

IOWA STATE  
UNIVERSITY  
Extension and Outreach



*68th annual*  
**SHADE  
TREE  
SHORT  
COURSE**

GROWING STRONGER TOGETHER

**FEBRUARY 20-22, 2024**

**Scheman Building □ Iowa State University □ Ames, Iowa**



SPONSORED BY  
Iowa State University Extension and Outreach  
Iowa Nursery & Landscape Association  
Iowa Arborist Association



*68th annual*  
**SHADE  
TREE  
SHORT  
COURSE**

## TUESDAY, FEBRUARY 20

### Become an ISA Certified Arborist

Once again in 2024, the Iowa State University Shade Tree Short Course (STSC) will host an International Society of Arboriculture (ISA) Certified Arborist exam. STSC participants wishing to take the exam should register online with the ISA ([isa-arbor.com/certification/index.aspx](http://isa-arbor.com/certification/index.aspx)) or call the ISA at 888-472-8733. **Enrollment deadline is February 12.**

**1:00 - 5:30 p.m. ISA Certified Arborist Exam - ROOM 250-252**

**Check In: 1:00 p.m.**

**Exam: 1:30-5:00 p.m.**

## WEDNESDAY, FEBRUARY 21

**7:30 a.m.**

### Registration

Scheman Building - FIRST FLOOR LOBBY

### Refreshments/Visit Trade Show

Scheman Building

**9 a.m.**

### OPENING GENERAL SESSION

C.Y. Stephens Auditorium

### Welcome, Announcements,

### Special Presentations

Jeff Iles, Iowa State University

**9:30 a.m.**

### Reshaping Arboriculture in Times of Climate Change

William Moomaw, Tufts University

**10:30 a.m.**

### We Have to Think in Tree Time

John Ball, South Dakota State University

**11:30 a.m. - 1 p.m.**

### Lunch / Visit Trade Show

INLA Business Meeting - ROOM 299

IAA Business Meetings - ROOM 150-154

**1 p.m.**

### Workshop Session A

**2:15 p.m.**

### Workshop Session B

**3:15 p.m.**

### Break / Visit Trade Show

**4 p.m.**

### Workshop Session C

**5 p.m. - 8 p.m.**

### INLA Hospitality Reception

*open to all attendees*

Reiman Gardens



## THURSDAY, FEBRUARY 22

### SCHEMAN BUILDING

7:30 a.m.	Refreshments/Visit Trade Show
8:30 a.m.	Workshop Session D
9:45 a.m.	Workshop Session E
11 a.m.	Workshop Session F
NOON	<b>Lunch</b> <i>available at the Scheman Building or on your own</i>
	<b>Trade Show</b> <i>open for final time!</i>
1:15 p.m.	Workshop Session G
2:30 p.m.	<b>CONCLUDING GENERAL SESSION</b> Benton Auditorium
	<b>How Trees Get Their Names</b> Guy Sternberg, Starhill Forest Arboretum
3:30 p.m.	Evaluation
3:45 p.m.	Adjourn



## GENERAL SESSIONS AND WORKSHOPS

### OPENING GENERAL SESSION

#### Wednesday, February 21 - 9:30 a.m. **Reshaping Arboriculture in Times of Climate Change** William Moomaw, Tufts University, Medford, MA

The ISU Shade Tree Short Course is pleased to welcome William Moomaw, Professor Emeritus at Tufts University and Distinguished Visiting Scientist at Woodwell Climate Research Center in Massachusetts. The climate of every region is changing rapidly with higher temperatures, extended droughts, and more intense precipitation and storms. Urban trees play an important role in reducing temperature increases and flooding and providing important aesthetic benefits that people value. However, urban trees are vulnerable to damage from these changing conditions. In most cities there are insufficient funds and staff to maintain existing trees. Dr. Moomaw will examine the consequences of these practices and what it would mean to shift priorities for managing our urban forests in the changing climate.

**1 ISA CEU Categories: A, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)**

#### **We Have to Think in Tree Time**

##### John Ball, South Dakota State University, Brookings, SD

John Ball, long-time friend of the ISU Shade Tree Short Course, is back with us in 2024. And in his opening general session presentation, John will introduce and describe the concept of "Tree Time." He will discuss how trees, being stationary and unable to avoid unfavorable changes in their environment, must adapt to various stresses. Unlike humans who respond quickly to challenges, trees operate at a much slower pace, taking their time to recover or decline in response to these stresses. His talk underscores the importance of patience and resilience in dealing with environmental challenges, drawing a parallel between tree time and our own need to adapt and endure in the face of adversity.

**1 ISA CEU Categories: A, T, U, M, Bp(0.5); LA CES (1.0 HSW)**

### CLOSING GENERAL SESSION

#### Thursday, February 22 - 2:30 p.m.

##### **How Trees Get Their Names**

##### Guy Sternberg, Starhill Forest Arboretum, Petersburg, IL

There's good reason to stay until the end this year because Guy Sternberg is back. In this session you'll learn the intricate process of having a new oak nothospecies (a stabilized natural hybrid) formally named, typified, accepted worldwide, and published in a peer-reviewed journal, by a team of experts from the US, France, Mexico, Germany, and Uruguay. Given that Guy was responsible for founding the International Oak Society and first to introduce this new oak into cultivation, it's only appropriate this oak taxon was named to honor him. They don't call him Mr. Oak for nothing!

