



*The 48th Annual*  
**Minnesota Shade  
Tree Short Course**

A two-day course for everyone involved in urban forestry and arboriculture.  
ISA Certified Arborist CEUs are available for most sessions.

**March 16-17, 2010**

**Bethel University, Arden Hills, Minnesota**



*Ensuring Tree Health Since 1963*

**[www.cce.umn.edu/shadetree](http://www.cce.umn.edu/shadetree)**

**UNIVERSITY OF MINNESOTA**  
**Driven to Discover<sup>SM</sup>**

## Minnesota's Unwanted Stimulus Program

Emerald ash borer was the talk of the town for much of Minnesota, for most of 2009. Minnesota has joined the unlucky ranks of those states where the shiny, hungry beetle has taken up residence. With a "control history" of less than 10 years, urban forest health specialists have been learning from each other and scrambling to make the right, new decisions...all with little time to spare. Who would have ever predicted that an ash tree would stimulate so much interest and planning, would get us to focus on inventorying our tree populations, meet weekly or monthly to plot action plans, invest hundreds of thousands of dollars in chemical controls, and remove trees before they were dead?

This year's Shade Tree Short Course will help you prepare for, manage, and recover from emerald ash borer, pine problems, gypsy moths, oak diseases, and just about anything else that keeps you up at night. No one responds to your worst tree nightmares like the Minnesota Shade Tree Short Course Steering Committee and the expert presenters who will join us in 2010. We will also review the best new trees and shrubs, teach you some new climbing techniques, and demonstrate

how to drop large branches and trees without incurring or causing damage. Our local and national experts will review the most recent research in utility arboriculture and root research, as well as take you on an international tour of some of the most beautiful botanic gardens in the world.

For 48 years, arborists, tree inspectors, urban foresters, landscape architects, master gardeners, and tree care advisers have come together to learn, recertify, reconnect with old friends, and make new ones. There are many conference and workshop options for you to choose from during the year, but the Minnesota Shade Tree Short Course works hard to give you the highest quality for the most reasonable price: one registration fee. No additional parking fees. No need to go off-site to find a restaurant. No need to look for a vending machine. It's all included, and we're easy to find - Bethel University is less than a minute off of I-694. No congestion or traffic lights to stack up behind, just lots of trees, water, and open space. (Okay, in March, lots of trees, ice, snow, and open space.) Join us again or for the first time...you won't regret it!

## In Memory of Patrick

Our friend and colleague Patrick Weicherding passed away in 2009. Throughout his illness, he continued to be an active, contributing member of the STSC Steering Committee as he had for many years. His dedication to urban forestry and teaching defined his long and

respected career, and the STSC's dedication to quality and unbiased education is a reflection of Patrick's work. The 2010 Minnesota Shade Tree Short Course is dedicated to the memory and spirit of Patrick.



Bethel University Information . . . . .	1	Fees . . . . .	4
Certification Options . . . . .	1	Further Information . . . . .	5
CEU Information . . . . .	1	Program . . . . .	8-11
Diagnostic Exhibit Area . . . . .	1	Breakout Sessions . . . . .	8-11
Tree Inspector's Recertification . . . . .	1	Presentation Descriptions . . . . .	12-15
Conference At A Glance . . . . .	2	Maps . . . . .	16
General Sessions . . . . .	2	Registration Form . . . . .	17

## Minnesota Shade Tree Short Course New Features in 2010:

### Extended Hours

There will be at least 15 minutes between the end of concurrent sessions and the beginning of the next. As wonderful as Bethel University is as a host site, it can take some time to travel from one session to the next. Your movement between sessions will be more of a stroll than a trot!

### 45-Minute Sessions

Several sessions are 45 minutes in length to accommodate the extended time between concurrent sessions. However, there will still be 50, 55, and double-sessions for those topics that require the extra time.

