

STATION NEWS

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION



THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

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.



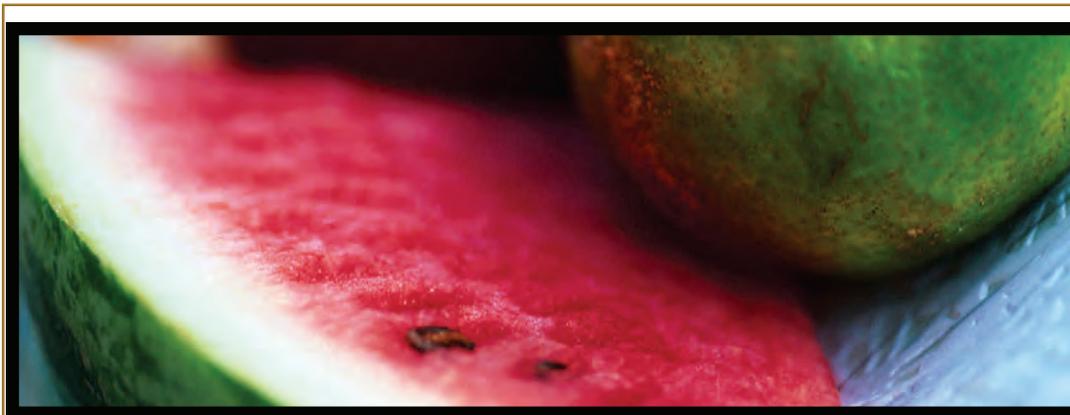
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DEPARTMENTAL NEWS

ADMINISTRATION

This issue is dedicated to the late Dr. Louis A. Magnarelli....

**Memorial Proclamation by
Governor Dannel P. Malloy, given on
the 103rd Plant Science Day**

On behalf of the State of Connecticut,
I, Dannel P. Malloy, Governor,
recognize and honor
Dr. Louis A. Magnarelli

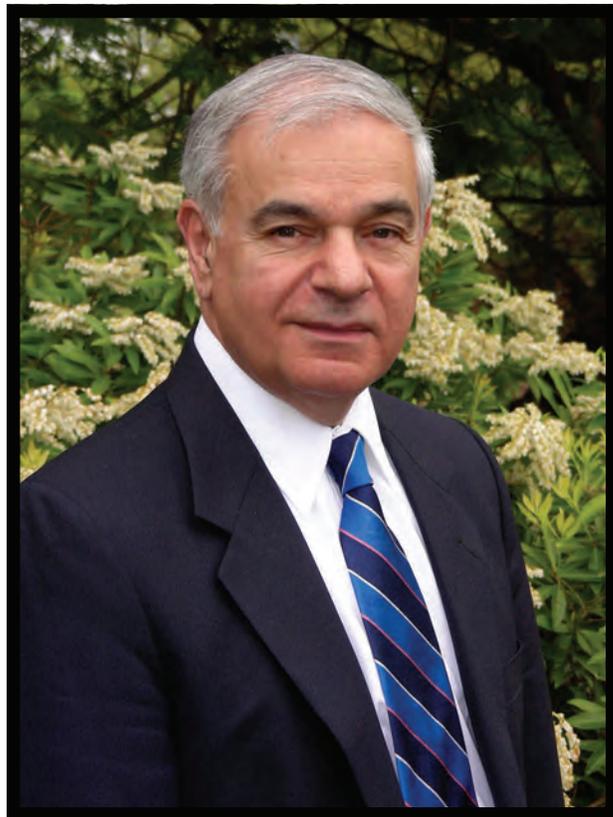
This memorial is a testament to
Dr. Magnarelli's devotion to his
community, the Connecticut
Agricultural Experiment Station, the
State of Connecticut, our nation,
and the world.

In a career spanning over four
decades, Dr. Louis Magnarelli
notably served as the State
Entomologist and for the past
nine years as Director of the
Connecticut Agricultural
Experiment Station.

Dr. Magnarelli was a pioneer
in the field of medical entomology
and is internationally renowned for
his prodigious research in
identifying and treating Lyme disease.
He was an indispensable resource to
the State of Connecticut in the areas
of insect-borne diseases and pathogens,
infestation, pests, and parasites.

Today at the 103rd annual Connecticut
Agricultural Experiment Station Plant
Science Day, we honor and recognize
Dr. Louis Magnarelli's tremendous
dedication and significant
contributions to the field of science
throughout the world.

Therefore, I, Dannel P. Malloy,
Governor of the State of Connecticut,
do hereby remember and honor
Dr. Louis A. Magnarelli
In the State of Connecticut.



Excerpt from Connecticut Post tribute by Terry Jones

“Lou arrived at the station in 1975, its centennial year, after receiving his doctorate in medical entomology at Cornell University. He was an excellent scientist, specializing in ticks and their associated diseases. The culture of the station captured his spirit and energy as he worked tirelessly ‘putting science to work for society.’ Lou became vice director in 1992 and was appointed director in 2004. Dr. Magnarelli loved the Connecticut Agricultural Experiment Station...Lou dedicated his professional career to advancing its mission of improving our lives through science.”



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Station Statement by Dr. Kirby Stafford, Michael Last, and Dr. Jason White

It is with great sadness that we mark the passing of Dr. Louis A. Magnarelli, Director of The Connecticut Agricultural Experiment Station, Thursday morning, July 11, 2013, at home after a courageous battle with illness. Lou's career at the Station began nearly 4-decades ago and he was the Director of this institution for the last 9 years. Dr. Magnarelli was known internationally for his work on ticks, tick-associated diseases, serological testing for vector-borne pathogens, and many other scientific accomplishments, far too numerous to catalog here. His contributions to Connecticut and science were extensive and appreciated. Through the course of his career, he published over 218 scientific articles.

Dr. Magnarelli received his Ph.D. in medical entomology from Cornell University and came to the Experiment Station in 1975. He served as Chief Entomologist and State Entomologist from 1987-2004, Vice Director from 1992-2004, and was appointed the agency's eighth Director in 2004. However, Lou was not only our Director; he was our colleague and most of all, our friend. His door was always open, both literally and figuratively, for discussion of all matters from the scientific to the personal. His keen scientific and analytical mind was only exceeded by his desire to bring this institution's scientific knowledge and experience to the benefit of the citizens of Connecticut. He was a strong supporter of Connecticut agriculture, the state's trees and woodlands, and the green industry. Lou's wisdom and skillful stewardship as our leader will be sorely missed. Even through his illness, his thoughts were always of the Experiment Station. All Station staff, both present and future, will take tremendous pride in honoring and continuing Dr. Magnarelli's unwavering commitment for "Putting Science to Work for Society".



Louis A. Magnarelli

Magnarelli to become Station Director

The Board of Control of The Connecticut Agricultural Experiment Station named Louis Magnarelli, vice-director and chief of the Department of Entomology, to assume the post of Director of The Connecticut Agricultural Experiment Station on November 12.