**1 ISA CEU Categories: A, T(0.5), M(0.5), Bs(0.5), Bm(0.5); LA CES (1.0 Non-HSW)**

## SESSION A WORKSHOPS

### **A-1. (B-1 Repeat) Tree Appraisal and the Principle of Substitution**

**James Komen, Class One Arboriculture Inc., Glendale, CA**

One of the foundational concepts in tree appraisal is the Principal of Substitution. A thing cannot appraise for more than a substitute of equivalent utility. Possibly the hardest step in applying this principal is selecting a “functional equivalent” to the subject tree or trees. When selecting the best appraisal technique, an appraiser must ask: “Is there a way the benefits provided by this tree could be replaced at a lower cost?” Depending on the facts of a case, the answer could be very different. This presentation reviews 10 court cases that applied the Principle of Substitution to tree appraisal.

**1 ISA CEU Categories: A, M, Bm; LA CES (1.0 Non-HSW)**

### **A-2. (C-2 Repeat) Changes, Applications, and Significance of the 2023 USDA Plant Hardiness Zone Map**

**Todd Rounsaville, USDA-ARS, US National Arboretum, Washington, D.C.**

The USDA Plant Hardiness Zone Map (PHZM) is the standard by which gardeners and growers can determine which plants are most likely to thrive at a location. In 2023, a new PHZM was released to the public which incorporates more fine-scale determination of hardiness zones and in many areas indicates the hardiness zones have changed since the 2012 PHZM. This presentation will explore the 2023 PHZM's history and development, as well as a demo of the website's navigational tools. The presentation will highlight zone changes based on new climatological data and tools and discuss approaches for optimal plant selection.

**1 ISA CEU Categories: A, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)**

### **A-3. Are Extremes the New Normal? A Brief Look at Statewide Climatological Trends and Impacts on the Weather**

**Justin Glisan, Iowa Department of Agriculture and Land Stewardship - Climatology Bureau, Des Moines, IA**

From derechos and droughts to floods, extreme weather events have been in the news at what seems like higher rates compared to previous decades. Have weather extremes become the new normal? This presentation will cover climatological trends across Iowa and their impact on current and future events.

**1 ISA CEU Categories: A, T, U, M, Bp; LA CES (1.0 HSW)**

### **A-4. (C-5 Repeat) The Periodical Cicada is Coming. Do Not Miss this Unique Entomological Experience\***

**Fredric Miller, The Morton Arboretum, Lisle, IL**

2024 will be a unique year as the 17-year periodical cicada will be emerging throughout northern Illinois and eastern Iowa. There is a short, but very interesting entomological event worth enjoying. In this session, we will discuss the fascinating biology and feeding habits of the periodical cicada, egg laying preferences, susceptible woody plant species, and potential for damage to young trees, whips, and seedlings. Practical management methods will be presented for members of the green industry and homeowners.

**1 ISA CEU Categories: A, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)**

### **A-5. (D-5 Repeat)**

#### **Diagnosing Health Problems of Woody Plants\***

(2 hours) – Limit 30 per session

**Ed Zaworski and Zach Schumm, Iowa State University, Ames, IA  
Mark Vitosh, Iowa DNR District Forester, Iowa City, IA**

This 2-hour, hands-on workshop covers woody plant problems caused by insects, plant pathogens, and several abiotic factors. Participants will become familiar with the steps of the diagnostic process, the differences between symptoms and signs, and learn management recommendations for problems selected for investigation. At 15 stations positioned around the room, participants will examine and diagnose current issues, invasive insects and diseases, and a few old favorites. Seating is limited, so sign up early for this one!

**2 ISA CEU's Categories: A, T, M, Bs(1), Bp(1); LA CES (2.0 HSW)**

### **A-6. (B-4 Repeat) The Spongy Moth Battle Didn't Go Well for Iowa in 2023\***

**Robin Puisner and Mike Kintner, Iowa Department of Agriculture & Land Stewardship, Des Moines, IA**

Spongy moth (formerly called gypsy moth) caught the unusual, and strong easterly winds in June and July, 2023, and landed in Iowa like an army of foliage-eating paratroopers. Trap locations that caught zero invaders in 2022 were loaded with over 40 moths in 2023. What does this mean for trapping and treatments for Iowa in 2024? Robin and Mike are here to provide answers.

**1 ISA CEU Categories: A, T, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)**

### **A-7. (G-6 Repeat) New Research Urban Forestry**

**David S. Bienemann, Municipal Arborist/Utility Forester, Hamilton, OH**

A lot of ground will be covered in this session including, how climate change is impacting urban trees, the connection between monarch conservation and edge tree habitat, tree recovery after transplant shock, and Tree Equity using urban site index in the urban forest.