### Exhibit Area Classes

They were a hit last year, and they'll be back for 2010. This will be an opportunity for you to take a tree ID quiz and add to your CEUs if you are an ISA Certified Arborist. Or, you can learn some all-purpose climbing techniques or what emerald ash borer tunneling looks like under the bark. All of the break-time sessions are 15 minutes long which gives you the opportunity to visit booths and vendors, have a cold drink, and take a few minutes to learn something new.

### Book Signings

Some of the leading experts in urban forestry, arboriculture, and entomology will be signing copies of their books during the exhibit area sessions. Chad Giblin has become one of the most recognized experts in developing young elms in the landscape and will be introducing and signing his new book on pruning elms. Jeff Jepson, the highly regarded former MSA Chapter Tree Climbing Champion, seasoned arborist, and author of two arboricultural books will be signing both. And wow, have you seen Jeff Hahn's new book on bugs? It's great, and you'll want a copy with Jeff's signature, so he's joining us, too.

### Bethel University

Bethel University offers beautiful facilities inside and out with free and convenient parking in the West Parking Lot and a spacious cafeteria. The campus is located in Arden Hills, a short distance from Snelling Avenue and I-694, (see map on page 16) with an exceptional and varied landscape for outdoor sessions. Make sure that you dress appropriately for the weather if you will be attending the breakout sessions with outdoor activities. Bethel University is a nonsmoking campus (smoking allowed in designated outdoor areas). The program begins at 7:30 a.m. on Tuesday, March 16 and concludes at 3:45 p.m. on Wednesday, March 17.

### Minnesota Shade Tree Short Course Steering Committee

- Gary Johnson*, Chair, Department of Forest Resources, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota
- Mike Bahe*, Municipal Arborist, City of Hutchinson
- David Hanson*, Research Specialist, Department of Forest Resources, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota
- Jim Hermann*, Municipal Urban Forester, Minneapolis Park and Recreation Board
- Ben Johnson*, Commercial Arborist, Rainbow Treecare
- Jill Johnson*, Coordinator, Midwest Center for Urban Forestry, U.S. Forest Service
- Manuel Jordan*, Owner, Heritage Shade Tree Consultants
- Russell Kennedy*, Commercial Arborist, Rainbow Treecare
- Bob Koch*, Minnesota Department of Agriculture
- Don Mueller*, Agency Urban Forester, Department of Natural Resources
- Gail Nozal*, Consulting Urban Forestry, S&S Tree and Horticultural Specialists
- Mark Schnobrich*, Municipal Forester, City of Hutchinson
- Mark Stennes*, Commercial Arborist, S&S Tree and Horticultural Specialists
- Paul Voigt*, Agency Urban Forester, Minnesota Department of Transportation
- Paul Walvatne*, Agency Urban Forester, Minnesota Department of Transportation
- Patrick Weicherding*, Educator, Researcher, University of Minnesota Extension

### Certification and Credit

- Certified tree inspectors will be recertified for 2011 by attending the entire short course.
- ISA CEUs will be given for all sessions.

### Please Note:

- Recertification for pesticide applicators is not available at this workshop.
- New Tree Inspector classes and testing are not available at this workshop.

## Conference at a Glance

### General Sessions (in order of presentation)

The general sessions and track menus listed below enable you to choose sessions of interest from the many that are offered during the conference. Many courses provide information pertaining to multiple tracks. You do not have to stay within a track. Feel free to select sessions among any of the tracks that appeal to you.

- GS I – Climate Change in Minnesota
- GS II – Great Moments in History and How Fungi Got Us There
- GS III – Gardens of the World
- GS IV – Characterizing the Risks that the Aging Forests Pose to an Overhead Distribution System
- GS V – Trees Have Hormones... And They Know How to Use Them!
- GS VI – Greening Our Neighborhoods

### Concurrent Sessions (in alphabetical order)

Key: 🌳 - 1 hour and 45- minute session   🕒 - only offered one time   💧 - pre-registration required

#### Introductory Sessions

Introductory sessions are most valuable for people just entering or re-entering the fields of arboriculture, urban forestry, or urban natural resource management. These sessions provide a sound foundation for understanding tree biology, tree I.D., diagnosing problems, soil science, and plant maintenance.

