticut Department of Environmental Protection, Judith R. Dicine, Connecticut Division of Criminal Justice, Tim Callahan, Norwalk Health Department, and Mike Lipsett, Connecticut Pest Control. She said in her opening statement that, "the purpose of this forum is to have a town hall meeting (supported by lectures), where professionals in health, pest control, and housing might collaborate on what can be done together towards the common goal of controlling an old, but resurging pest".

Dr. Kirby C. Stafford III, Vice Director of CAES and State Entomologist, said in his welcome statement that "Bedbugs have reemerged as a major pest problem in Connecticut and we have seen an increase in bedbug related inquiries at the Experiment Station. In response to this new problem, Dr. John F. Anderson initiated a bed bug research program and this timely forum was organized by Dr. Ridge. As a measure of the importance of this topic, many more wished to attend than could be accommodated and plans are underway to provide a public lecture on bedbug biology and control and a repeat of this specialist's forum in October.

Dr. Ridge talked about bed bug biology, history, and factors associated with their recent resurgence. Dr. Anderson talked about research that he is conducting on bed bugs as well as other research and developments on bed bug control. A demonstration of the use of trained dogs for the detection of small bed bug populations was provided by Mr. Charlie Mastroberti and his bed bug sniffing dog, Ellie. She was a great hit with the audience and performed her duties flawlessly. Mr. Michael Siwek, executive director of West Haven Housing Authority, talked about the housing authority experiences with bed bug issues and how difficult it can be in dealing with peoples' anxieties over bed bugs, and Attorney Judith R. Dicine from the Connecticut Division of Criminal Justice skillfully lead the audience through the legal issues of bed bug management. With the speakers forming an expert panel following the talks, the panel and audience discussed ways to help provide a coordinated management effort of bed bug control between different local and state agencies and pest control professionals in Connecticut.





Administration

DR. LOUIS A. MAGNARELLI Welcomed members of the Federated Garden Clubs of CT in Jones Auditorium and reviewed some highlights of Station research (March 24); and welcomed members of the Experiment Station Associates at their annual meeting in Jones Auditorium and gave an update of Experiment Station activities (March 30).

Analytical Chemistry

DR. BRIAN EITZER attended a meeting hosted by the National Resources Defense Council to discuss issues related to the effect of pesticide residues on honey bee health in Washington D.C. (March 24 -25).

Biochemistry and Genetics

DR. DOUGLAS DINGMAN consulted with Dr. Sudhir Kumar Rai (Department of Molecular Biology and Biotechnology, Tezpur University, Assam, India) on the use of PCR primers for fingerprinting of bacteria for identification on March 10; had a telephone conversation with Dr. R. Marron (Newtown, CT) on honeybee problems and results of AFB analysis (March 11); had telephone conversations with Sister Ozanne (Abbey of Regina Laudis, Bethlehem, CT) on AFB analysis results and follow-up protocols (March 12 and 23); presented a seminar entitled “ Honeybee Health and American Foulbrood” as part of the Albert Notation Memorial Series Seminar for the Quinnipiac Sigma Xi Chapter (Quinnipiac University, Hamden, CT) (March 25); participated in the Career Fair for Eighth graders of New Haven public schools (Southern Connecticut State University, Hamden, CT) (March 27); and had a telephone conversation with Dr. T. Cronin on the health of his honeybees relating to the AFB analysis and future participation in a beekeeper sanitation study (March 31).

Entomology

MS. ROSE BONITO arranged an exhibit and worked at the Station display for the 11th annual Garden Expo held in Fairfield (2,000 children and adults) (March 21 & 22).

MS. ROSE HISKES chaired a state CAPS committee meeting on Asian Longhorned Beetle Outreach (March 3), with **TODD MERVOSH** and **GREG BUGBEE**, gave a training session on 'Invasive Plants' to municipal and state officials in New Haven (March 5), gave a talk on 'Insects: the Good, the Bad, the Beautiful and the Just Plain Ugly' to the Shoreline Institute of Lifelong Learning in Guilford (20 attendees) (March 12), gave a talk on "Growing Natives to Sustain Birds, Bees and Butterflies" to Master Gardeners in Manchester (20 attendees) (March 21), and staffed a Station Booth at the Master Gardener Conference (300 attendees) (March 21).