**1 ISA CEU Categories: A, T, U, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)**



**\*QUALIFYING PESTICIDE APPLICATOR WORKSHOPS**

**\*\*REQUIRED PESTICIDE APPLICATOR WORKSHOP**

## SESSION B WORKSHOPS

### **B-1. Tree Appraisal and the Principle of Substitution** (See description A-1)

ISA CEU Categories: A, T, U, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

### **B-2. Wounding and Tree Wound Response**

**Chris Olson, Olson Tree Care, West Des Moines, IA**

Nearly 50 years ago Alex Shigo revolutionized arboriculture with the system called CODIT (Compartmentalization of Decay In Trees). This system has been taught and accepted as the way trees respond to wounding which puts the issue in a nice little compartmentalized box. But is that the only box and does it hold water? In this session, Board Certified Master Arborist Chris Olson discusses decades of empirical based field study in relation to wounding and tree wound response.

1 ISA CEU Categories: A, T, U, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

### **B-3. (C-4 Repeat) Securing Your Pesticide and Equipment Loads on Trailers\***

**Fred Whitford, Purdue University, West Lafayette, IN**

Losing cargo on the road is serious business. It results in material loss, personal injury, and destruction of property. And when pesticides are involved, chemicals can wind up in nearby creeks or other bodies of water creating undesirable environmental impacts. Properly loading, positioning, and securing pesticide-related cargo within the truck or on a trailer prevents highway accidents and reduces your liabilities.

No ISA CEU; LA CES (1.0 Non-HSW)

### **B-4. The Spongy Moth Battle Didn't Go Well for Iowa in 2022\***

(See description A-6)

1 ISA CEU Categories: A, T, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

### **B-6. (E-6 Repeat) Mulch Volcanoes, An Urban Tree's Best Friend**

**Andy Schmitz, Brenton Arboretum, Dallas Center, IA**

In this satirical presentation Andy will invite you to take a closer look at mulch volcanoes and the impact this practice has on newly planted urban trees. He will share his observations of trees as it relates to tree mortality and/or tree survivability. Conventional wisdom says this practice of over-mulching is detrimental, but how detrimental is it?

1 ISA CEU Categories: A, T, M, Bp; LA CES (1.0 HSW)

### **B-7. (E-3 Repeat) A Calendar Approach to Turfgrass Management\*\***

**Adam Thoms, Iowa State University, Ames, IA**

This presentation will cover common ornamental and turfgrass pests including identification characteristics as well as damage (insects, diseases, and weeds) and when they are expected to be active in Iowa. We will also address how to best control them with cultural practices as well as the use of pesticides. As a part of the presentation, we will discuss new pesticides available for turfgrass and ornamental management and how they did in research-based testing at Iowa State University.

No ISA CEU; LA CES (1.0 HSW)

## SESSION C WORKSHOPS

### **C-1. (D-6 Repeat) From Seas to Trees: Vignettes from America's Public Lands**

**Amanda Snodgrass, Bureau of Land Management, Grants Pass, OR**

Come experience what a day in the life of a park ranger, or a field botanist, or a resource manager is like. We will wander through adventures in the Slash Pines of South Florida and the Whitebark Pines of the Teton Range. We will go on harrowing journeys with the pitchy Pinyon Pines of the Colorado Plateau and the iconic Joshua Trees of the Mojave Desert. Come rest in the shade of the giants of the Pacific Northwest and learn what it's like to get paid in sunsets across the wild landscapes of the United States.

1 ISA CEU Categories: A, M, Bm; LA CES (1.0 HSW)

### **C-2. Changes, Applications, and Significance of the 2023 USDA Plant Hardiness Zone Map** (See description A-2)

1 ISA CEU Categories: A, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

### **C-3. (E-1 Repeat) The Art and Science of Grafting in Tree Propagation**

**Ted Hildebrant, Coldwater Pond Nursery, Phelps, NY**

The craft of tree propagation by grafting is often cloaked in mystery. Join master grafter Ted Hildebrant to uncover this mystery and learn the how and why of this ancient technique for propagating trees. This will be an informative presentation that covers the science behind grafting, the methods commonly utilized in nurseries today, and why trees would be grafted as opposed to other propagation methods. A live demonstration will also be given that illustrates some of the techniques covered in the presentation.

1 ISA CEU Categories: A, T, M, Bs; LA CES (1.0 HSW)

### **C-4. Securing Your Pesticide and Equipment Loads on Trailers\***

(See description B-3)

No ISA CEU; LA CES (1.0 Non-HSW)

### **C-5. The Periodical Cicada is Coming. Do Not Miss this Unique Entomological Experience\*** (See description A-4)

1 ISA CEU Categories: A, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

### **C-6. (D-7 Repeat) Lone Worker Safety - Aggressive Homeowners: Training for a Mindset of De-Escalation**

**Liz Westberg, Growth Solutions, Minnetonka, MN**

Interacting with aggressive or hostile homeowners has long been an issue for utility tree workers and is becoming more common in other spheres of tree care as well. This is a training topic all Growth Solutions field staff attend annually and covers both common and rare hostile encounters with homeowners, occupants, and general members of the public. Best practices for de-escalation, leaving situations in a safe manner, and appropriate follow-up methods will be covered.