Director John F. Anderson will continue conducting research on ticks and mosquitoes as a Distinguished Scientist when Magnarelli becomes director.

A New York native, Magnarelli graduated from the State University of New York at Oswego and taught biology at West Genesee High School.

After receiving his PhD from Cornell University in 1975, he joined the Entomology Department of the Experiment Station and began studies of the ecology and control of mosquitoes, deerflies, and horse flies. He also started investigating ticks, especially the American dog tick, the vector of Rocky Mountain spotted fever.

Magnarelli succeeded Anderson as Chief of the Department of Entomology

and State Entomologist when Anderson became director in 1987.

Magnarelli continued his research, especially on ticks, including the black-legged tick, the vector of Lyme disease, and, as State Entomologist, dealt with regulatory issues, such as controlling gypsy moth and inspections and quarantines for exotic insects.

In 1992, Magnarelli was named Vice-Director by the Board of Control, and he

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Spring 2004 issue of the Experiment Station Associate Bulletin

Director, continued from page 1

also assumed the duties of Affirmative Action Officer.

Magnarelli has continued his research, most recently focusing on developing improved diagnostic tests for Lyme disease and ehrlichiosis, the ecology of ticks, and the epidemiology of Lyme disease, babesiosis, and ehrlichiosis.

He has served on the editorial boards of the Journal of Clinical Microbiology, Journal of Medical Entomology, Journal of the American Mosquito Control Association, and the Bulletin of the Society for Vector Ecologists.

He has received the Bronze Medal of the Federated Garden Clubs of Connecticut and other awards.

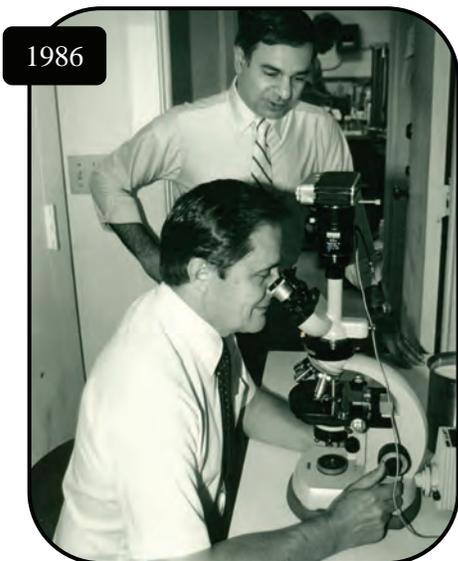
Magnarelli lives in Durham with his wife, Sharon.

Anderson served as director while supporters helped fight off a move to close the Station, and has overseen major upgrades of facilities, including construction of the Johnson-Horsfall Laboratories, a new and modern facility for analytical chemistry, molecular biology, and studies of tick and insect-borne viruses and other pathogens.

