OPENING GENERAL SESSION
Wednesday, February 20, 2019 - 9:30 a.m.

Your 100% Solution–The 4 S’s of Success

The Iowa State Shade Tree Short Course is pleased to welcome Kristan Browne to the stage in what promises to be one of our best opening general sessions in recent memory. Kristan is a business coach and founder of Attriniti Consulting in Pasadena, California, and in her presentation she will instruct us how to apply the 4 S’s of Success to our businesses: Space, Systems, Structure, and Strategy are foundational keys to starting, growing, and sustaining a business. When the 4 S’s are implemented, then it is simpler to manage your schedule, meet client expectations, and focus on what you do best. It is all too easy to get mired in the problem. Instead, shift your focus to the solution…a solution that fits your business.

When a Good Plant Goes Bad: Lessons Learned from the Callery Pear

We know invasive plants are bad, but what if the “bad” plant turns out to be one of your favorites? First time presenter Theresa Culley, professor of biological sciences at the University of Cincinnati, will lead this important discussion using Pyrus calleryana (callery pear) as a prime example of a once popular plant now increasingly recognized as a problematic invasive species. The spread of this Asian species into natural areas throughout the Midwestern United States is the result of cross-pollination among callery pear cultivars such as ‘Aristocrat’, ‘Cleveland Select’, and ‘Bradford’. The presentation will explore the history leading up to this current crisis, measures implemented to address the issue, and lessons learned that might help prevent future problems with other introduced ornamental species.

CLOSING GENERAL SESSION
Thursday, February 21, 2019 - 2:30 p.m.

Tree Damage and Lightning: Appreciating New Information on Lightning Attributes

It’s been way too long since we’ve heard from fellow Cyclone and international authority on all things related to arboriculture Kim Coder, and we are delighted to have him back to the Iowa State University Shade Tree Short Course in 2019! In his presentation, Dr. Coder, professor of community forestry, tree biology and health care at the University of Georgia, will remind us tree damage from lightning strikes can be severe and life-threatening, however, lightning conduction systems can be installed on selected trees to minimize damage. Understanding the many ways lightning power is applied to trees can help the tree health care provider better assess tree and site risks.

The characteristics of lightning ground strikes that damage trees will be highlighted and placed into a risk assessment framework.

Session A Workshops

A-1.
Forget the Lions, Tigers, and Bears, Oh My! We’re Talking Jumping Worms, Spotted Lanternflies, and Gypsy Moths!*

Robin Pruisner, State Entomologist and Bureau Chief of Entomology and Plant Science, Iowa Department of Agriculture and Land Stewardship, Ankeny, Iowa

Buy one session, learn about three pests! Join Robin for this workshop and get an update on three pests slated to be in your garden or nursery in the near future. Gypsy moth is pressing harder on eastern Iowa…what are we doing about it? Jumping worms have jumped into Iowa…what to expect if they land in your yard. And finally, spotted lanternfly is moving up and down the Atlantic coast…can it be stopped or are the hops for your beer or grapes for your wine endangered? Oh my!

A-2. (D-2 Repeat)
A Primer on Tree Appraisal: Terms, Concepts, and Processes of Appraisal from the 9th and 10th Editions

Limit 75

Jim Flott, Community Forestry Consultants, Inc. Spokane, Washington

Tree appraisal is a service provided by practitioners from a variety of fields. Most would agree engaging in the practice requires, at a minimum, arboricultural and horticultural expertise. Basic appraisal theory and procedures provide the foundation needed to define appraisal problems, yet many practitioners focus on the methods of appraisal without understanding the theory behind them. This presentation will focus on the theory of appraisal methods and defining the evaluation problem that in the end, will help practitioners appropriately solve a variety of appraisal problems.

A-3. (F-3 Repeat)
Just Because It’s Popular Doesn’t Mean We Should Grow It or Plant It!

Lydia Scott, Director, Chicago Region Trees Initiative, Lisle, Illinois

Many of us have experienced the devastating effects of a plant that gets out of control in our landscape or one that does not hold up well in urban conditions. This problem is difficult to solve once these plants get into production, especially if they are popular! And is it the nursery or buyer who bears responsibility for stopping the cycle? Attend this session to learn ways the nursery industry and buyers of plants can work collaboratively to keep our forests healthy.

*Qualifying Pesticide Applicator Workshops

**Required Pesticide Applicator Workshop
A-4. (D-4 Repeat)
Managing a Nursery/Landscape Company in the Future
Brent Gustason, David J. Frank Landscape Contracting Inc.
Germantown, Wisconsin
In this workshop, Brent will take a look at what is involved in running a nursery business that also includes a construction and maintenance division. Growing, maintaining, and purchasing plant materials along with labor force issues are among the many challenges facing the nursery manager. The nursery industry has changed a lot since Brent began his nursery career some 35 years ago! There's much to be learned from this seasoned veteran.