MR. IRA KETTLE gave a talk on Bees at the Cherry Brook Garden Club in Canton (35 people present) (March 10); provided a Bee demonstration for senior citizens at Russell Mercier Center in Hebron, (20 attendees) (March 17); arranged an exhibit and worked at the Station display for the 11th annual Garden Expo held in Fairfield (2,000 children and adults) (March 21 & 22); and spoke to the Trillium Garden Club at the Groton Public Library in Groton (Attendees:30) (March 23).

DR. CHRIS T. MAIER participated in discussions about the Asian longhorned beetle at a committee meeting of the Cooperative Agricultural Pest Survey at the Valley Laboratory, Windsor (March 3); displayed a poster on "Invasive Alien Insects in Connecticut" at the Third Annual Connecticut Conference on Natural Resources at the University of Connecticut, Storrs (March 9); discussed exotic insects with John Ascher and Lee Herman while working at the American Museum of Natural History, New York, NY (March 18); discussed ongoing research on cerambycids with Stefan Cover and Phil Perkins while visiting the insect collection at the Museum of Comparative Zoology, Harvard University, to record distributional data on cerambycid specimens (March 26).

DR. GALE E. RIDGE held the first of two Connecticut bed bug forums bringing together, health departments, pest control operators, housing authorities and other commercial interests to be educated about bed bugs, their control, and to learn about legal issues. The forum also provided a platform for delegates to engage in an old fashioned New England town hall meeting. Here people asked questions from an expert panel and discussed strategies on bed bug management. The interest was so great that the 180 seat Jones auditorium was full, with a waiting list of 70 people. The forum is scheduled to be repeated on October 15th, 2009 to accommodate these people and others planning to come (March 17).

DR. CLAIRE RUTLEDGE attended the annual meeting of the Eastern Branch of the Entomological Society of America and presented a talk entitled 'Male, interrupted: Mating duration and sperm transfer in the emerald ash borer and its native congener the bronze birch borer' Harrisburg PA (March 20-23); taught Aboriculture 101 class, Jones Auditorium, New Haven (March 26); and attended Northeastern Bark Beetle and Woodborer Taxonomy Training sponsored by USDA APHIS and U.S. Forest Service at University of Massachusetts- Amherst (March 31).

DR. KIRBY C. STAFFORD, III participated in a meeting of the bed bug forum planning committee in the Slate Board Room (5 attendees) (March 6); spoke on ticks and Lyme disease at the Bolton Center School in Bolton, Connecticut (50 attendees) (March 11); welcomed attendees to the Connecticut Bed Bug Forum and CAES in Jones Auditorium (180 attendees) (March 17); and participated in the meeting of Northeastern Regional Association of Agricultural Experiment Station Directors (NERA) in Baltimore, MD (March 23-25).

DR. KIMBERLY A. STONER spoke to the North Haven Garden Club on "Organic Gardening and Organic Pest Management" (40 people) (March 12); participated in a meeting of the Board of Directors of CT NOFA in Oxford (12 people) (March 15); participated in meeting of the NOFA Organic Land Care Committee at the Valley Laboratory, Windsor (6 people) (March 17); along with **DR. BRIAN EITZER** and **VICKIE BOMBA-LEWANDOSKI**, presented posters on honey bees and our research measuring pesticides in pollen at Ag Day at the Capitol (March 18); with **DR. BRIAN EITZER**, met with the Natural Resources Defense Council and other scientists on the role of pesticides in pollinator decline in

Washington, DC (12 people) (March 24-25); and presented a talk to the Milford Community Gardeners on “Biological Control and Organic Management of Vegetable Pests” at the Milford Senior Center (45 people) (March 30).