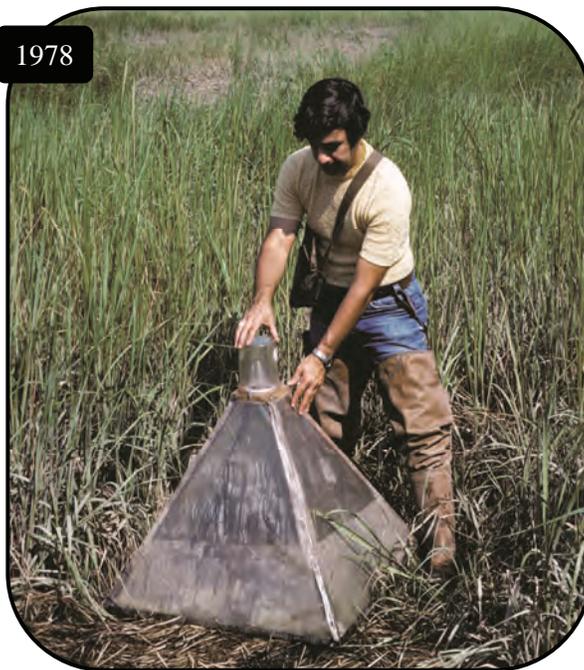


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1986



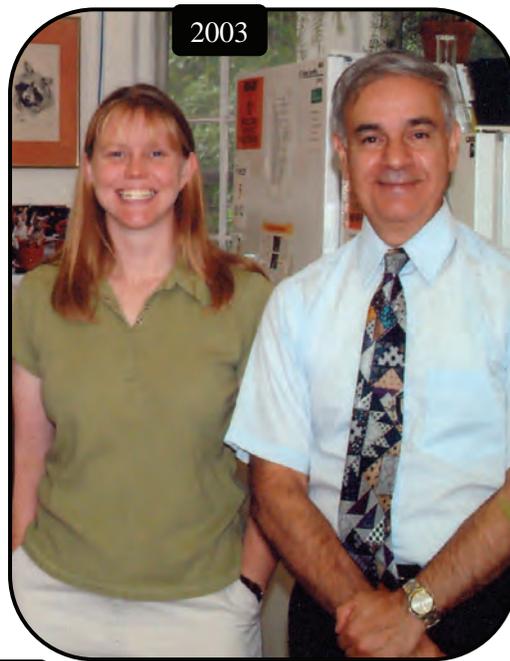
1978



1993



1977



2003

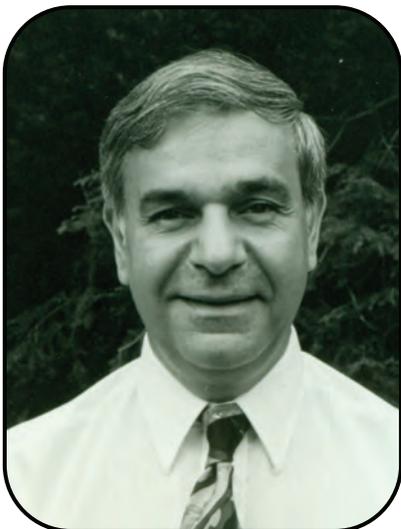


2005



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Entomology Department, 1990



1997



1978



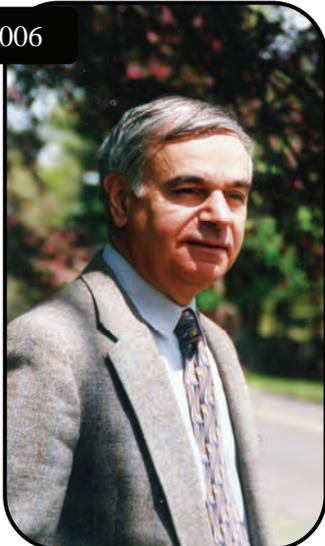
Entomology Department, 1992



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2006



2013



2013

2013



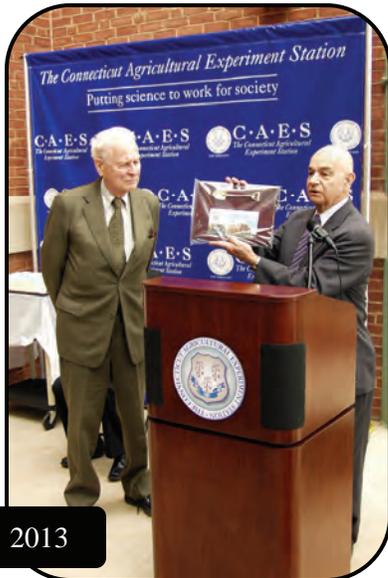


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2005



2013



2010



2013



2012



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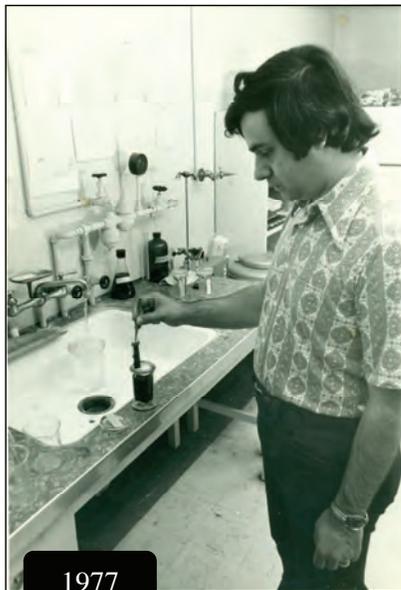
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1976



1976



1977



Plant Science Day 2010



Louis Magnarelli at the 1992 Lyme Disease State of the Art



1997



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Tribute to Dr. Louis Magnarelli...One of my lasting memories of Dr. Magnarelli were his paper-clips. He would line them up in a neat row on his desk and touch or idly realign them when we talked. They were the touch-stone of his muse and where ever he went, if there were paper-clips, they were inevitably lined up in a neat row. They were in part, a definition of the man. A cynic from the mechanical engineering industry once said to me, "if a person put their arm into a bucket of water, when it was withdrawn, the hole left behind would be the measure of how much they would be missed". They missed one point. The ripples. The ripples Lou left behind, his sphere of influence both intellectually and as our careful generous leader, will be lasting for many years to come. —*Dr. Gale E. Ridge*

Dr. Magnarelli was an incredible mentor. Over time, we collaborated on a number of publications. Lou's experience as a teaching assistant while in graduate school at Cornell University was undoubtedly reflected in his patient, thoughtful, and careful approach to all that he did. He was not only a great scientist, but a great teacher as well.

—*Dr. Kirby C. Stafford 999*

What can I say? Lou was a fair and considerate boss. I really lucked out when I took the position in his serology laboratory 21 years ago. I honestly didn't plan on staying at CAES for this long, but he was such a superb grant writer that the opportunities for new projects never waned. Throughout my career in his laboratory we not only enjoyed the epidemiology of tick-borne diseases, but we also enjoyed sharing stories of our travels. It was through his fostering that I toured most of Western Europe, save Portugal. He enlightened me with accounts of European culture and returned with souvenirs of special places he had visited. Now, when I look at those special mementoes of his travels, I remember a man who was not only my employer but also my inspiration for the realization that life should be an experience filled with adventure. Thanks for the memories Lou. —*Ms. Fia Blewins*

Dr. Magnarelli was a wonderful boss and person who will be greatly missed.

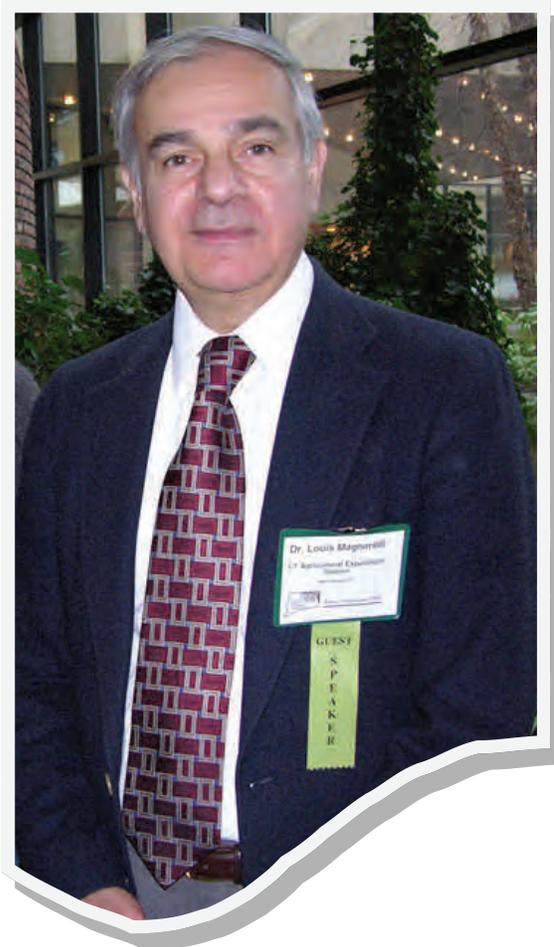
—*Mrs. Vickie Bomba-Lewandoski*



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Dr. Magnarelli's support of Connecticut farming and the nursery industry as State Entomologist and later as Director is an aspect of his work that was largely unknown outside the agricultural circles. He had broad regulatory authority over plant pests and pathogens and approached regulatory matters carefully and thoughtfully to ensure both quality plants and the viability of the green industry, preferring as the industry put it, to "consult and work quietly behind the scenes in cooperation with...green industry organizations". The Connecticut Nursery and Landscape Association honored Dr. Magnarelli with its Award of Merit in January 2013.



Station Director Dr. Louis Magnarelli, a speaker and attendee at a winter meeting of the Connecticut Nursery and Landscape Association, regulated the industry carefully and thoughtfully to ensure quality plants and the viability of the industry.

Dr. Magnarelli...

"a gentleman, self-controlled, personable, down to earth, strict-by-the-rules, dedicated to CAES, not self-serving, always willing to listen, high integrity, private"

- Dr. Joseph Pignatello



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Dr. Louis A. Magnarelli: Director and Scientist

March 27, 1945 – July 11, 2013

By John F. Anderson

Dr. Louis A. Magnarelli dedicated much of his nine years as Director to The Connecticut Agricultural Experiment Station and studying ticks and the pathogens that they carry in Connecticut. He lost his courageous battle with a blood disease on July 11, 2013.

On July 31, 1975 on behalf of the Experiment Station's Board of Control, I hired him as a young, well-trained, and enthusiastic entomologist. He had received his PhD in medical entomology in January from Cornell University after completing his thesis "A Study of Mosquito Ovarian Cycles and Life Histories". For 38 years, we worked together on a variety of research projects. We published at least 107 collaborative scientific publications. Harsh words were never exchanged between us.

Dr. Magnarelli was born in Syracuse, New York on March 27, 1945 and graduated from West Genesee Central Senior High School, Camillus, New York, in 1963. He was a good baseball player and had the opportunity to play professional baseball but decided instead to attend college. He graduated from the State University of New York, College at Oswego, in 1967 where he majored in biology and secondary education. He received his Master of Science Degree in biology in 1968 from the University of Michigan.