A-5. (D-5 Repeat)
Diagnosing Health Problems of Woody Plants* (2 hours) – Limit 30 per session
Laura Jesse Iles and Lina Rodriguez-Salamanca, Iowa State University, Ames, Iowa
Mark Vitosh, Iowa DNR District Forester
Iowa City, Iowa
If you were to travel to the planet Mars, and wanted to survive the 7-month journey with your sanity preserved at the end, who would you choose as a seat mate? Well, for me it would have to be this intrepid assortment of plant health professionals. Seriously! I could spend hours listening to Laura extoll the virtues of the green lacewing. And Lina's tales of fungal spores always leave me wanting more. And Mark's ability to detect a deer tick by tactile sensation is simply remarkable. Don't believe me…just sign up for this workshop for more convincing evidence.

A-6.
Spaghetti on the Wall–The Lost Art of Discernment
Limit 30
Kristan Browne, Attriniti Consulting
Pasadena, California
Spaghetti on the Wall is the name of a simple journal and workshop created by Kristan Browne and inspired by conversations and interviews with entrepreneurs, artists, business owners, and other interesting people. Discernment is a skill and by definition, it is perception in the absence of judgment with a view to obtaining direction and understanding. Discernment also is one of the most valuable skills for any business, leader, and team. Come to this session and learn how to apply this under-utilized and often overlooked exercise to quiet the noise, gain clarity, and improve all aspects of your business. Workshop attendees will receive their own copy of SOTW.

A-7. (B-7 Repeat)
Landscaping with Special Conifers
Robert Fincham, Coenosium Publishing
Puyallup, Washington
Conifers come in a wide range of colors, textures, shapes, and growth rates and this presentation will familiarize participants with many of the better selections that are little known in the landscape trade. Conifers that change colors with the seasons as well as those that present unusual colors throughout the year will be discussed. Sign up for this workshop and learn from a garden conifer legend how to use miniature conifers, pendulous conifers, and narrowly upright conifers in all kinds of landscape situations.

Session B Workshops
B-1.
Advancement in Clonal Propagation of Oak (Quercus spp.) Using Modified Stool Bed and Tissue Culture Techniques*
Miles Sax, Cornell University
Ithaca, New York
Cornell's Urban Horticulture Institute (UHI) is developing oak cultivars for the urban environment through their long-term (15-year) white oak breeding and propagation research program. The program has generated over 345 unique hybrid white oak genotypes developed from 40 parent species across the U.S., Europe, and Asia. As the genus Quercus is notoriously difficult to propagate through traditional means of grafting or rooting, the UHI has focused on developing clonal propagation techniques. This workshop will present findings from a series of studies that use a modified stool bed technique and tissue culture methods to asexually propagate oaks.

B-2. (E-2 Repeat)
Tree Preservation During Development and Construction
Limit 75
Jim Flott, Community Forestry Consultants, Inc.
Spokane, Washington
Infrastructure development both in reforming and modifying the cityscape is common and often trees are subject to injury during new development and/or renovation of existing roads, utilities, facilities, and other structures. Tree preservation is necessary, important, and requires careful planning in all stages of a project. Preserving the right trees and protecting them from damage can maintain greenery and minimize subsequent costs for rehabilitation or removal.

B-3. (E-3 Repeat)
How Management of Today’s Urban Trees Provides Pitfalls and Perks for Wildlife
Marlene Warren Ehresman, Iowa Wildlife Center
Ames, Iowa
Every wildlife rehabilitator dreads phone calls, as usually they aren't about making a donation. Throughout the year, numerous wildlife species can be unintended victims of urban tree and shrub management advice and practices. Using actual cases presented for rehabilitation, Marlene will explore some management pitfalls and offer some options that provide more perks for the wildlife around us. She will also discuss what to do should you find yourself staring at naked nestlings, stuck snakes, or itty-bitty bats.
A New Niche: So You Want to Become an Expert Professional Consultant
Malcolm Guidry, Professional Consulting Arborist
Covington, Louisiana

Becoming a competent expert can only be achieved through work experience and continuing education. Testifying in a court of law requires continuous dedication to learning the science of trees, the skills of discovery, formulating opinions, reducing facts to writing, being prepared to be deposed, and to defend your conclusions in a court of law. Whether advising a homeowner or testifying in court, discovering the facts must come before answering questions. Never answer questions before first discovering the facts. You won't want to miss this session with Dr. Guidry!