1 ISA CEU Categories: A, T, U, M, Bm; LA CES (1.0 Non-HSW)



### **C-7. (G-7 Repeat) Continuing Instruction Course for Pesticide Applicators\*\***

**Evan Alderman, Iowa State University, Ames, IA**

This workshop will be a part of the continuing instruction course (CIC) for pesticide applicators looking for 2024 credit. This required session will present information on application equipment use, maintenance and calibration, safe application techniques, including pesticide drift reduction as well as other relevant required topics. This Continuing Instruction Course will be approved by The Iowa Department of Agriculture and Land Stewardship for categories 2, 30, and 30T. You will be required to attend additional qualifying sessions to receive pesticide applicator credit at the Shade Tree Short Course.

**1 ISA CEU Categories: A, T, U, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)**

## **SESSION D WORKSHOPS**

### **D-1. New Trees From Oregon**

**Ryan Contreras, Oregon State University, Corvallis, OR**

The Ornamental Plant Breeding Program at Oregon State University works to breed new trees that are easily propagated, beautiful, and resilient for gardeners. Learn about a variety of techniques from traditional hybridization, ploidy manipulation, and mutagenesis to tweak or remake familiar trees that support the urban canopy of the future.

**1 ISA CEU Categories: A, M, Bs; LA CES (1.0 HSW)**

### **D-2. The Evolution of Wildland Fire Fighting and its Effects on the Landscape**

**Steve Marien, Eastern Area Coordination Center/National Park Service, St. Paul, MN**

Sign up for this session and experience a dynamic exploration of the transformation of wildland firefighting practices over the years and the enduring impacts these changes have had on our natural landscapes. Attendees will gain valuable insights into the historical progression of wildland firefighting techniques and equipment, and how these advancements have shaped the contemporary firefighting landscape. This presentation serves as a comprehensive guide to help attendees comprehend how past practices influence the environment we see today.

**1 ISA CEU Categories: A, T, U, M, Bm; LA CES (1.0 HSW)**

### **D-3. (F-3 Repeat) The Challenge of Managing Scales: Are They Really Insects?\***

**Fredric Miller, The Morton Arboretum, Lisle, IL**

This session will focus on the proper identification of both soft and armored scales, the life history, importance as pests of woody plants, and effective scale pest management. Emphasis will be on environmentally friendly pest management tactics and strategies.

**1 ISA CEU Categories: A, T, M(0.5), Bs(0.5), Bp(0.5); LA CES (1.0 HSW)**

### **D-4. (E-4 Repeat) Wielding the A300 Standards: The Shield and the Sword**

**James Komen, Class One Arboriculture Inc., Glendale, CA**

The ANSI A300 Standards are a documentation of what industry stakeholders can agree upon within the context of the ANSI approval process. When wielded correctly, they can form powerful legal weaponry to use both defensively and offensively. Learn how to limit your liability when performing tree risk assessments by following the mandatory requirements. Learn how to avoid offensive strategies by plaintiffs that attack insufficiency of inspections, reports, and pruning practices.

**1 ISA CEU Categories: A, T, U, M, Bp(0.5), Bm(0.5); LA CES (1.0 HSW)**

### **D-5. Diagnosing Health Problems of Woody Plants\* (See description A-5)**

**2 ISA CEU's Categories: A, T, M, Bs(1), Bp(1); LA CES (2.0 HSW)**

### **D-6. From Seas to Trees: Vignettes from America's Public Lands**

**(See description C-1)**

**1 ISA CEU Categories: A, M, Bm; LA CES (1.0 HSW)**

### **D-7. Lone Worker Safety - Aggressive Homeowners: Training for a Mindset of De-Escalation (See description C-6)**

**1 ISA CEU Categories: A, T, U, M, Bm; LA CES (1.0 Non-HSW)**

## **SESSION E WORKSHOPS**

### **E-1. The Art and Science of Grafting in Tree Propagation**

**(See description C-3)**

**1 ISA CEU Categories: A, T, M, Bs; LA CES (1.0 HSW)**

### **E-2. (F-2 Repeat) Celebrating Nature's Guardians: Beneficial Insects in Our Trees\***

**Suzanne Wainwright-Evans, Buglady Consulting, Slatington, PA**

Understanding your local beneficial insects has never been more essential. These unsung heroes work tirelessly to naturally manage pest populations at no cost to you. Furthermore, many of them serve as pollinators, a critical service we are all committed to preserving. In this discussion, we will delve into the most prevalent beneficial species found in trees and explore how to choose pesticides with minimal impact on them, should the need for pesticide application arise.

**1 ISA CEU Categories: A, T, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)**

### **E-3. A Calendar Approach to Turfgrass Management\*\***

**(See description B-7)**

**No ISA CEU; LA CES (1.0 HSW)**

### **E-4. Wielding the A300 Standards: The Shield and the Sword**

**(See description D-4)**

**1 ISA CEU Categories: A, T, U, M, Bp(0.5), Bm(0.5); LA CES (1.0 HSW)**

## **E-6. Mulch Volcanoes, An Urban Tree's Best Friend** (See description B-6)

1 ISA CEU Categories: A, T, M, Bp; LA CES (1.0 HSW)

## **E-7. (G-2 Repeat) Applying a Culture of Safety: A Practical Example**

**Liz Westberg, Growth Solutions, Minnetonka, MN**

Putting safety first in the tree care industry is neither cheap nor easy. But the costs associated with incidents are high and take many forms. This talk provides an overview of how Growth Solutions approaches safety and includes: a summary of how our Safety Council functions, and what specific steps we take to create a culture of safety. To illustrate a practical example, we will follow the story of how a specific incident with a dog prompted an overhaul of how we approach this topic, and how the actions we took lowered our dog related incidents.