Ira Kettle speaking to visitors, at The Experiment Station exhibit in Fairfield, about colony collapse disorder. (photo by Rose Bonito)

Forestry and Horticulture

DR. JEFFREY WARD participated in a Connecticut Forestlands Council, Research Committee meeting in Middlefield (March 4); administered practical and oral examination to arborist candidates for the Connecticut Tree Protection Examining Board (March 11); spoke on "Controlling Japanese barberry: alternative control methods" at the New England Society of American Foresters meeting in Portland, ME (35 attendees) (March 18); and spoke on “Invasive control strategies: theory and practice” at the “30 Hour Course”, a pesticide applicators certification course sponsored by the Cornell University Cooperative Extension, Yaphank, NY (15 attendees) (March 26).

DR. MARTIN GENT gave a talk to the Meriden Men’s Y group at the YMCA in Meriden on "Life in the Greenhouse at the Connecticut Agricultural Experiment Station" (40 attendees) (March 3); 18 March gave a talk to the Cheshire Suburban Garden Club on “Use of row covers, high tunnels, and cold frames in Connecticut” (20 attendees) (March 18); and gave a talk on “Life in the Greenhouse at the Connecticut Agricultural Experiment Station” at the 65th birthday symposium for Dr. James Prestegad at the University of Georgia (40 attendees) (March 20-21).

DR. ABIGAIL MAYNARD helped with Middle School Science Projects at Hamden Hall Country Day School (17 students, 1 teacher) (March 5); spoke on Composting and Utilization of Compost to the Branford Garden Club (35 adults) (March 9).

DR. WILLIAM NAIL gave a presentation on pruning and tying grapevines at a meeting of the Connecticut Vineyard and Winery Association at the Connecticut Food Association in Farmington (14 attendees) (March 3); participated in a planning meeting for a SCRI project in Geneva, NY (March 5); attended the Finger Lakes Grape Growers’ Conference in Waterloo, NY (March 6); participated in a meeting of the Connecticut Farm Wine Development Council at the Department of Agriculture in Hartford (March 19); met with Jim Baker and Bill Hopkins to discuss management practices for the upcoming season at Hopkins Vineyard in New Preston (March 25); and participated in a meeting of the State Consulting Committee for Agricultural Education at Wamogo High School in Litchfield (March 25).

DR. SCOTT WILLIAMS interviewed by Meredith Blake of the Greenwich Times about research project investigating deer behavior proximate to roadways in the interest of better understanding the causes of deer-vehicle collisions (March 2); spoke on "Japanese Barberry: A Public Health Concern?" at Tupper Hill-Norcross Wildlife Sanctuary in Wales, MA (47 attendees) (March 7); spoke on "Overabundant Suburban White-Tailed Deer as Seed Dispersal Agents" at Tupper Hill-Norcross Wildlife Sanctuary in Wales, MA (47 attendees) (March 7); lectured on “Japanese Barberry: A Public Health Concern?” at the 3rd annual

Connecticut Conference on Natural Resources at the University of Connecticut, Storrs (52 attendees) (March 9); spoke to the Town of Fairfield's Conservation Commission about white-tailed deer densities in Connecticut and their adverse impacts on the forested landscape (22 attendees) (March 25); and spoke on "Deer Repellents, Duration and Efficacy" at the "30 Hour Course", a pesticide applicators certification course sponsored by the Cornell University Cooperative Extension, Yaphank, NY (41 attendees) (March 26).

JOSEPH P. BARSKY provided an update on current forest research at the New England Society of American Foresters Executive Committee meeting in Portland, ME (March 17); presented poster "Reconstruction of long-term forest research data: The Old Series" that was selected as Outstanding Poster at the 89th Annual Meeting of the New England Society of American Foresters in Portland, ME (March 18-20); and spoke on "Career Opportunities in Natural Resources" to students at the New Haven Public School System-8th Grade Career Fair, at Southern Connecticut State University (80 attendees) (March 26-27).

Plant Pathology and Ecology

DR. SANDRA L. ANAGNOSTAKIS talked to a group at Belding Wildlife Management Area in Vernon. Present were DEP representatives and Board Members of the BWMA, as well as neighbors. Concerns about the project planned to harvest 2 acres of timber and plant chestnut trees were discussed and information was presented (40 adult attendees) (March 17).