He returned to his earlier roots and taught biology at West Genesee Central Senior High School from 1968-1971. It was there that he likely learned patience, humility, and organizing. He learned to listen and to teach high school students. Later, these skills served him well while he performed research and led the Experiment Station.

During the summers of 1970 and 1971, mosquitoes and other biting arthropods interested him while he worked as a public health sanitarian for the Onondaga County Health Department. In September 1971, he began PhD studies in medical entomology at Cornell University and chose Dr. E. M. Raffensperger as his major advisor.

Soon after his arrival at the Experiment Station in July 1975, he established a laboratory in the Jenkins Building and field plots in marsh and wooded areas to study how Connecticut mosquitoes fed. Alone he published eight papers on mosquitoes in 1977 and 1978, and he and I published three papers in 1978 on ticks and on horseflies and deer flies. One of his 1977 papers, "Host feeding patterns of Connecticut mosquitoes" published in the American Journal of Tropical



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Medicine and Hygiene, is still cited frequently. In the years that followed, he continued publishing extensively on the natural history of mosquitoes, horse flies, deer flies, house flies, black flies, sand flies, no-see-ums, and flesh-eating flies.

In 1976 - 1977, Dr. Magnarelli suggested that the two of us ought to begin working on ticks that transmitted the causative agent of Rocky Mountain spotted fever to people on Long Island and Westchester County, New York, on Cape Cod, Massachusetts, and in Connecticut. With the support of Experiment Station Director Paul E. Waggoner, we began our studies of the ecology of American dog ticks, *Dermacentor variabilis*, and became interested in the rickettsiae that cause Rocky Mountain spotted fever. We visited Dr. Jorge Benach in 1977, who was working for the New York State Department of Health on Rocky Mountain spotted fever in Westchester County, New York, and later we worked in the laboratories of Dr. Willy Burgdorfer and Dr. Robert N. Philip at the Rocky Mountain Laboratories, U.S. Public Health Service, National Institutes of Health, in Hamilton, Montana.

We often laughed about our trip to Hamilton. We carried extensive collections of bloods from humans, dogs, horses, and wild animals along with ticks, which we had frozen in dry ice. When we changed planes in Chicago to fly to Missoula, Montana, we had to lug two relatively heavy boxes from one end of O'Hare airport to the other. In the airport Lou informed me that he had a bad back and could not carry the boxes. He said that he would lead, and I could follow with the boxes. That is what we did. Upon our return to New Haven, we had not one but two guys with bad backs. Importantly, we decided on this trip that Lou would emphasize serological studies of bloods from humans, domestic animals, and wildlife, and that I would focus on isolation of organisms from ticks and animals.

We also worked in the laboratories at the Yale Arbovirus Research Unit where we were given encouragement and assistance, particularly from Dr. Wilber G. Downs and Dr. Robert E. Shope. Also, we processed ticks in the Connecticut State Health Laboratory in Hartford.

In time and with the encouragement of the Experiment Station's Board of Control and Director Paul E. Waggoner, Dr. Magnarelli established a serology laboratory on the second floor of the Jenkins Building, and I set up an isolation laboratory for tick-associated human and veterinary pathogens on the first floor of the Britton Building. The two laboratories worked closely together in following years.

Dr. Magnarelli led the research that resulted in the first, and I believe only isolation from a Connecticut resident, of *Rickettsia rickettsia*, the cause of Rocky



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Mountain spotted fever. Dr. Magnarelli developed and published serologic tests for Rocky Mountain spotted fever in wildlife, and he published on rickettsiae in Connecticut ticks.

In 1977, Drs. Allen C. Steere and Stephen E. Malawista in the Department of Internal Medicine, Yale School of Medicine, and other colleagues at Yale and in the Connecticut Department of Health reported a cluster of arthritic children in the towns of Old Lyme, Lyme, and East Haddam, Connecticut. One or more recalled a tick-bite. Dr. Steere and colleagues called the disease Lyme arthritis, which they later changed to Lyme disease. The causative agent was not known. Dr. Magnarelli and I began studying the tick that seemed to be associated with the disease, *Ixodes scapularis*.

At a meeting of the American Society of Rickettsiology in Atlanta, Georgia in late 1981, Dr. Willy Burgdorfer informed the two of us that he had discovered the causative agent of Lyme disease, a spirochete, and let us read a draft of the paper that had been accepted but not yet published in Science magazine.

Lou and I were sharing a room in the hotel where the meeting was being held. We stayed up much of the night into the early morning, discussing how we would begin field and laboratory studies of this newly discovered spirochete, which was later named by Dr. Russell C. Johnson of the University of Minnesota as *Borrelia burgdorferi*, in honor of Dr. Burgdorfer. Dr. Burgdorfer was the Samuel W. Johnson Memorial speaker at Plant Science Day in 1983.

In 1982, we isolated spirochetes from ticks and from wildlife in Connecticut. Dr. Magnarelli used one on the isolates as antigen and began developing serologic tests for Lyme disease in humans, domestic animals, and wildlife. He also continued publishing about Rocky Mountain spotted-fever and about the feeding of mosquitoes and deer flies. He and colleagues were one of the first to publish serologic methods for detecting antibodies to *Borrelia burgdorferi* in humans by enzyme-linked immunosorbent assays and indirect fluorescent-antibody tests. Improving these two tests remained a focus of Dr. Magnarelli for more than two decades. In 1984, Dr. Magnarelli began analyzing human serum for antibodies to *Borrelia burgdorferi* and performed more than 6,000 tests for the Connecticut State Department of Public Health. He also provided reagents and his expertise to Connecticut hospitals and to clinical laboratories throughout the U.S.A. He extended his serologic tests to other tick-associated pathogens that cause tularemia, anaplasmosis, ehrlichiosis, babesiosis, and Powassan encephalitis. He also developed tests for co-infections, and he was one of the first to report Lyme disease in dogs.

He collaborated with colleagues throughout the United States. He published rela-



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tively frequently with Drs. Willy Burgdorfer, Robert N. Philip, and Allan G. Barbour (National Institutes of Health), Erol Fikrig, Richard A. Flavell, Durland Fish, Jacob W. IJdo, Tian Wang, and Steven W. Barthold (Yale University), Steve Levy (Durham, Veterinary Hospital), Russell C. Johnson (University of Minnesota), Sandra L. Bushmich (University of Connecticut), J. Stephen Dumler (University of Maryland School of Medicine), Gary P. Wormser (New York Medical College), James H. Oliver, Jr. (Georgia Southern University), W. Adrian Chappell (Centers for Disease Control), Ray Koski (L² Diagnostics, LLC), Steven J. Norris (University of Texas Medical School at Houston), Bruce A. Sherman (Connecticut Department of Agriculture), and Theodore G. Andreadis and Kirby C. Stafford III (The Connecticut Agricultural Experiment Station).