1 ISA CEU Categories: A, T, U, M, Bp(0.5), Bm(0.5); LA CES (1.0 HSW)

## **SESSION F WORKSHOPS**

## **F-1. The National Discussion on Non-invasive Cultivars: Why it's Important and Why Now is the Time**

**Ryan Contreras, Oregon State University, Corvallis, OR**

Breeding efforts over the last 20 years have made great progress in developing a dizzying array of landscape plants, including trees. Much of this effort has been directed toward creating less weedy versions of some stalwart tree species. However, confusion abounds on how to handle these new cultivars. There is a need for clarifying common language and testing methods. Our industry is built on interstate commerce and requires that breeders, growers, and consumers know what to expect when crossing state lines. In this session Dr. Contreras will address questions and concerns including: 1) why do we need a national discussion about weedy/invasive plants if their regulation is a state issue, 2) can we trust claims that Chastity™ pear or that new triploid maples will be seedless – didn't we hear that before about 'Bradford' pear, and 3) what testing should new plants undergo before being introduced to the nursery trade?

1 ISA CEU Categories: A, T, U, M, Bp(0.5), Bm(0.5); LA CES (1.0 HSW)

## **F-2. Celebrating Nature's Guardians: Beneficial Insects in Our Trees\*** (See description E-2)

1 ISA CEU Categories: A, T, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

## **F-3. The Challenge of Managing Scales: Are They Really Insects?\*** (See description D-3)

1 ISA CEU Categories: A, T, M(0.5), Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

## **F-4. (G-3 Repeat) Plant Growth Regulators and Drought Resiliency\***

**Nick Kantola, Rainbow Treecare, Minnetonka, MN**

Plant growth regulators induce physiologic responses that help plants increase or improve drought resiliency. In this workshop we will look at the impact some of the physiological changes caused by PGRs have on trees, and how we can use PGRs to support trees under our care to help them be more drought resilient.

1 ISA CEU Categories: A, T, U, M, Bp; LA CES (1.0 HSW)

## **F-5. (G-4 Repeat) Equipment Caught in Powerlines—What Options Do You Have?**

**Fred Whitford, Purdue University, West Lafayette, IN**

Power lines are inherently dangerous, which is why utilities spend thousands of dollars each year training linemen to work safely. Linemen are repeatedly told never to underestimate the deadly power in power lines. If those working everyday with electric lines take their work seriously, why would we not do the same? This session will describe what to do in the event you find yourself in the wires. Remember, the power in powerlines can kill so knowing what to do is critically important!

1 ISA CEU Categories: A, T, U, M, Bp(0.5), Bm(0.5); LA CES (1.0 HSW)

## **F-6. (G-1 Repeat) The Evolution of Tree Species Distribution Mapping**

**James Ellenwood, US Forest Service, Washington, D.C.**

The evolution of tree species distribution mapping, from Sargent to Little and others in between, has been crucial in understanding our forests. Rapid changes to our environment have challenged us in managing for the right species for the right place for the right time. Development of models to predict risks associated with forest pests necessitated the development of improved species distribution maps and led to the creation of the National Individual Tree Species Atlas, however, ongoing changes due to factors like invasive pests, climate change, and habitat destruction highlight the need for continuing research and updated map products.

1 ISA CEU Categories: A, T, M, Bm; LA CES (1.0 HSW)

## **F-7. (G-5 Repeat) Root Excavation For Fun...and Profit?**

**Scott Carlson, Iowa Arborist Consulting, Eldridge, IA**

Way back when stem girdling roots (SGR's) were new and exciting, Scott performed his first root excavation, and afterwards he thought the tree would probably die. He knew for sure he'd lost money. But hundreds of excavations followed. He continued to lose money but saved a lot of trees. For years Scott used water to perform root excavations but several years ago he began using an air spade. Was it worth the investment? Sign up for this workshop and find out.

1 ISA CEU Categories: A, T, M, Bp; LA CES (1.0 HSW)

## SESSION G WORKSHOPS

### G-1. The Evolution of Tree Species Distribution Mapping

(See description F-6)

1 ISA CEU Categories: A, T, M, Bm; LA CES (1.0 HSW)

### G-2. Applying a Culture of Safety: A Practical Example

(See description E-7)

1 ISA CEU Categories: A, T, U, M, Bp(0.5), Bm(0.5); LA CES (1.0 HSW)

### G-3. Plant Growth Regulators and Drought Resiliency\*

(See description F-4)

1 ISA CEU Categories: A, T, U, M, Bp; LA CES (1.0 HSW)

### G-4. Equipment Caught in Powerlines—What Options Do You Have?

(See description F-5)

1 ISA CEU Categories: A, T, U, M, Bp(0.5), Bm(0.5); LA CES (1.0 HSW)

### G-5. Root Excavation For Fun...and Profit?

(See description F-7)

