

## **PROGRAM SYNOPSIS**

NJUCF Core training provides a solid foundation for understanding urban and community forest management in NJ including the legal aspects of shade tree commissions, advisory bodies, and NJUCF Accreditation, as well as the biology of trees, identifying tree risk, and proper tree planting.

Dr. Daniel Herms of Davey Tree Expert Company will address the membership on “Climate Change and Arboriculture: As Earth Warms, Trees Feel the Heat”. Earth has warmed sharply in recent years with impacts on tree growth and physiology, distribution of species, pest pressure, and plant health care practices that are already apparent. This presentation will explore the impacts of ongoing climate change for arboriculture and urban forestry that are already apparent, projected impacts of future warming, and the steps required to limit these impacts, including the potential for urban forests to mitigate climate change.

Dr. Herms will also address “The Future of Tree Health: Challenges and Opportunities.” The history of commercial tree health care has been characterized by great progress but also unfulfilled promise. For example, host plant resistance has long been recognized as an ideal pest management tactic, yet there are few examples of selection or breeding for pest resistant trees. Invasive species will continue to threaten urban forests into the foreseeable future, as will climate change. Tree Health Care as a concept, adopted to minimize non-target and other environmental impacts of pesticides, continues to evolve. Promising technology on the horizon includes management of key pests via gene silencing and internet-connected environmental sensors. The foundation of tree health will continue to rest on fundamental physiological and ecological principles.

Dr. James Clark of Bartlett Tree Experts joins us and will present “Managing Trees During Construction”. What role does an arborist have during the construction process? This presentation will discuss the development process with a focus on the construction phase. It will highlight the important roles that the arborist has in preserving trees and getting the project built.

The 10th edition of the Guide for Plant Appraisal was published in 2018. Dr. James Clark will also provide us with a “Tree Appraisal Update”. This presentation will highlight the contents of this new edition as well as the key changes from the 9th edition.

Dr. Doug Tallamy from the University of Delaware joins us to discuss “Nature’s Best Hope”. Recent headlines about global insect declines, the impending extinction of one million species worldwide, and three billion fewer birds in North America are a bleak reality check about how ineffective our current landscape designs have been at sustaining the plants and animals that sustain us. Such losses are not an option if we wish to continue our current standard of living on Planet Earth. The good news is that none of this is inevitable. Dr. Tallamy will discuss simple steps that each of us can and must take to reverse declining biodiversity. He will explain why we, ourselves, are nature’s best hope.

Dr. Tallamy will provide us with “A guide to restoring the little things that run the world”. A recent UN report predicts that as many as 1 million species will disappear from planet earth because of human activities. Many of these are insects and nearly all species at risk rely on insects. Insects have already declined 45% since 1974. The most alarming part of this statistic is that we don’t seem to care, despite the fact that a world without insects is a world without humans! So how do we create beautiful landscapes brimming with life; landscapes that support the pollinators, herbivores, detritivores, predators and parasitoids that run the ecosystems we depend on? Dr. Tallamy will remind us of the many essential roles insects play, and describe the simple changes we must make in our landscapes and our attitudes to keep insects on the ground, in the air and yes, on our plants.

Dr. Lara Roman, Research Ecologist from the Forest Service, Philadelphia Field Station, Northern Research Station, will join us to discuss “Tree death in cities: A review of urban tree mortality literature”. Urban tree mortality research is on the rise, with dozens of studies published over the past few decades. This presentation will provide an overview of the state of the science on urban tree death. A recent literature review of over 50 studies revealed a mix of study designs, including tracking cohorts of planted trees and tracking uneven-aged groups of trees with repeat inventories. Typical annual mortality rates for planting cohort studies can be used to construct survivorship curves, showing middle-of-the-road performance as well as above- and below-typical survival. The literature shows a strong link between stewardship and maintenance and tree survival. Yet some factors which are likely important, like soil quality, household characteristics, and program governance, are rarely studied. New mixed-methods studies that shed light on the intersecting biophysical and social forces impacting urban tree mortality will also be discussed. Lastly, the audience will be introduced to new urban tree monitoring guides from the USDA Forest Service, which will help local urban forestry professionals to carry out their own monitoring projects.

Dr. Ann Gould from Rutgers, The State University, will update us on tree diseases we are seeing. Beech leaf disease has become a topic of concern in the NJ Forested regions as of late. This and other current issues surrounding New Jersey’s regions will be discussed.

Steve Bross will provide us with updates and navigation through the PCP website and explore recent changes made due to the Coronavirus. Steve will review the Consumer Information Notification and advise what's required from the Applicator. He will also provide an update on record keeping requirements and discuss the details on interpreting and understanding Pesticide Labels. He will explore pesticide storage areas and provide the details on the requirements for storage areas as well as service vehicle requirements. Lastly, he will update us on the recent changes and requirements relative Pesticide Regulations.

Allyson Salisbury joins us to share with us her thoughts on Tree Root Biology. It's easy to spend a lot of time admiring the above-ground half of a tree, but we can't forget about what is happening below ground. There's a lot happening under our feet that is critical for tree growth and health. Learn about the fundamentals of tree root biology - how they grow, where they grow, and why. Discover how principles of root biology inform and guide best management practices for planting and caring for trees in the built environment.

Geoff Kempner of Asplundh Tree Expert will discuss “Incidental Line Clearance: Working Within the BMPs for Utility Pruning of Trees”.

Art Laster of Plant Detectives will review “How to properly specify plant material”. Art will help us to communicate our needs more accurately and concisely with nurseries.

Beth Kwart has experience writing, editing and submitting a number of grant proposals and supporting documents to private foundations, corporations, and federal, state, and local government sources. She will share her thoughts and experiences and maybe offer some tips regarding the grant application process.

This year we are introducing a panel discussion on “What Can You Do as a Municipality and When Should You Reach Out for Help”. John Anlian, Esq will have input on legal aspects, Neil Hendrickson sits on the Shade Tree Commission in Readington and will have input from the municipal point of view. John Linson of The Shade Tree Department is an LTE who consults with municipalities and will have input from a tree professional's point of view, and Steve Chisholm, Sr. is a current member of the NJ Board of Licensed Tree Experts and will have input from the point of view of the NJ Board of Licensed Tree Experts.