In 1987 The Experiment Station's Board of Control appointed Dr. Magnarelli as Chief Entomologist and State Entomologist. From 1992-2004 he was Vice Director. In 2004 he was elected Director.

Regulatory responsibilities came with these positions, and sometimes Dr. Magnarelli established and enforced quarantines to protect Connecticut. He fully recognized the economic impacts these decisions had on citizens and always listened intently to those who voiced their concerns at hearings. He oversaw quarantines on tracheal mites on honey bees from 1986-1992, Varro mites on honey bees from 1991-1992, Japanese longhorned beetle from 1999 to the present, and the emerald ash borer from 2012 to the present. He learned to juggle his administrative responsibilities with his research on ticks, serology, microbial pathogens, and mosquitoes.

He actively served numerous organizations and committees. He was on the editorial boards of the Journal of Medical Entomology and the Journal of Clinical Microbiology. He was an elected member of the Connecticut Academy of Science and Engineering and served on the Governing Council from 2004-2011, was Chairperson of the Agriculture Food and Nutrition Technical Board, and was a Reviewer for the "Food and Agriculture" Briefs. He was a member of the Legislative Invasive Plants Council. He worked closely with agricultural and environmental organizations, including the Experiment Station Associates, Connecticut Tree Protection Association, the Connecticut Nursery & Landscape Association, the Connecticut Farm Bureau, the Federated Garden Clubs of Connecticut, and the Garden Club of New Haven. He served on the Selection Committee for the Century Farm Award. In 2009 he received Connecticut Friend of Floristry Award.

Three of Dr. Magnarelli's goals as Director were to improve the laboratory and office facilities of the Jenkins Building, to expand the reach of the Experiment Station into eastern Connecticut, and to find additional research funds. He suc-



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ceeded on all fronts. He took custody of the former Department of Environmental Protection tree nursery in 2007, opened a new research center in 2008, and built a laboratory building at the Griswold Research Center in eastern Connecticut in 2012. In 2007, the Connecticut Legislature authorized funding for the renovation and addition to the Jenkins Building. In 2010 Governor M. Jodi Rell and the State Bond Commission allotted \$1.26 million for the design of the building. Governor Dannel P. Malloy and the State Bond Commission allotted \$11.4 million to construct the Jenkins-Waggoner Laboratory. I am sure the highlight of Dr. Magnarelli's career was arranging "Dr. Paul E. Waggoner Appreciation Day" and the ground-breaking ceremony for the Jenkins-Waggoner laboratory on March 18, 2013. Additionally, he was instrumental in establishing The Connecticut Agricultural Experiment Station Research Foundation. Its primary goal is to provide support for new, continuing, and future research at the Experiment Station and to disseminate information to Connecticut residents.

Yale University, where he was a Research Affiliate in the Department of Epidemiology and Public Health, regarded Dr. Magnarelli highly. Dr. Durland Fish, Professor of Epidemiology and of Forestry and Environmental Studies, wrote "... I received a message from Ted [Andreadis] yesterday and I am very sad to hear this [his death]. He was a good colleague and friend and I will miss him very much..." Dr. Albert Icksang Ko, Chair, Department of Epidemiology of Microbial Disease, wrote. "I know that Lou played a critical role in the growth and sustenance of the Connecticut Agricultural Station and his loss weighs heavily. His colleagues at Epidemiology of Microbial Disease well appreciated the importance of his contributions to vector borne diseases, especially Lyme disease and will miss his collaboration." On August 22, 2013, Professor Durland Fish, who had participated in the 13th International Conference on Lyme Disease and Other Tick-Borne Diseases, wrote to Drs. Theodore G. Andreadis, Kirby C. Stafford, III, and to me, "I cited several of Lou's papers in my plenary talk in Boston, and Sam Telford (Tufts University) called a moment of silence for him at the start of the ecology session which followed." Dr. Magnarelli had given one of the invited talks at the First International Symposium on Lyme disease held at Yale University on November 16-18, 1983.

Elected officials noted the passing of Dr. Magnarelli. Governor Dannel P. Malloy and President of The Station Board wrote an "Official Statement" that was read by Commission of Agriculture Stephen K. Reviczky at Plant Science Day. Governor Malloy concluded "...we honor and recognize Dr. Louis Magnarelli's tremendous dedication and significant contribution to the field of Science throughout the world." U. S. Congresswoman Rosa L. DeLauro released a statement "...Lou was a dear friend who will be sorely missed. He worked tirelessly for the people of Connecticut, our communities and the environment. Lou's joy and dedication to his work was inspiring, and I could always count on him for



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outstanding research or an update on CAES's recent work...."

Terry Jones, Vice President of the Experiment Station's Board of Control wrote in the Connecticut Post "...Lou dedicated his professional career to advancing [The Station's] mission of improving our lives through science. ... His love of the institution was also spread among his colleagues--a world class team of scientists and support staff. The director's office door was always open, and he respected and encouraged the creative ideas that grew among his colleagues...."

Dr. Magnarelli continued writing and carrying out his duties as Director while in the hospital. My last communication was on July 7, 2013 when he responded to my email on the ecology of Powassan virus. He wrote "...I like your approach. I think this is an emerging pathogen and wish I could be a part of the research...." Yale Professor Erol Fikrig, a long-time collaborator and close friend of Dr. Magnarelli, wrote me on July 13th, 2013 "Just two weeks ago Lou and I were working on finishing a paper together." Dr. Magnarelli's work ethic was exceptional and continued to the end.

His wife, Sharon Dishaw Magnarelli, whom he married in June 1969, survives him. She received her PhD from Cornell University and is Professor of Modern Languages at Quinnipiac University. She has published four books and almost 100 articles on Spanish American theatre and narrative. For reason, Lou was extremely proud of her.

I shall miss this humble superb scientist, friend, and colleague who wrote at least 218 scientific manuscripts. He devoted his life to studying important public health issues locally and throughout the county and led The Connecticut Agricultural Experiment Station from 2004 until his death at his home in Durham, Connecticut on July 11, 2013. Dr. Theodore G. Andreadis, one of his close and trusted colleagues, will now carry the Station's torch forward.