DR. DONALD E. AYLOR gave an invited talk entitled "Modeling disease spread by aerially dispersed pathogens in a patchy landscape" at the Workshop on "Models and Methodological Problems of Botanical Epidemiology" held at the Center for Discrete Mathematics and Theoretical Computer Science at the Rutgers University CoRE campus located in Piscataway, NJ (20 adult attendees) (March 17); chaired a session on "Spatially-explicit models for the spread of disease" and lead a discussion on future strategies for modeling botanical epidemics at the same workshop (20 adult attendees) (March 18); and gave a talk entitled "Aerial transmission of plant disease" in a graduate level class on Climate and Life in the Yale School of Forestry and Environmental Studies in New Haven (26 adult attendees) (March 31).

DR. BOTOND BALOGH attended the Perennial Plant Conference at UConn in Storrs (March 12); attended the NEPDN 2009 Annual Regional Meeting in New Brunswick, NJ (March 17-19) and spoke about tree diseases at the Tree Condition Lab of the CTPA Arboriculture 101 class (30 adult attendees) (March 26).

DR. SHARON M. DOUGLAS gave a lecture entitled "What is plant pathology—A career opportunity?" as part of Dr. Kim Blake's Seminar Series on Career Opportunities in Environmental Science at Mitchell College in New London (20 adult attendees) (March 5); participated in the Workshop Committee and Board of Directors meetings of the CTPA in New Haven (March 10); assisted the Connecticut Tree Protection Examining Board with administering the oral examination for arborists in New Haven (March 11); participated in the monthly conference call of the APS Foundation Board of Directors (March 18); gave a presentation entitled "History of plant disease—The Irish Potato Famine and more..." as part of the Lecture Series "Hot Topics in the World of Plants" offered by the Shoreline Institute of Lifelong Learning in Guilford (28 adult attendees) (March 19); and met with Dr. Chris Gilligan, Fellow of Kings College, Cambridge University, UK, to discuss the role of the Department of Plant Pathology and Ecology in issues of regulated plant pathogens (March 20).

DR. WADE H. ELMER presented the poster "Potential uses of biochar in asparagus disease management" at the Third Connecticut Conference on Natural Resources at UConn in Storrs (150 adult attendees) (March 9); attended the Perennial Plant Conference at UConn in Storrs (March 12); was interviewed about using earthworms in home gardens by Theresa Barger of the Hartford Courant (March 19); and co-organized the session, presented the talk "Role of chlorine nutrition in IPM for suppressing plant diseases" (52 adult attendees), and presented the poster "Using earthworms to suppress soilborne diseases" (600 adult attendees) at the session entitled "Role of Mineral Nutrition in IPM for Suppressing Plant Diseases" at the Sixth International IPM Symposium in Portland, OR (March 23-26).

DR. FRANCIS J. FERRANDINO gave an invited talk entitled “The interaction of the spatio-temporal heterogeneity of inoculum release and host susceptibility” at the Workshop on “Models and Methodological Problems of Botanical Epidemiology” held at the Center for Discrete Mathematics and Theoretical Computer Science at the Rutgers University CoRE campus located in Piscataway, NJ (27 adult attendees) (March 16-18).

MS. MARY K. INMAN gave a talk entitled “Pruning woody ornamentals” to the Branford Garden Club in Branford (30 adult attendees) (March 5).

DR. ROBERT E. MARRA successfully completed the month-long USDA-APHIS-PPQ-NPPLAP Proficiency Test for Ramorum Blight Molecular Diagnostics, attaining “Certified” status to perform molecular diagnostics for *Phytophthora ramorum* for the coming year. Recertification next year will require a similar or perhaps even more involved test of proficiency performing conventional and realtime PCR assays on a panel of “unknowns” provided by the NPPLAP facility in Beltsville, MD.