1 ISA CEU Categories: A, T, M, Bp; LA CES (1.0 HSW)

### G-6. New Research Urban Forestry

(See description A-7)

1 ISA CEU Categories: A, T, U, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

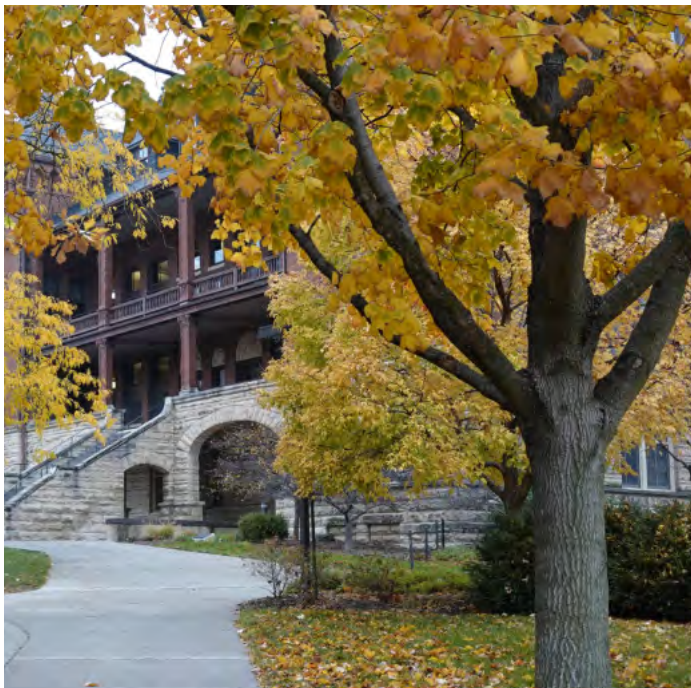
### G-7. Continuing Instruction Course for Pesticide Applicators\*\*

(See description C-7)

1 ISA CEU Categories: A, T, U, M, Bs(0.5), Bp(0.5); LA CES (1.0 HSW)

\*QUALIFYING PESTICIDE APPLICATOR WORKSHOPS

\*\*REQUIRED PESTICIDE APPLICATOR WORKSHOP



## About CEU's and CIC's

### ISA CEU's

The International Society of Arboriculture (ISA) grants Continuing Education Units (CEU's) for educational events like the ISU Shade Tree Short Course. In 2024, most general session and workshop presentations qualify for ISA CEU's and they are clearly identified by amount and category of credit using the following codes:

A = Certified Arborist

T = Tree Climber

U = Utility Specialist

M = Municipal Specialist

Bs/m/p = Board Certified Master Arborist (science, management, or practice)

### LA CES

The Landscape Architecture Continuing Education System (LA CES) establishes, maintains, and enforces standards for evaluating professional development and continuing education programs for landscape architects. And once again in 2024, the ISU Shade Tree Short Course is pleased to partner with the Iowa ASLA Chapter in offering LA CES approved courses. Approved courses will be identified as meeting (or not meeting) the LA CES standard of health, safety, and welfare subject matter:

LA CES (HSW)

LA CES (Non-HSW)

### Pesticide Applicator CIC's

The Iowa Department of Agriculture and Land Stewardship (IDALS) approves Pesticide Applicator Continuing Instruction Courses (CIC's) for educational events like the ISU Shade Tree Short Course. In 2024, a select number of workshops have qualified for Pesticide Applicator CIC's for categories 2, 30, and 30T and they are identified with an asterisk\*:

Qualifying Pesticide Applicator Workshops  
Required Pesticide Applicator Workshop

### To Recertify in Category Applicator Must Attend

2 or 30	Workshop C-7 or G-7 PLUS One other "Pest Management" workshop
30T	Workshop C-7 or G-7 PLUS Workshop B-7 or E-3 PLUS One other "Pest Management" workshop



68th ANNUAL  
IOWA STATE UNIVERSITY SHADE TREE SHORT COURSE ○ FEBRUARY 21-22, 2024  
It's Easy to Register!

**REGISTER EARLY!** Advanced registration is required due to the multiple workshop format. We will attempt to place you in your first choice, although some of the workshops have limited enrollment. Cancellations received on or before February 12th will be provided a full refund minus a \$20 processing fee. Cancellations received February 13th and after may receive a partial refund that will be issued after the conference. To cancel your registration, email [registrations@iastate.edu](mailto:registrations@iastate.edu)

- ONLINE

Complete online form and pay with credit card at [regcytes.extension.iastate.edu/shadetree](https://regcytes.extension.iastate.edu/shadetree)
- MAIL

Complete form (one per participant). **Select your workshop choices on the other side of this form.**  
For each session A through G, rank your choices 1 to 7 in the spaces provided. Remember, some workshops run two or three hours. Mail completed form(s) with check made payable to Iowa State University:  
ISU Registration Services, 1601 Golden Aspen Drive, Suite 110, Ames, IA 50010
- QUESTIONS?