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ANALYTICAL CHEMISTRY

DR. JASON C. WHITE participated in an Association of Public Health Laboratories (APHL) quarterly Agriculture/Chemistry conference call (July 9); participated in an Organizational Committee conference call for the upcoming 10th International Phytotechnologies Conference in Syracuse NY (July 11); participated with **DR. BRIAN EITZER, MS. KITTIPATH PRAPAYOTIN-RIVEROS, MS. TERRI ARSENAULT, MR. CRAIG MUSANTE, MR. MICHAEL CAVADINI, AND DR. WALTER KROL** in the monthly FDA FERN Chemistry Cooperative Agreement Program conference call (July 11); hosted Ms. Judith Singer of the CT DEEP Water Quality Program, as well as two student interns from a local high school, and gave them a tour of Department laboratories (July 11); served as a Dissertation Committee member and participated by Skype in the Oral Proposal Defense of Arnab Mukherjee, Ph.D. candidate at the University of Texas El Paso (July 18); served as a Dissertation Committee member and participated by Skype in the B-exam of Sanghamitra Majumdar, Ph.D. candidate at the University of Texas El Paso (July 18); participated in the Northeast Environmental and Public Health Laboratory Directors Quarterly Meeting at the CT Department of Public Health Laboratory in Rocky Hill, CT (July 24); participated with **MR. JOSEPH HAWTHORNE, MS. KITTIPATH PRAPAYOTIN-RIVEROS, AND DR. WALTER KROL** in an FDA ISO mentoring conference call with Ohio Department of Agriculture (July 25); and attended a USDA AFRI Program Review and gave a presentation entitled "Nanomaterial Contamination of Agricultural Crops" in Charlotte, NC (25 attendees) (July 26-27).

DR. BRIAN EITZER presented a talk on the Connecticut Market Basket Survey for Pesticide Residues in Produce at the 50th annual North American Chemical Residue Workshop in St. Petersburg Beach, FL (175 attendees) (July 21-24); participated in a conference call on the planning of the North American Chemical Residue Workshop (July 11); participated in a conference call on planning the annual FDA FERN cCAP meeting for this year (July 26); and along with **DR. WALTER KROL, DR. CHRISTINA ROBB, DR. ROBERTO DE LA TORRE-ROCHE, MR. CRAIG MUSANTE, MR. MICHAEL CAVADINI, MS. TERRI ARSENAULT, AND MR. JOSEPH HAWTHORNE**, participated in an on-site ISO17025 Accreditation Training provided by Mettler-Toledo (July 31).

DR. WALTER KROL participated in an FDA 50-State conference call concerning new proposed rules that were released under the Food Safety Modernization Act (FSMA) for the Foreign Supplier Verification Programs (FSVP) and Accreditation of Third-Party Auditors (July 26).

MS. KITTIPATH PRAPAYOTIN-RIVEROS participated in a conference call with the Association of Public Health Laboratories (APHL) about data transmission to FDA eLEXNET (July 9); and participated in the Ad Hoc Laboratory Accreditation webinar from the North Carolina Department of Agriculture and Consumer Services laboratory on ISO Accreditation and document control (July 18).

ENTOMOLOGY

MS. KATHERINE DUGAS spoke about good and bad insects and forest pests to Cub Scouts at Camp Cedarcrest in Orange (July 18); spoke about beneficial insects and invasive forest pests to three summer day camps at East Shore Park (July 22), Edgewood Park (July 23), and Clinton Avenue School (July 26); with **MS. ROSE HISKES**, staffed a Forest Pest display table at the Bridgeport Farmer's Market (July 25).



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MS. ROSE HISKES volunteered as a Wasp Watcher for the CAES *Cerceris* biosurveillance program at Center Road School in Vernon (harvested 53 buprestid beetles) (July 6, 7, 14, and 15); participated in a moth identification training for the Cooperative Agricultural Pest Survey (CAPS) program at the University of Massachusetts in Amherst (July 16); discussed winter moth in Connecticut with Dr. Joe Elkington and Mr. Jeff Boettner, University of Massachusetts (July 16); staffed a CAPS and forest pest table at the Connecticut Nursery and Landscape Association's summer meeting held at Summer Hill Nursery in Madison (approx. 30 people stopped by the booth) (July 17); staffed a CAPS and forest pest table at the Connecticut Tree Protective Association's summer meeting in Farmington (180 people stopped by the booth) (July 18); and with **MS. KATHERINE DUGAS**, staffed a forest pest table at the Downtown Bridgeport Farmer's Market in Bridgeport (68 attendees) (July 25).

MS. ROSE HISKES staffed the CAES booth and answered questions about Asian longhorned beetle and emerald ash borer at the Summer Meeting of the Connecticut Nursery and Landscape Association held at Summer Hill Nursery in Madison (July 17); staffed the CAES booth and answered questions about ALB and EAB at the Connecticut Tree Protective Association Summer Meeting held at the Farmington Club (July 18); and with **MS. KATHERINE DUGAS**, staffed a Forest Pest display table at the Bridgeport Farmer's Market (July 25).

DR. GALE E. RIDGE spoke about bed bugs to senior citizens at the Woodview Apartments in East Haven (45 attendees) (July 9).

DR. CLAIRE E. RUTLEDGE carried out numerous trainings in July for the Wasp Watcher program throughout the state, including trainings at White Memorial Conservation Center in Litchfield, Orange, Hampton, and Wilton; and gave an interview about our discovery of Emerald ash borer in Sherman to the Danbury News Times (July 26).

DR. VICTORIA L. SMITH attended the Connecticut Nursery and Landscape Association Summer Meeting held at Summer Hill Nursery in Madison (approx. 200 participants) (July 17); attended a meeting of the Connecticut Chapter of the American Society of Landscape Architects held at Planters Choice Nursery in Newtown (50 participants) (July 23).

DR. KIRBY C. STAFFORD III was interviewed about the passing of the cicadas by Steve Kalb, Connecticut Radio Network (July 2); was interviewed about the increased number of mosquitoes with all the rain by David Groman, Waterbury Republican American (July 5); was interviewed about the increased number of mosquitoes with all the rain by Karena Garrity, Shoreline Times (July 5); participated in the joint meeting of the Northeastern Regional Association of Experiment Station Directors (NERA) and Extension Directors (NEED) (July 7-9); was interviewed about the insecticide permethrin by Paul Greenberg, Discovery Channel (July 15); was interviewed about Louis Magnarelli by Ed Stannard, New Haven Register (July 16); interacted with growers at the Summer Meeting of the Connecticut Nursery and Landscape Association held at Summer Hill Nursery in Madison (July 17); was interviewed about ticks and tick control by Robert Tedeschi, New York Times (July 17); interacted with arborists at the Connecticut Tree Protective Association Summer Meeting held at the Farmington Club (July 18); was interviewed about **DR. LOUIS MAGNARELLI** by Bob Miller, Danbury News Times (July 19); and was interviewed about the Emerald ash borer detection in Sherman, CT by Bob Miller, Danbury News Times (July 26).

DR. KIMBERLY A. STONER, along with **MR. MARK CREIGHTON** and **MR. ROBERT DURGY**, was interviewed at Griswold Research Center about pumpkin pollination, pesticides in pollen and nectar, and the role of honeybees in pollination by Judy Benson of the New London Day (July 5); was interviewed about pumpkin pollination and wild bees by Sandy Csizmar of the Hartford Courant (July 10); Rich Messina of the Hartford Courant photographed research on pumpkin pollination, collection of trapped pollen from honeybee hives, bumble bees, and honeybees at the Griswold Research Center (July 11); presented a Mobile Garden Clinic on pest management at the Little Red Hen Community Garden at 32 Mead Street in New Haven. The workshop was organized by Shannon Raider-Ginsburg of the Common Ground Environmental Education Center in New Haven (17 adult attendees, 3 youth attendees) (July 27).