New Technologies Addressing Old Problems: Biotechnology Could Allow Restoration of American Chestnut Trees*
Andrew Newhouse, State University of New York (SUNY)
Syracuse, New York

Chestnut blight effectively eliminated mature American chestnuts from their native range in the early 20th century. The addition of a single gene from wheat into the American chestnut imparts tolerance to blight, and may allow restoration of these majestic trees. This presentation will include the natural history of chestnuts, scientific progress in creating and testing a blight-tolerant chestnut tree, the federal regulatory process for evaluating transgenic plants, and considerations for using genetic engineering to address environmental problems.

Landscaping with Special Conifers
(See description A-7)

Session C Workshops

C-1.
Grow, Spec, Plant: Supply Chain Challenges and Opportunities in the Landscape Industry
Limit 50
Grant Thompson, Iowa State University, Ames, Iowa
Paul Tauke, City Arborist, Ames, Iowa
Brett Douglas, Genus Landscape Architects, Des Moines, Iowa
Emily Swihart, Trees Forever, Marion, Iowa
Trever Ewalt, Country Landscapes, Ames, Iowa
Brent Gustason, David J. Frank, Landscape Contracting, Inc., Germantown, Wisconsin

Obtaining high-quality woody plant materials for installation in the urban landscape is a primary goal for meeting client expectations and improving environmental quality for the wider public, but currently difficult due to the many stakeholders and steps in the supply chain. In this panel discussion, experts from around the Midwest will share perspectives, challenges, and opportunities for addressing current issues in the green industry.

C-2.
Urban Soil Health and Remediation by Physical Fracturing and Incorporation of Compost Using the Scoop and Dump Technique
Miles Sax, Cornell University
Ithaca, New York

In an effort to improve urbanized soils, the Scoop & Dump (S&D) soil remediation technique was developed at the Urban Horticulture Institute, Cornell University. The S&D process involves physically fracturing the soil and incorporating large volumes of compost (30 percent by volume) with the use of a backhoe or mini excavator. This workshop will explore how the S&D technique improves tree growth in urban soils and the long-term effects (12-year) of remediation on soil quality.

C-3.
Pulling Out Stuck Equipment
Fred Whitford, Purdue University
West Lafayette, Indiana

The truth is that for every story of a successful vehicle or equipment extraction, there usually is a story about something that has gone wrong…sometimes very wrong. Extracting equipment is anything but routine, and owners and operators need to understand the potential repercussions of unsafe practices. In this presentation, Fred will examine the ratings of towing vehicles, factors to consider before pulling out stuck equipment or vehicles, and when calling a professional wrecker service is warranted. Attend this session and learn how to safely and effectively extract stuck vehicles without injuring drivers, bystanders, equipment, or the environment.

C-4.
Methods and Effectiveness of Hardwood Mulching at Louisiana State University
Fred Fellner, Consulting Arborist
Central, Louisiana

Director of the Landscape Department at Louisiana State University for over 23 years, Fred will describe his experiences, methods, and techniques and discuss the chemical, biological, and abiotic effects of hardwood mulching on the LSU campus. You won’t believe the positive impact Fred’s work has had on the venerable live oaks at LSU.

C-5.
New Technologies Addressing Old Problems: Biotechnology Could Allow Restoration of American Chestnut Trees*
(See description B-6)

*Qualifying Pesticide Applicator Workshops
**Required Pesticide Applicator Workshop
C-6. (D-7 Repeat)
Native Woody Nursery Production: Seed to Finished Product
Conner Shaw, Possibility Place Nursery
Monee, Illinois
Connor began growing native plants (indigenous to the Chicagoland area) exclusively in the early 1980's, and the finding, growing, and selling of native plants has been a challenge, to say the least. But Connor and his nursery have been extremely successful and in this workshop he will discuss seed collection, stratification, soil mix, and timing. From start to finish, Connor will explain what it takes to grow a good tree and shrub liner.

C-7. (G-7 Repeat)
Continuing Instructional Course for Pesticide Applicators**
Limit 60 per session
Mark Shour, Iowa State University,
Ames, Iowa
This workshop is required if you want approved continuing instructional credits (CICs) toward pesticide applicator recertification at the 2019 STSC. The Iowa Department of Agriculture and Land Stewardship has approved the Iowa State University Shade Tree Short Course for CICs in categories 2, 3O, 3OT, 5, 6, and 10. This required session will present information on recognition of sensitive areas including groundwater and other non-target sites and organisms (pollinators) as potentially impacted by pesticide applications, drift, and runoff. Pesticide labels, restricted entry intervals, and pre-harvest intervals also will be covered. You also must attend one additional qualifying workshop (A-1, A-5 or D-5, B-1, B-6 or C-5, E-4 or G-3, or F-2 or G-2) to receive certification. If you are recertifying for category 3OT, you also must attend the turfgrass management workshop (D-8 or E-8). If you are recertifying for category 5 and/or 6, you must attend the appropriate pre-conference workshop(s) held on February 19.