[registrations@iastate.edu](mailto:registrations@iastate.edu) • (515) 294-6222

FIRST NAME	LAST NAME
EMAIL	PHONE
COMPANY/AFFILIATION	ADDRESS CITY/STATE/ZIP

<div>GENDER IDENTITY</div> <div><input type="checkbox"/> female</div> <div><input type="checkbox"/> male</div> <div><input type="checkbox"/> other</div> <div><input type="checkbox"/> prefer not to respond</div>	<div>ARE YOU OF HISPANIC, LATINO, OR SPANISH ORIGIN?</div> <div><input type="checkbox"/> yes</div> <div><input type="checkbox"/> no</div> <div><input type="checkbox"/> prefer not to respond</div>	<div>WHAT IS YOUR RACIAL BACKGROUND?</div> <div><input type="checkbox"/> American Indian or Alaska Native</div> <div><input type="checkbox"/> Asian</div> <div><input type="checkbox"/> Black or African American</div> <div><input type="checkbox"/> Native Hawaiian or other Pacific Islander</div> <div><input type="checkbox"/> White</div> <div><input type="checkbox"/> Prefer not to respond</div>
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<div>BUSINESS CLASSIFICATION <i>check only one</i></div> <div><input type="checkbox"/> design professional</div> <div><input type="checkbox"/> nursery and landscape professional</div> <div><input type="checkbox"/> arborist</div> <div><input type="checkbox"/> master gardener</div> <div><input type="checkbox"/> educator/student</div> <div><input type="checkbox"/> state/municipal employee</div>	<div>PROFESSIONAL CLASSIFICATION <i>check all that apply</i></div> <div><input type="checkbox"/> Iowa Arborist Association</div> <div><input type="checkbox"/> Iowa Nursery &amp; Landscape Association</div> <div><input type="checkbox"/> Iowa Golf Course Superintendents Association</div> <div><input type="checkbox"/> Iowa Professional Lawn Care Association</div> <div><input type="checkbox"/> Iowa Sports Turf Managers Association</div> <div><input type="checkbox"/> American Society of Landscape Architects</div> <div><input type="checkbox"/> Association of Professional Landscape Designers</div>
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STSC REGISTRATION OPTIONS	ON OR BEFORE FEB. 9	AFTER FEB. 9	METHOD OF PAYMENT
FEBRUARY 21-22 includes lunch on February 21	<input type="checkbox"/> \$210	<input type="checkbox"/> \$260	<input type="checkbox"/> CHECK Make checks payable to Iowa State University
STSC DISCOUNTED FEE for full-time academic student or ISU staff	<input type="checkbox"/> \$110	<input type="checkbox"/> \$135	<input type="checkbox"/> VISA
PESTICIDE APPLICATOR RECERTIFICATION 2, 30, 30T	<input type="checkbox"/> \$ 45	<input type="checkbox"/> \$ 45	<input type="checkbox"/> MASTERCARD
FEBRUARY 22–Optional lunch	<input type="checkbox"/> \$ 20	<input type="checkbox"/> \$ 20	<input type="checkbox"/> DISCOVER
			<input type="checkbox"/> AMERICAN EXPRESS

TOTAL \$

CARDHOLDER NAME

SIGNATURE

EXPIRATION DATE

THREE-DIGIT SECURITY CODE

## **SESSION A WORKSHOPS**

- ☐ A-1 Tree Appraisal and the Principle of Substitution
- ☐ A-2 Changes, Applications, and Significance of the 2023 USDA Plant Hardiness Zone Map
- ☐ A-3 Are Extremes the New Normal? A Brief Look at Statewide Climatological Trends and Impacts on the Weather
- ☐ A-4 The Periodical Cicada is Coming. Do Not Miss this Unique Entomological Experience\*
- ☐ A-5 Diagnostic Workshop - Diagnosing Health Problems of Woody Plants\* (2 HOURS/LIMIT 30 PER SESSION)
- ☐ A-6 The Spongy Moth Battle Didn't Go Well for Iowa in 2022\*
- ☐ A-7 New Research Urban Forestry

## **SESSION B WORKSHOPS**

- ☐ B-1 Tree Appraisal and the Principle of Substitution
- ☐ B-2 Wounding and Tree Wound Response
- ☐ B-3 Securing Your Pesticide and Equipment Loads on Trailers\*
- ☐ B-4 The Spongy Moth Battle Didn't Go Well for Iowa in 2022\*
- ☐ B-6 Mulch Volcanoes, An Urban Tree's Best Friend
- ☐ B-7 A Calendar Approach to Turfgrass Management\*\*

## **SESSION C WORKSHOPS**

- ☐ C-1. From Seas to Trees: Vignettes from America's Public Lands
- ☐ C-2. Changes, Applications, and Significance of the 2023 USDA Plant Hardiness Zone Map
- ☐ C-3. The Art and Science of Grafting in Tree Propagation
- ☐ C-4. Securing Your Pesticide and Equipment Loads on Trailers\*
- ☐ C-5. The Periodical Cicada is Coming. Do Not Miss this Unique Entomological Experience\*
- ☐ C-6. Lone Worker Safety - Aggressive Homeowners: Training for a Mindset of De-Escalation
- ☐ C-7. Continuing Instruction Course for Pesticide Applicators\*\* (LIMIT 50 PER SESSION)