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ENVIRONMENTAL SCIENCES

DR. THEODORE ANDREADIS was interviewed about the impact of the heavy rainfall events on mosquito population, West Nile virus and eastern equine encephalitis by Cynthia Druman, Westerly Sun and Diane Orsan, National Public Radio (July 8), was interviewed about the Mosquito trapping and Testing Program by Judy Benson, The Day (July 8), was interviewed about the impact of the heavy rainfall events on mosquito population, West Nile virus and eastern equine encephalitis by Bob Miller, Danbury News Times (July 8), presented a lecture entitled, *Impact of Global Climate Change on Mosquito-Borne Diseases* to a group of Connecticut high school science teachers as part of the NIH SEPA Peabody Fellows Program at Yale University (July 10), was interviewed about the first detection of West Nile Virus in mosquitoes this season in Norwalk by Steve Coulter, Ridgefield Press (July 11), was interviewed about the detection of West Nile virus in mosquitoes in Norwalk and the impact of rainfall on mosquitoes by Marc Sims, Connecticut Public Radio (July 12); was interviewed about **DR. LOUIS MAGNARELLI** by Amanda Cuda, Connecticut Post and William Weir, Hartford Courant (July 15); was interviewed about West Nile virus activity this summer by Angela Carrila, Stamford Advocate (July 15); was interviewed about the state mosquito and trapping program, West Nile virus and eastern equine encephalitis by Kate Rayner WFSB TV3 (July 16); was interviewed about **DR. LOUIS MAGNARELLI** by Ed Stannard, New Haven Register (July 16); was interviewed about the detection of eastern equine encephalitis from mosquitoes in Voluntown by WTIC Radio (July 16); was interviewed about mosquitoes, West Nile virus and eastern equine encephalitis virus by Kelly Glista, Hartford Courant (July 16); was interviewed about the detection of eastern equine encephalitis from mosquitoes in Voluntown by Brian Blessing, Norwich Bulletin (July 16); was interviewed about the 2013 mosquito season and the early detection of eastern equine encephalitis and West Nile virus in mosquitoes by Jocelyn Maminta, WTNH TV8 (July 30); and participated in a special teleconference call on the current status of Mosquitoes and Mosquito-borne illness in Connecticut with Dr. Jewel Mullen, Commissioner Connecticut Department of Public Health, Daniel C. Esty, Commissioner Connecticut Department of Energy & Environmental Protection, and local state health directors (July 31).

DR. PHILIP ARMSTRONG was interviewed by the New London Day and Harford Currant about abundant mosquito populations in Connecticut (July 1); was interviewed by a local affiliate of Fox News about the record high number of mosquitoes trapped during 2013 (July 2); and was interviewed by WCBS and WITC radio about increases in mosquitoes collected during statewide trapping program (July 3).

MR. GREGORY BUGBEE was interviewed by Bob Miller of the Danbury News Times on invasive aquatic plants in Connecticut lakes (July 16); attended a public meeting of the East Had-dam Board of Selectmen to provide information to residents an legislators on use of glyphosate to control weeds in Moodus Reservoir (July 17) (approx. 60 attendees); and spoke at a meeting of the Bashan Lake Association on *Control of Variable Milfoil and Fanwort* (approx. 50 attendees) (July 27).

DR. GOUDARZ MOLAEI presented an invited talk entitled, *Culex pipiens complex Mosquitoes and Transmission of West Nile Virus in the USA* at the Thirteenth International Congress on Invertebrate Reproduction and Development held in Detroit, MI (July 14-19).

MR. MICHAEL THOMAS attended the Dragonfly Society of the Americas annual meeting in Prince Albert, Saskatchewan, Canada (July 11-13); and co-led the Farmington Valley Butterfly Count sponsored by the North American Butterfly Association (12 attendees) (July 20).



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FORESTRY AND HORTICULTURE

MR. JOSEPH P. BARSKY participated in a “Foresters are for the Birds” planning session with Patrick Comins and Corrie Folsom-O’Keefe (Audubon CT), Helene Flounders and Chris Martin (CT-DEEP), Roger Monthey (USDA-FS), and Jim Shallow (Audubon VT) at the Slate Boardroom (July 29).

DR. ABIGAIL MAYNARD was invited as a guest on WTIC AM-1080 radio talk show “Garden talk” to talk about the New Crops program (July 27).

DR. JEFFREY WARD hosted a Research Working Group for the Governor’s Council for Agricultural Development in New Haven (July 2); gave a talk on native woody shrubs for the Federated Garden Club on Connecticut Environmental Council at Lockwood Farm (11 attendees) (July 8); was interviewed about running bamboo at the Griswold Research Center by Judy Benson of the New London Day (July 10); attended the CNLA Summer Field Day in Madison (July 17); attended the CTPA Summer Meeting in Farmington (July 18); met with Hallie Metzger to discuss forest management in Goshen (July 19); met with members of the Cornwall Conservation Trust to discuss white pine ecology (3 attendees) (July 23); participated in the CT Forest Stewardship committee in Middlefield (July 25); participated in a conference planning meeting of the Connecticut Urban Forest Council in Southbury (July 26); and was invited as a guest on WTIC AM-1080 radio talk show “Garden talk” to offer advice on plant care (30,000 listeners) (July 27).

DR. SCOTT WILLIAMS participated in a conference planning meeting of the Connecticut Urban Forest Council in Southbury (July 26); met with Troy Weldy (Director of ecological management for The Nature Conservancy in New York), Jeremy Hurst (New York DEC Wildlife Biologist), and Dr. Anthony DeNicola (White Buffalo, Inc.) about a collaborative research project regarding the training of recreational hunters to better manage white-tailed deer herds to ecologically acceptable levels (July 29); spoke with John Camp of the Wall Street Journal about the scientific principles of animal repellents (July 31); with **MR. JOSEPH P. BARSKY** and **MR. MICHAEL SHORT**, was featured in a YouTube informational video arranged by the East Haddam Land Trust; <http://www.youtube.com/watch?v=VgWijJuv51I>. (July 31).

PLANT PATHOLOGY AND ECOLOGY

DR. SANDRA L. ANAGNOSTAKIS, with **MS. MARY INMAN**, answered general gardening questions (and one question about chestnut trees!) and discussed Plant Science Day on Garden Talk with Len and Scott on WTIC Radio (July 27).

DR. SHARON M. DOUGLAS was interviewed about the wet June and humid, hot July and their impact on plant diseases, particularly the downy mildews, by Steve Grant of the Hartford Courant (July 10); gave a presentation titled “Boxwood blight, downy mildews, and other diseases of 2013” at the CNLA Summer Meeting held at Summer Hill Nursery in Madison (125 attendees) (July 17); assisted with organizing and moderating oral presentations at the CTPA Summer Meeting at the Farmington Club (800 attendees) (July 18); gave a presentation on current diseases in Christmas tree plantations for 2013 at the CT Christmas Tree Growers Association twilight meeting at the Valley Lab in Windsor (45 attendees) (July 23); and was interviewed about late blight of tomato and potato and its potential threat to these crops in Connecticut for 2013 by Bob Miller of the Danbury News Times (July 24).