- Are You Purchasing the Best Nursery Stock?
- Best New Trees and Shrubs for Minnesota Landscapes
- Common Tree and Shrub Insects
- Diagnosing Tree Diseases and Disorders
- Pruning for Structure, Not Just Fruit
- Tree Biology
- Trees, Shrubs: Compound Leaved Trees 🌳

#### Technical Sessions

These sessions build on your basic understanding of arboriculture and urban forestry with new, specific, or more technical information.

- 15 Years of Root Research at the U
- Are You Purchasing the Best Nursery Stock?
- Best New Trees and Shrubs for Minnesota Landscapes
- Nature's Graffiti: Understanding Invasiveness 🕒
- Physics for Arborists 💧
- Pruning for Structure, Not Just Fruit
- Redirects, Double-Crotching, and Positioning
- The Case for Utility Vegetation Management: Research, Development and Demonstration 🕒
- Tree Root Ball Washing: A Better Way to Prepare Plants for the Landscape?
- What Every Arborist Should Know About Utility Arboriculture

#### Advanced Technical Track

Advanced sessions tend to be very topic-specific and assume that you have the experience and education for more technically challenging classes. For example, rather than a primer on diagnosing diseases, advanced technical sessions will focus on one or two diseases and discuss the pathogen(s), life cycles, various control tactics, and recent research.

- Gypsy Moth in Minnesota: Damage, Range, Control Tactics
- Problems with Pines
- Sugar Maple Decline: Is This the End of Sugar Maples in Urban Landscapes?
- Tree Diseases to Watch For

#### Community Forestry

These sessions will help volunteers, advocates, or decision-makers at any level to make better-educated choices.

- Budget Slashed? Draft a Volunteer Work Force
- Developing Neighborhoods for Commerce, People, and Trees
- EAB: Now That It's Here, What Do We Do?
- Markets for Urban and Community Ash Trees in Minnesota
- Recovering Communities After Catastrophic Losses

#### International Society of Arboriculture, Certified Arborist Exam Preparation Track

These selected sessions will greatly assist your preparation to take the certification exam. Select sessions that you feel will strengthen your weaknesses.

- 15 Years of Root Research at the U
- Are You Purchasing the Best Nursery Stock?

- Best New Trees and Shrubs for Minnesota Landscapes
- Common Tree and Shrub Insects
- Diagnosing Tree Diseases
- EAB: Now That It's Here, What Do We Do?
- Gypsy Moth in Minnesota: Damage, Range, Control Tactics
- Physics for Arborists 💧

- Problems with Pines
- Redirects, Double-Crotching, and Positioning
- Tree Biology
- Tree Diseases to Watch For
- Trees, Shrubs: Compounded Leaved Trees 🌳
- Sugar Maple Decline: Is This the End of Sugar Maples in Urban Landscapes?

### Our Speakers:

*Mark Abrahamson* is an entomologist at the Minnesota Department of Agriculture and a First Detector team leader.

*Jeff Corney* is the managing director of the Cedar Creek Ecosystem Science Reserve, University of Minnesota.

*Doug Courneya* is currently in his ninth year teaching Horticulture at Rochester Community and Technical College.

*Sue Erhardt* is the director of education for Casey Trees, Washington, D.C.

*Tivon Feeley* is the forest health program leader for the Forestry Bureau, Iowa Department of Natural Resources.

*Jim Flott* is a principal with Community Forestry Consultants in Spokane, Washington.

*David Frank* is director of development for Shafer Richardson, Inc., Minneapolis.

*Chad Giblin* is a research scientist in the Horticultural Science Department, University of Minnesota.

*John Goodfellow* is the principal consultant with BioCompliance Consulting, Inc., Redmond, Washington.

*Jeff Hahn* is a University of Minnesota Extension entomologist, Saint Paul campus.

*Dave Hanson* is a research specialist in Urban and Community Forestry at the University of Minnesota in the Department of Forest Resources.

*Taylor Hamel* is an arborist from Saint Paul.