Soil and Water

DR. THEODORE ANDREADIS presented a lecture entitled, West Nile virus: a ten year perspective on what we have learned and what we can expect in the future at a meeting of the Experiment Station Associates held at the Station (45 attendees) (March 30) and gave an oral presentation on West Nile virus and a tour of the Biosafety Level 3 and electron microscope laboratories to a group of 26 students from the Metropolitan Business Academy in New Haven as part of the NIH/NSF sponsored Peabody Fellows Program, Yale University (March 31).

GREGORY BUGBEE hosted an “Invasive Plant Workshop for Government Officials” in Jones auditorium and spoke on Identification of Connecticut’s Invasive Aquatic Plants (58 Attendees) (March 5); spoke on “Using Geographic Information Systems (GIS) to Map Invasive Aquatic Plants” at the 3rd Annual Connecticut Conference on Natural Resources” held at the University of Connecticut (approx. 50 attendees) (March 9); spoke on Correlating Connecticut’s Invasive Aquatic Plants with Hydrography, Water Chemistry and Boat Launches at the New England Association of Environmental Biologists Conference in Westbrook, CT (approx. 35 attendees) (March 19); and presented the results of the 2008 CAES IAPP invasive aquatic plant survey of Lakes Candlewood and Zoar to the FirstLight Hydro Generating Company - Invasive Aquatic Plant Technical Committee in Sherman, CT (6 Attendees) (March 25).

MICHAEL THOMAS AND JOHN SHEPARD demonstrated and discussed key morphological characters used for mosquito identification and verified species identification from the UCONN Medical Entomology Collection with Dr. Roberta Engel (March 31) and spoke to 26 students from the Metropolitan Business Academy in New Haven and provided hands on activities about mosquito biology and arbovirus surveillance as part of the NIH/NSF sponsored Peabody Fellows Program, Yale University (26 students) (March 31).

DR. JOSEPH PIGNATELLO was visited by Prof. Bruce Brownawell, SUNY Brookhaven (March 9).

DR. JASON WHITE met with Professor Saion Sinha of the University of New Haven to discuss results from collaborative experiments on the phytotoxicity of nanoparticles and to begin planning a joint grant proposal to EPA (March 18).

Valley Laboratory

DR. RICHARD COWLES spoke to SavALawn employees about "White grubs and their management" and SavATree workers on "Managing hemlock woolly adelgids and scales" at their annual training meeting, Southbury, CT (60 attendees) (March 5); presented "Management of pyrethroid-resistant annual bluegrass weevils," at the Eastern Branch Meeting of the Entomological Society of America, Harrisburg, PA (25 attendees) (March 21); and chaired the meeting for the Northeast Regional Hatch Turf Workgroup,

NE-1025, at the Valley Laboratory, and presented "Management of pyrethroid-resistant annual bluegrass weevils" (15 attendees) (March 26).

DR. JAMES A. LAMONDIA participated in a conference call concerning grant research planning with Drs. George Abawi, Curt Petzholz, and Beth Gugino (March 9); examined candidates for the Connecticut arborist license and participated in the quarterly meeting of the Connecticut Tree Protection Examining Board in New Haven (March 11); taught a session on tree diseases as a part of Arboriculture 101 in New Haven (40 students) (March 11); was interviewed about shade tobacco culture and production and the economy by Mark Herz of National Public Radio (March 13); spoke about research and services at the Station and summer employment opportunities at the Central Connecticut State University Biology Department Career Fair (40 attendees) (March 16); participated in Ag Day at the Capital as a member of the Connecticut Agricultural Information Council (March 18); and participated in a planning meeting of grape-IPM researchers conducted by Frank Ferrandino at the Valley Laboratory (March 24).