NOTE: Pesticide applicators wishing to recertify at the STSC will be charged an additional $35 for categories 2, 3O, or 3OT, and 10 AND an additional $35 for categories 5 and 6 (see registration form).

Session D Workshops

D-1.
Electrical Safety and Incident Prevention
Randall Miller, CNUC
Des Moines, Iowa
As Director of Research, Development, and Industry Intelligence for CNUC, Randy is one of the leading experts in the field of utility vegetation management practices, regulations, and trends. Sign up for this workshop and learn how to explain electrical safety risks, differentiate between safety and incident prevention, understand arboricultural work-related trauma, and create a culture of safety.

D-2.
A Primer on Tree Appraisal: Terms, Concepts, and Processes of Appraisal from the 9th and 10th Editions
Limit 75
(See description A-2)

D-3.
Pulling Out Stuck Equipment
(See description C-3)

D-4.
Managing a Nursery/Landscape Company in the Future
(See description A-4)

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

D-6. (E-6 Repeat)
Magical Moments
Stephanie Salasek, Lookup Communications
Kelly, Iowa
Stephanie was a big hit with STSC audiences in 2018 and she's back again, this time to help us understand how transitions, milestones, and pits are everyday opportunities for leaders and managers in creating loyal and productive employees and team members. In fact, what you do for new employee orientation and negative performance reviews might affect outcomes more than promotions and perks.

D-7.
Native Woody Nursery Production: Seed to Finished Product
(See description C-6)

D-8. (E-8 Repeat)
A Calendar Guide to Turfgrass Management for Iowa (Category 3OT)*
Adam Thoms, Iowa State University
Ames, Iowa
This workshop will provide a monthly guide to turfgrass management for Iowa. The Iowa Department of Agriculture and Land Stewardship requires commercial pesticide applicators to receive instruction specific to each category in which they are certified in order to recertify by training. To receive recertification credit in Category 3OT (Ornamentals and Turf) at the ISU Shade Tree Short Course, an applicator must attend Workshop C-7 or G-7 (Continuing Instructional Course for Pesticide Applicators) PLUS Workshop D-8 or E-8 (A Calendar Guide to Turfgrass Management for Iowa) PLUS one additional pest-management approved workshop as designated by an asterisk (*).

*Qualifying Pesticide Applicator Workshops
**Required Pesticide Applicator Workshop
Session E Workshops

E-1.
The New Z: Paragraphs to Live By
John Ball, South Dakota State University
Brookings, South Dakota
Tree work is one of the most high-risk professions in the United States, but it doesn’t need to be that way. The new Z133 standards provide recommendations and requirements for how to perform arboricultural operations and, if followed, can lead to incident-free work. In this workshop, Dr. Ball (ISA representative on the Z133 committee) will cover the main requirements including the many changes for working near conductors. Here’s your only chance to see John this year, so take advantage of this opportunity.

E-2.
Tree Preservation During Development and Construction
(See description B-2)

E-3.
How Management of Today’s Urban Trees Provides Pitfalls and Perks for Wildlife
(See description B-3)

E-4. (G-3 Repeat)
What’s New with Gypsy Moth in the Midwest?*
John Kyhl, U.S. Forest Service
St. Paul, Minnesota
Gypsy moth continues to expand its range, edging closer to Iowa all the time. In his presentation, John will review many aspects of gypsy moth in the Midwest including identification and life cycle, effects on host trees and the forest, and management tools and programs.

E-6.
Magical Moments
(See description D-6)

E-7. (F-7 Repeat)
How to Graft
Limit 24
Robert Fincham, Coenosium Publishing
Puyallup, Washington
Register for this workshop and learn about veneer grafting of conifers, maples, and beeches from a real propagation master. This discussion and demonstration will include understock and scion collecting and preparation, the proper tools and equipment, and aftercare of the finished grafts. Space is limited, so sign up early for this one.