## **SESSION D WORKSHOPS**

- ☐ D-1 New Trees from Oregon
- ☐ D-2 The Evolution of Wildland Fire Fighting and its Effects on the Landscape
- ☐ D-3 The Challenge of Managing Scales: Are They Really Insects?\*
- ☐ D-4 Wielding the A300 Standards: The Shield and the Sword
- ☐ D-5 Diagnostic Workshop - Diagnosing Health Problems of Woody Plants\* (2 HOURS/LIMIT 30 PER SESSION)
- ☐ D-6 From Seas to Trees: Vignettes from America's Public Lands
- ☐ D-7 Lone Worker Safety - Aggressive Homeowners: Training for a Mindset of De-escalation

## **SESSION E WORKSHOPS**

- ☐ E-1 The Art and Science of Grafting in Tree Propagation
- ☐ E-2 Celebrating Nature's Guardians: Beneficial Insects in Our Trees\*
- ☐ E-3 A Calendar Approach to Turfgrass Management\*\*
- ☐ E-4 Wielding the A300 Standards: The Shield and the Sword
- ☐ E-6 Mulch Volcanoes, An Urban Tree's Best Friend
- ☐ E-7 Applying a Culture of Safety: A Practical Example

## **SESSION F WORKSHOPS**

- ☐ F-1 The National Discussion on Non-invasive Cultivars: Why it's Important and Why Now is the Time
- ☐ F-2 Celebrating Nature's Guardians: Beneficial Insects in Our Trees\*
- ☐ F-3 The Challenge of Managing Scales: Are They Really Insects?\*
- ☐ F-4 Plant Growth Regulators and Drought Resiliency\*
- ☐ F-5 Equipment Caught in Powerlines—What Options Do You Have?
- ☐ F-6 The Evolution of Tree Species Distribution Mapping
- ☐ F-7 Root Excavation for Fun...and Profit?

## **SESSION G WORKSHOPS**

- ☐ G-1 The Evolution of Tree Species Distribution Mapping
- ☐ G-2 Applying a Culture of Safety: A Practical Example
- ☐ G-3 Plant Growth Regulators and Drought Resiliency\*
- ☐ G-4 Equipment Caught in Powerlines—What Options Do You Have?
- ☐ G-5 Root Excavation for Fun...and Profit?
- ☐ G-6 New Research Urban Forestry
- ☐ G-7 Continuing Instruction Course for Pesticide Applicators\*\* (LIMIT 50 PER SESSION)

\*QUALIFYING PESTICIDE APPLICATOR WORKSHOPS

\*\*REQUIRED PESTICIDE APPLICATOR WORKSHOP



## **GENERAL INFORMATION**

### **It's Easy to Register**

Select from these registration options: register online [regcytes.extension.iastate.edu/shadetree](https://regcytes.extension.iastate.edu/shadetree) or mail to Registration Services, 1601 Golden Aspen Drive, Suite 110, Ames IA 50010.

### **Change in Plans**

If you cannot attend the short course you may send a substitute. Please email the substitute's information in advance of the event to [registrations@iastate.edu](mailto:registrations@iastate.edu). If you cancel your registration on or before February 13, 2024, your registration fee will be **refunded less a \$20 processing charge.** **Cancellations received February 13th and after may receive a partial refund that will be issued after the conference.** To cancel, email us at [registrations@iastate.edu](mailto:registrations@iastate.edu).

### **Travel**

Centrally located in the Midwest, Ames is easily accessible by transcontinental U.S. Highways 30 and 69, as well as Interstate 35. The Des Moines International Airport is located 40 minutes south of Ames and is served by major airlines. Major car rental agencies maintain offices in the airport.

### **Directions and Parking**

The Scheman Building is located in the Iowa State Center on the Iowa State University campus. From Interstate 35, take US Highway 30 west into Ames. Take the University Boulevard exit and go north past Jack Trice Stadium. The Scheman Building is located between Hilton Coliseum and C.Y. Stephens Auditorium. Free parking is available adjacent to the Scheman Building.

### **Further Information**

For questions about program content, call Jeff Iles (515) 294-3718. For registration questions, contact Registration Services at (515) 294-6222 or email [registrations@iastate.edu](mailto:registrations@iastate.edu).

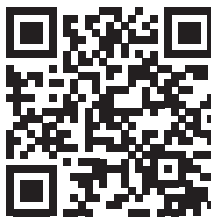
### **Tax Deduction**

The expense of continuing education, when taken to maintain and improve professional skills, is tax deductible. Contact your accountant for details.

### **Lodging**

Hotel guest room block options can be found on the Shade Tree Short Course Website page under the local information tab.

A complete listing of hotels & restaurants in the Ames area can be found at [discoverames.com](https://discoverames.com)



<https://discoverames.com/stay/>



<https://www.regcytes.extension.iastate.edu/shadetree/>

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# SHADE TREE SHORT COURSE



## **Growing Stronger Together** **February 21-22, 2024**

**Scheman Building**  
**Iowa State University | Ames Iowa**

69<sup>TH</sup> ANNUAL IOWA STATE UNIVERSITY  
SHADE TREE SHORT COURSE  
**SAVE THE DATE**  
**FEBRUARY 25-27, 2025**

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**IOWA STATE  
UNIVERSITY**  
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