*Ken Holman* is the state urban and community forestry coordinator, Minnesota Department of Natural Resources.

*George Hudler* holds a B.S. degree in forest management and an M.S. degree in plant pathology from the University of Minnesota. He was awarded the Ph.D. from Colorado State University in 1976 and immediately thereafter joined the faculty at Cornell University.

*Keith L. Jacobsen* is the forest products utilization and marketing program leader at the Minnesota Department of Natural Resources.

*Jeff Jepson* is an arborist, owner of Beaver Tree Service in Longville, and an accomplished author of arboricultural books.

*Gary Johnson* is professor of Urban and Community Forestry in the Department of Forest Resources, University of Minnesota.

*Jeff Johnson* is a horticulturist at the Minnesota Landscape Arboretum, University of Minnesota.

*Sam Kezar* is an aerial rescue specialist with North American Training Solutions and adjunct professor at the University of Minnesota – Crookston campus.

*John Kyhl* is an entomologist with the U.S. Forest Service in Saint Paul and specializes in gypsy moth management.

*Debbie Lonnee* is the manager of the Planning and Administration Department at Bailey Nurseries, Saint Paul.

*Joe Murray* is the arboriculture program coordinator, Blue Ridge Community College in Staunton, Virginia.

*Joe O'Brien* is a plant pathologist with the U.S. Forest Service in Saint Paul, and specializes in infectious diseases and risk management.

*Peter Olin* is a professor in the Horticultural Science Department, University of Minnesota, and former director of the Minnesota Landscape Arboretum.

*Andy Olson* is a utility forester for East Central Energy (Minnesota), Forestry Services.

*Kit Richardson* is a real estate developer for Shafer Richardson, Inc., Minneapolis.

*Terry Robinson* is the superintendent of the Parks and Forestry Department, Iowa City, Iowa.

*Philip Ronald* directs the research and development division of Jeffries Nurseries, Manitoba, Canada.

*Kevin Smith* is a plant pathologist and project leader for the U.S. Forest Service in Durham, New Hampshire.

*Lance Sorensen* is the staff forester in charge of timber sales/utilization and marketing at Department of Natural Resources–Central Region.

*Glen Stanosz* is a professor of plant pathology and academic programs at the University of Wisconsin, Madison.

*Jay Walljasper* is a senior fellow for the Project for Public Spaces, former editor of the *Utne Reader*, and author of *The Great Neighborhood Book*.

*Pierce Wasmund* is an arborist with Northern Arborists, and former MSA Tree Climbing Champion.

## Registration Fees

The early registration fee, received by March 2 is \$165 per person. The regular fee after March 2 and at the door is \$180 per person. The registration fee includes general sessions, breakouts, breaks, lunches, and handouts.

## Student Rate

Student registration is \$40.00 per student.

*To obtain the student rate, a statement from the student's academic adviser must accompany the registration form. The statement must confirm the student's current enrollment in a post-secondary, degree program, along with the institution's name, the adviser's name, and the adviser's signature.*

## Tree Board or Park Board Member Rate

Tree Board or Park Board member registration is \$85.00 per person.

*To obtain the tree board/park board member rate, documentation from the city that the person is a member of the tree or park board must accompany the registration form. Write "Tree Board Member Option 086" on your registration form.*

## Tree House of Horrors – 2010

### The Tree House of Horrors: Your Gateway to Diagnosing Tree Health Problems!

Fresh samples from common tree problems will test your diagnostic skills. As always, the interesting samples of tree morphology, decay, embedded artifacts in trees and other phenomena provided by local arborists, the University of Minnesota, Minnesota Department of Transportation, and Minneapolis Park Board collections will be on display.

Back by popular demand will be the poster displays of our current research projects at the University of Minnesota as well as the latest information on invasive insect pests of trees and shrubs. As always, there will be experts on hand to discuss those tree health questions that you always seem to encounter on your job.