E-8.
A Calendar Guide to Turfgrass Management for Iowa (Category 3OT)*
(See description D-8)

Session F Workshops

F-1.
Diagnosing Essential Element Problems in Trees: The Myths and Dangers of Visual Assessments
Kim Coder, University of Georgia
Athens, Georgia
The essential elements required by trees provide a highly complex and interactive resource allocation problem for tree health care providers. Essential element concentrations interact in both positive and negative ways with each other. Understanding essential element activities in a tree is required to properly apply element enrichment. There are many superficial/visual guides for diagnosing essential element problems in trees that have proven to be wrong. Hey Dr. Coder, it’s great to have you back on the program!

F-2. (G-2 Repeat)
Stem Girdling Roots: Can the Tree Be Saved or Is It Time to Say Goodbye?*
Gary Johnson, University of Minnesota
St. Paul, Minnesota
Stem girdling roots (SGRs) have been a significant predisposing agent affecting landscape trees for more than four (documented) decades. Despite this history of damage and awareness, the problem won’t go away and most landscape and arboricultural professionals are faced with making the decision to either try and save trees or say goodbye. In this session, Dr. Johnson will help you wrestle with those decisions based on tree species, size, condition, risk, and location factors.

F-3.
Just Because It’s Popular Doesn’t Mean We Should Grow It or Plant It!
(See description A-3)

F-4.
A New Niche: So You Want to Become an Expert Professional Consultant
(See description B-4)

F-5. (G-5 Repeat)
Keeping the Trailer Connected
Fred Whitford, Purdue University
West Lafayette, Indiana
Trailer hitches should not be viewed as simple mechanical devices. In fact, just the opposite is true! Hitches are a complex integration of components working together to keep the trailer hooked to the truck. The consequences of a trailer becoming unhitched from a truck on the highway are something we would rather not think about. But, at all times we must understand that people are injured or killed every day from these types of accidents. Sign up for this workshop and learn how to safely attach your trailer to your truck.

*Qualifying Pesticide Applicator Workshops
**Required Pesticide Applicator Workshop
F-6. (G-6 Repeat)
Old Oak Trees in Iowa
John Pearson, Iowa Department of Natural Resources
Des Moines, Iowa
Sign up for this workshop and learn how old oak trees in Iowa on state conservation lands, studied in the early 1980's for dendrochronological analysis of historical precipitation cycles, were relocated, mapped, and tagged in 1986 by Daniel Duvick (the original researcher) and John Pearson. Many of these trees have been revisited over the past 30 years. Participants will learn about the history of these oaks and the many stories they have to tell.

G-7.
Continuing Instructional Course for Pesticide Applicators**
(See description C-7)

PESTICIDE CONTINUING EDUCATION
The Iowa Pesticide Act provides two options for renewing commercial pesticide applicator certification. Commercial and public applicators may choose to renew their certification by testing once every three years or by attending approved instructional training each year.

Recertification by training requires participation in two hours of approved instructional training each year, in each category in which an applicator is certified. Some programs may be approved for more than one category and simultaneous credit hours are possible. Applicators will not be allowed to make up hours that they missed in a previous year, nor will they be allowed to carry forward excess credit hours.

To Recertify in Category Applicator Must Attend
2 or 30 and 10 Workshop C-7 or G-7 PLUS One other "Pest Management"workshop
2 or 3OT and 10 Workshop C-7 or G-7 PLUS Workshop D-8 or E-8 PLUS One other "Pest Management"workshop
5 Workshop C-7 or G-7 PLUS Pre-conference workshop 1
6 Workshop C-7 or G-7 PLUS Pre-conference workshop 2

Pest Management Workshops:

A-1 Forget the Lions, Tigers, and Bears, Oh My! We’re Talking Jumping Worms, Spotted Lanternflies, and Gypsy Moths (Pruisner)
A-5 or D-5 Diagnosing Health Problems of Woody Plants (Iles, Rodriguez-Salamanca, and Vitosh)
B-1 Advancement in Clonal Propagation of Oak (Quercus spp.) Using Modified Stool Bed and Tissue Culture Techniques (Sax)
B-6 or C-5 New Technologies Addressing Old Problems: Biotechnology Could Allow Restoration of American Chestnut Trees (Newhouse)
D-8 or E-8 A Calendar Guide to Turfgrass Management (Thoms) (For 3OT applicators only)
E-4 or G-3 What’s New with Gypsy Moth in the Midwest? (Kyhl)
F-2 or G-2 Stem Girdling Roots: Can the Tree Be Saved or Is It Time to Say Goodbye? (Johnson)

Category 5 Pre-conference Workshop 1
Identification and Management of Invasive Aquatic Weeds (Bogenschutz)

Category 6 Pre-conference Workshop 2
Managing Iowa’s Roadside Noxious and Invasive Weeds (Henze)