MS. MARY K. INMAN, with **DR. SANDRA ANAGNOSTAKIS**, answered questions about gardening and discussed Plant Science Day on Garden Talk with Len and Scott on WTIC Radio (July 27).



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DR. YONGHAO LI attended the CNLA Summer Field Day in Hamden (July 17); and staffed the CAES booth and answered questions about tree diseases at the CTPA Summer Meeting held at the Farmington Club (800 attendees) (July 18).

DR. ROBERT E. MARRA participated in a phone conference with other members of the Boxwood Blight Working Group (July 12); and presented the talk "Tropical Storms, Hurricanes, Superstorms: Their Impacts and Influence on Tree Diseases" twice during the day at the CTPA Annual Summer Meeting held at the Farmington Club (800 attendees) (July 18).

MS. PAMELA SLETTEN and **DR. SANDRA ANAGNOSTAKIS** found another large, old Japanese chestnut tree in Stonington, Connecticut. It is tied with the tree at the Bee and Thistle Inn in Old Lyme for being the largest in the state (July 10) (Pictured below).



VALLEY LABORATORY

DR. CAROLE CHEAH conducted a webinar titled "Biological control of hemlock woolly adelgid: a Connecticut Perspective" as part of the 2013 New York Statewide Invasive Species Series (June 26) (20), to be posted to Youtube NY Invasives Channel; was interviewed, together with Donna Ellis of University of Connecticut by the Ridgefield Patch and by the Voice in Woodbury during new releases of the imported weevil, *Rhinoncomimus latipes* on town lands in Ridgefield and Woodbury, for biological control of the invasive mile-a-minute weed (July 18).

DR. RICHARD COWLES presented "Research at the Kogut Farm" at the Connecticut Christmas Tree Growers' Association evening meeting, Somers (30 attendees) (June 11); discussed systemic insecticide effects on plants at the Valent Corporation Ornamentals Workshop, Moran, WY (20 attendees) (June 17 and 18); taught the subject "Diagnosing Invertebrate Pest Damage" for the CT Nursery and Landscape Association Plant Diagnostic Workshop, Southington, June 26 (43 attendees); presented "Minimizing Side Risks of Insecticides" at the Connecticut Nursery and Landscape Growers' Association summer meeting, Madison (30 attendees) (July 17); reviewed progress on "Genetic Improvement of True Firs," for the CT Christmas Tree Growers' Association, Windsor (40 attendees) (July 23); and taught "Systemic Insecticides and Risks to Bees," and "Facts and Fallacies of Organics" to the Massachusetts Association of Lawn Care Professionals, Boylston, MA (40 attendees) (July 24).



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DR. JAMES LAMONDIA spoke about the Experiment Station, the Valley Laboratory and plant pathology research to Calvin Brodersen and 12 graduating senior students from the Rockville Agriculture Education Center (June 11); examined candidates for the Connecticut arborist license and participated in the quarterly meeting of the Connecticut Tree Protection Examining Board in New Haven (June 12); was interviewed about the effects of wind damage on shade tobacco and the status of blue mold in the US by Dana Whalen of WTIC news (July 1); was interviewed about the Station and tobacco research by Dr. Helen Newton for the Health Services Commission (July 9); attended the annual meeting the Society of Nematologists in Knoxville TN (July 14-17); participated as Past-President in the Executive Board Meeting (July 14); participated in the Journal of Nematology Editorial Board meeting and the Finance Advisory Committee meeting (July 16); presented a paper co-authored with Wade Elmer titled ‘ salt tolerance of *Melodogyne spartinae* and *M. hapla*’ (July 17) (65 people); and presented in a workshop ‘Publishing in the Journal of Nematology’ (July 17) (50 people).

DR. DEWEI LI participated in the annual meeting of Pan-American Aerobiological Association and Spore Camp held from July 28-31 in Toronto. He made an oral presentation “Five Noteworthy airborne fungi from Indoors environments” (20 people). During the meeting, the participants toured the facilities of The Southern Ontario Centre for Atmospheric Aerosol Research (SOCAAR) at the University of Toronto.

DR. TODD L. MERVOSH spoke about invasive plants and led a nature hike at the Housatonic Council Cub Scout Day Camp in Orange (65 boys [7 to 9 yrs. old] and 12 adults) (July 9); attended the Connecticut Nursery & Landscape Association field day and displayed a poster on biological control of mile-a-minute weed (co-authors **DR. CAROLE CHEAH** and Donna Ellis) in Madison (July 17); and presented a talk on summer weed management options and tributes to **DR. JOHN AHRENS** and **DR. LOUIS MAGNARELLI** at the Christmas Tree Twilight Meeting at the Valley Laboratory in Windsor (45 attendees) (July 23).



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GRANT AWARDS JULY 2013

DR. CLAIRE E. RUTLEDGE, in collaboration with partners in five other states, received a 3-year, \$27,891 Redesign Grant under the CARP program of the U.S. Forest Service entitled "Enhanced Monitoring of Emerald Ash Borer in New England." This grant will enable us to increase our monitoring footprint for emerald ash borer to increase the effectiveness of our response to this destructive forest pest.

JOURNAL ARTICLES APPROVED JULY 2013

Cowles, Richard S. Pollinator safety and neonicotinoid use in Christmas tree culture. Connecticut Christmas Tree Growers' Newsletter

De La Torre-Roche, Roberto, Joseph R. Hawthorne, Deng, Xing, Cai, Newman, Wang, Ma, Handi, Jason White. Multiwalled carbon nanotubes and Coo fullerenacs differentially impact the accumulation of weathered pesticides in four agricultural plants. Environmental Science Technology

Eitzer, Brian D., W. Hammack, M. Filigenzi. Interlaboratory validation of a general method to screen food and beverages for pesticides using QuEChERS extraction with high performance liquid chromatography and high resolution mass spectrometry. Journal of Agricultural and Food Chemistry

Elmer, Wade H. A tripartite interaction between *Spartina alterniflora*, *Fusarium palustre* and the purple marsh crab (*Sesarma reticulatum*) contributes to Sudden Vegetation Dieback of salt marshes in New England. Phytopathology

Kokalis-Burelle, Nancy, I. Zasada, W. T. Crow, **James A. LaMondia**, S. R. Stetina, and A. Westphal. Navigating the publication process for the Journal of Nematology. Journal of Nematology

Stafford, Kirby C., III, Scott C. Williams, Louis A. Magnarelli, Anuja Bharadwaj, S-H Ertel, and R. S. Nelson. Expansion of zoonotic Babesiosis and reported human cases, Connecticut, 2001-2010. Journal of Medical Entomology

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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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