*The Tree House of Horrors is organized by:*

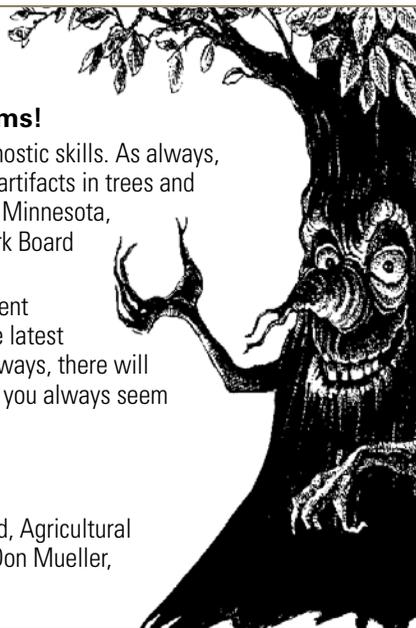
Dave Hanson, Department of Forest Resources, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota and Don Mueller, Minnesota Department of Natural Resources

## Exhibit Area Classes

The exhibit area "mini-classes" that we instituted in 2009 were so well received that they will be back for 2010. These 15-20 minute classes, offered in the exhibit area during the open hours, will cover the following topics:

- How Do I Know if It's EAB? And if It Is, What Can I Do?
- How Can I Satisfy the Quarantine Restrictions on Wood Chip Size? Do I Need to Buy a New Chipper?
- What Can I Do with Wood Generated from Ash Removal? Are There Any Options Other Than Burning, Burying, Mulching with Wood Chips?
- My Community Needs to Inventory its Tree Population... What Kind of Equipment Should I Buy?
- My Community Is Reforesting with Smaller Trees, but the Deer Eat Everything. Is There Anything that Really Controls Critter Damage?

A tree identification quiz will be available on both days in the THOH for everyone, and ISA Certified Arborists may earn 1.0 CEUs for correctly identifying 72 percent of the tree samples.



## Further Information

### Exhibits

Commercial and agency exhibits will be available each day. Everyone is invited to stop by and exchange information at booths located throughout the center. Exhibit space is coordinated by Ben Johnson, who can be reached by phone or e-mail – 952-252-0527 or [bjohnson@rainbowtreecare.com](mailto:bjohnson@rainbowtreecare.com).

### Tree Inspector Information

Stephen Schott or Michelle Jacobson  
Minnesota Department of Natural Resources  
Division of Forestry - Box 44  
500 Lafayette Rd.  
Saint Paul, MN 55155  
651-259-5306

### Registration Questions

612-625-2900

### For More Information

Heather Dorr or Clair Daley  
University of Minnesota  
612-624-3492  
[cceconf3@umn.edu](mailto:cceconf3@umn.edu)

### MSA (Minnesota Society of Arboriculture) Winter Picnic

The Tuesday, March 16 business meeting will begin at 4:30 p.m., followed by a picnic at 5:30 p.m. The picnic offers great food and is an opportunity to network with speakers and participants. Free to Shade Tree Short Course participants. Maps provided at registration desk.

Location: To Be Determined. Please check the Web site for updated information at [www.cce.umn.edu/shadetree](http://www.cce.umn.edu/shadetree)



# International Society of Arboriculture (ISA) Continuing Education Units (CEUs)

Attendance sheets will be offered immediately after each session. For more information regarding ISA CEUs, please visit <http://www.isa-arbor.com/certification/ceus.aspx>.

## ISA Certification Code Information

A Certified Arborist	U Utility	Bm BCMA Management
T Certified Tree Worker	Bs BCMA Science	
M Municipal	Bp BCMA Practice	