DR. TODD L. MERVOSH was interviewed by Keila Torres of the Connecticut Post about a project to control invasive plants such as multiflora rose and garlic mustard in Bridgeport parks (March 3); along with **ROSE HISKES** and **GREGORY BUGBEE**, was an instructor for a course on identification of invasive plants at CAES in New Haven (65 attendees) (March 5); met with town officials in Newtown regarding control options for mile-a-minute vine (March 17); mentored a Wesleyan University student about invasive plant issues while on a site visit and meeting with **DR. CAROLE CHEAH** and representatives of UConn, D.E.P. and Spectra Energy Company about a biological control project for mile-a-minute vine in Quinnipiac River State Park in North Haven (March 23); participated in meetings of the Connecticut Invasive Plant Working Group (35 attendees), the Mile-a-Minute Task Force (20 attendees), and the Connecticut Nurserymen's Foundation scholarship selection committee (10 attendees) at the Valley Laboratory in Windsor (March 24); and spoke about integrated weed management and factors affecting herbicide activity at a training course for Suffolk County pesticide applicators in Yaphank, NY (20 attendees) (March 27).

Journal Articles Approved March 2009

Cowles, Richard S. An effective, selective, and less laborious approach for managing cryptomeria scale. The Evergreen Bulletin (RI Christmas Tree Growers' Newsletter)

Gent, Martin P. N. Measurement and modeling of diurnal variation of nitrate and sugars in lettuce. Acta Horticulturae

Gent, Martin P. N., Wade H. Elmer, R. J. McAvoy. Rapid watering to achieve partial saturation of root medium on flooded floors. Acta Horticulturae

I. Seginer and **Martin P. N. Gent.** A supply/demand, single-organ crop growth model. Proceedings International Agricultural Conference. July 2009, Wageningen

LaMondia, James A. January temperatures predict tobacco blue mold severity – evidence for local source and long distance transport of inoculum in Connecticut. Plant Disease

Zhao, GH, **De-Wei Li**, and Xi, GJ. First report of powdery mildew caused by *Oidium* sp. on *Cassia corymbosa* in China. Mycosystema

Maynard, Abigail A. and David E. Hill. How to Grow Belgian Endive in Connecticut. Station Fact Sheet

Musante, Craig and MaryJane Incorvia Mattina. Analysis of animal feed products sold in Connecticut, 2008. Station Bulletin

Nail, William R. and G. S. Howell. Pruning and training system effects on Concord grapevines in Michigan II: fruit composition and yield. American Journal of Enology and Viticulture.

Rutledge, Claire E., J. G. Millar, C. M. Romero, and L. M. Hanks. Contact pheromone of *Callidiellum rufipenne*. Environmental Entomology Chemical Ecology

Smith, Victoria Lynn. Natural enemies: The best hope for control of exotic pests of the northeast forests. Newsletter of the Connecticut Botanical Society.

Smith, Victoria Lynn. Forest Health Outlook for 2009: Some new threats and the usual suspects. CTPA Spring Newsletter

Grant Awards March 2009

DR. WILLIAM NAIL is a Project Investigator on a planning grant proposal for cold-climate winegrape research that was awarded \$10,000 from Northeast Research Association (NERA) for a planning meeting to be held in Burlington, VT in November (March 31).

DR. BOTOND BALOGH is the Project Coordinator; Lorraine Los from University of Connecticut is co-Coordinator and **MR. ROBERT DURGY** is also a key participant. The total funding is \$195,498 from which \$99,361 will come to the Experiment Station.

BALOGH, B. and Los, L. 2008. Development and on-farm training of biologically based methods for integrated crop management of stone fruits in New England. Sustainable Agriculture Research and Education, Northeast SARE Research & Education Grants.

Drs. George Abawi (Cornell Geneva), Beth Gugino (PSU), **JIM LAMONDIA** (CAES) and Curt Petzoltz (Cornell Geneva) were selected to receive a NE – IPM Competitive Grant for “Prioritizing cover crops for improving root-health and yield of vegetables in the Northeast” (\$120,000).

HUGH SMITH received \$900 from the New England Vegetable and Berry Growers Association in support of research on strawberry sap beetle.

Donna Ellis, **CAROLE CHEAH** and **TODD MERVOSH** received a grant “Biological control of mile-a-minute weed (*Persicaria perfoliata*) with *Rhinoncomimus latipes*.” from USDA-APHIS for \$10,000.

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