Session	Title	Speaker	CEU Hours
<b>General Sessions</b>			
General	Climate Change in Minnesota; Great Moments in History and How Fungi Got Us There; Gardens of the World	Corney, Hudler, Olin	1.75 AMBm
General	Characterizing the Risks that the Aging Forests Pose to an Overhead Distribution System; Trees Have Hormones...And They Know How to Use Them; Greening Our Neighborhoods	Goodfellow, Murray, Walljasper	1.75 AMUTBp
<b>Introductory Sessions</b>			
Concurrent Session	Are You Purchasing the Best Nursery Stock?	Ronald	.75 AMBm
Concurrent Session	Best New Trees and Shrubs for Minnesota Landscapes	Lonnee	1 AMBs
Concurrent Session	Common Tree and Shrub Insects	Hahn	.75 AMBs
Concurrent Session	Diagnosing Tree Diseases	O'Brien	1 AMBs
Concurrent Session	Pruning For Structure, Not Just Fruit	Johnson	.75 ATMBp
Concurrent Session	Tree Biology	Courneya	.75 ATMUBp
Concurrent Session	Trees, Shrubs: Compound Leaved Trees	Hanson	1.75 ATMUBp
Exhibit Area Session	Tree ID Quiz. 20 Samples. 70% Passing Rate To Earn CEUs	Johnson/Hanson	1 ATMBs
<b>Technical Sessions</b>			
Concurrent Session	15 Years of Root Research at the U	Johnson	.75 AMBp
Concurrent Session	Are You Purchasing The Best Nursery Stock?	Ronald	.75 AMBm
Concurrent Session	Best New Trees and Shrubs for Minnesota Landscapes	Lonnee	.75 AMBm
Concurrent Session	The Case for Utility Vegetation Management: Research, Development, and Demonstration	Goodfellow	1 ATUMBp
Concurrent Session	The Changing Landscape of Tree Inventories: GIS and Tree Inventories	Flott	.75 AMBm
Concurrent Session	Markets for Urban and Community Ash Trees in Minnesota	Jacobson and Sorensen	1 AMBm
Concurrent Session	Nature's Graffiti: Understanding Invasiveness	Murray	.75 AMBp
Concurrent Session	Physics for Arborists	Kezar	.75 ATUMBp
Concurrent Session	Pruning for Structure, Not Just Fruit	Johnson	.75 ATMBp
Concurrent Session	Redirects, Double-Crotching and Repositioning	Wasmund and Taylor	1 ATMBp
Concurrent Session	Tree Root Ball Washing: A Better Way to Prepare Plants for the Landscape?	Flott	1 AMBp
Concurrent Session	What Every Arborist Should Know About Utility Arboriculture	Olson	.75 ATUMBp
<b>Advanced Technical Sessions</b>			
Concurrent Session	Gypsy Moth in Minnesota: Damage, Range, and Control Tactics	Kyhl	1 AMBp
Concurrent Session	Problems with Pines	Stanosz	.75 AMBm
Concurrent Session	Sugar Maple Decline: Is This the End of Sugar Maples in Urban Landscapes?	Smith	.75 AMBm
Concurrent Session	Tree Diseases to Watch For	Feeley	.75 AMBp
<b>Community Forestry Sessions</b>			
Concurrent Session	Budget Slashed? Draft a Volunteer Work Force	Erhardt	1 AMBm
Concurrent Session	Developing Neighborhoods for Commerce, People, and Trees	Richardson and Frank	.75 AMBm
Concurrent Session	EAB: Now That It's Here, What Do We Do?	Abrahamson and Holman	.75 AMBm
Concurrent Session	Markets for Urban and Community Ash Trees in Minnesota	Jacobson and Sorensen	1 AMBm
Concurrent Session	Recovering Communities after Catastrophic Losses	Robinson	.75 AMBm

## Program – Tuesday, March 16, 2010

6:45 a.m.

### Registration begins

#### General Sessions – Benson Great Hall

7:30

#### Welcome and Opening Remarks

*Gary Johnson*, Department of Forest Resources,  
College of Food, Agricultural and Natural  
Resource Sciences, University of Minnesota

7:45

#### GS1: Climate Change in Minnesota and the Effects on Vegetation

*Jeff Comey*

8:40

#### GSII: Great Moments in History and How Fungi Got Us There

*George Hudler*

9:35

#### GSIII: Gardens of the World

*Peter Olin*

10:30-12:15 p.m.

#### Exhibit Area and the Tree House of Horrors

11:00

Group 1 Lunch Break

11:20

Group 2 Lunch Break

11:45

Group 3 Lunch Break

(MSA members to eat and hold Business Meeting)

12:15 p.m.

### Concurrent Sessions Begin

### KEY FOR CONCURRENT SESSIONS

-  1 hour and 45-minute session
-  only offered one time
-  Pre-registration required
- I Introductory Session
- T Technical Session
- A Advanced Technical
- C Community Forestry
- E ISA Exam Prep



### Concurrent Sessions

12:15-1:00

- Are You Purchasing the Best Nursery Stock?** *Philip Ronald* I,T,E
- Best New Trees and Shrubs for Minnesota Landscapes,** *Debbie Lonnee* T,I,E
- The Changing Landscape of Tree Inventories: GIS and Tree Inventories,** *Jim Flott*
- Common Tree and Shrub Insects,** *Jeff Hahn* I,E
- Developing Neighborhoods for Commerce, People, and Trees,**  
*Kit Richardson and David Frank* C
- Recovering Communities After Catastrophic Losses,** *Terry Robinson* C
- Sugar Maple Decline: Is This the End of Sugar Maples Urban Landscapes?** *Kevin Smith* A,E
- Tree Diseases to Watch For,** *Tivon Feeley* A,E

1:15-2:00

- 15 Years of Root Research at the U,** *Gary Johnson* T,E
- EAB: Now that It's Here, What Do We Do?** *Mark Abrahamson and Ken Holman* C,T,E
- Nature's Graffiti: Understanding Invasiveness,** *Joe Murray*  T,E
- Physics for Arborists,** *Sam Kezar*  T,E
- Problems with Pines,** *Glen Stanosz* A,E
- Tree Biology,** *Doug Courneya* I,E
- What Every Arborist Should Know About Utility Arboriculture,** *Andy Olson* T

2:00-2:45

#### Exhibits, Refreshments, and "Mini-Sessions" in the Exhibit Hall

2:45-3:45

- Best New Trees and Shrubs for Minnesota Landscapes,** *Debbie Lonnee* I,T,E
- Budget Slashed? Draft a Volunteer Work Force!** *Sue Erhardt* C
- Diagnosing Tree Diseases,** *Joe O'Brien* I,E
- Gypsy Moth in Minnesota: Damage, Range, and Control Tactics,** *John Kyhl* A,E
- Markets for Urban and Community Ash Trees in Minnesota,**  
*Keith Jacobson and Lance Sorenson* C,T
- Redirects, Double-Crotching, and Repositioning,** *Pierce Wasmund and Taylor Hamel* T,E
- Tree Root Ball Washing: A Better Way to Prepare Plants for the Landscape?** *Jim Flott* T,E

#### 1 hour 45-minute Sessions

12:15-2:00

- Trees, Shrubs: Trees with Compound Leaves,** *Dave Hanson* I,E

3:45

#### Adjourn

4:15

Minnesota Society of Arboriculture (MSA) Business Meeting – Como Park

5:30

MSA Winter Picnic – Como Park (food and drink compliments of MSA)

# Program – Wednesday, March 17, 2010

## General Sessions – Benson Great Hall

7:45 a.m.

### **GSIV: Characterizing the Risks that the Aging Forests Pose to an Overhead Distribution System**

*John Goodfellow*

8:40

### **GSV: Trees Have Hormones... And They Know How to Use Them**

*Joe Murray*

9:35

### **GSVI: Greening Our Neighborhoods**

*Jay Walljasper*

10:30-12:15 p.m.

### **Exhibit Area and the Tree House of Horrors**

11:00

Group 1 Lunch Break

11:20

Group 2 Lunch Break

11:45

Group 3 Lunch Break

12:15 p.m.

### **Concurrent Sessions Begin**

## KEY FOR CONCURRENT SESSIONS

-  1 hour and 50-minute session
-  only offered one time
-  Pre-registration required
- I Introductory Session
- T Technical Session
- A Advanced Technical
- C Community Forestry
- E ISA Exam Prep



## Concurrent Sessions

12:15-1:00

**15 Years of Root Research at the U,** *Gary Johnson*

T,E

**Are You Purchasing the Best Nursery Stock?** *Philip Ronald*

I,T,E

**Budget Slashed? Draft a Volunteer Work Force!** *Sue Erhardt*

C

**Common Tree and Shrub Insects,** *Jeff Hahn*

I,E

**Markets for Urban and Community Ash Trees in Minnesota,**

*Keith Jacobson, Lance Sorensen*

C,T

**Pruning for Structure, Not Just Fruit,** *Jeff Johnson*

I,T,E

**Sugar Maple Decline: Is This the End of Sugar Maples in Urban Landscapes?**

*Kevin Smith*

A,E

**What Every Arborist Should Know About Utility Arboriculture,** *Andy Olson*

T

1:15-2:00

**Developing Neighborhoods for Commerce, People, and Trees,** *Kit Richardson, David Frank*

C,T

**Diagnosing Tree Diseases,** *Joe O'Brien*

I,E

**Problems with Pines,** *Glen Stanosz*

A,E

**Recovering Communities After Catastrophic Losses,** *Terry Robinson*

C

**Redirects, Double-Crotching, and Repositioning,** *Pierce Wasmund, Taylor Hamel*

T,E

**Tree Diseases to Watch For,** *Tivon Feeley*

A,E

**Tree Root Ball Washing: A Better Way to Prepare Plants for the Landscape?** *Jim Flott*

T,E

2:00-2:45

### **Exhibits, Refreshments, and "Mini-Sessions" in the Exhibit Hall**

2:45-3:45

**The Case for Utility Vegetation Management: Research, Development, and Demonstration,**

*John Goodfellow*

T

**EAB: Now that It's Here, What Do We Do?** *Mark Abrahamson, Ken Holman*

T,C,E

**Gypsy Moth in Minnesota: Damage, Range, and Control Tactics,** *John Kyhl*

A,E

**Physics for Arborists,** *Sam Kezar*

♦,T,E

**Tree Biology,** *Doug Courneya*

I,E

### **1 hour 45-minute Session**

12:15-2:00

**Trees, Shrubs: Trees with Compound Leaves,** *Dave Hanson*

I,E

3:45

### **Adjourn**

## Presentation Descriptions

### General Sessions (in alphabetical order)

#### **Characterizing the Risks that the Aging Forests Pose to an Overhead Distribution System**

Recent storm events in many parts of the country, especially the eastern half, have caused severe damage to energy delivery systems and caused extensive interruptions to electric service. In many urban areas, the aging population of large and potentially over-mature trees may contribute to the damage experienced. Results from investigations in overhead distribution system damage from aging urban forests will be discussed. *John Goodfellow*

#### **Climate Change in Minnesota**

How will climate change affect Minnesota? How do scientists know what will change? Come hear Jeffrey Corney, associate director of the Cedar Creek Ecosystem Science Reserve, describe the changes Minnesota will experience and the studies which are being done to help create these future climate models. Cedar Creek Ecosystem Science Reserve is home to a rare meeting of three distinct ecosystems (prairie, deciduous forest, and boreal forest) making it an ideal location to observe how climate change will affect these different biomes. *Jeff Corney*

#### **Gardens of the World**

For many years, Peter Olin guided the development of Minnesota's most famous botanic garden, the Minnesota Landscape Arboretum. During the course of his leadership, Peter had the opportunity to visit other beautiful gardens around the world, selecting some of the best examples of garden design and management to implement at home. Get ready for 50 minutes of botanical eye candy. *Peter Olin*

#### **Great Moments in History and How Fungi Got Us There**

The University of Notre Dame Football team would not be a powerhouse among football if it were not for fungi, according to George Hudler, of Cornell University. George is not only an outstanding, popular speaker and professor of plant pathology, he is a powerful advocate of fungi - and if asked, will excitedly speak of the greatest events in the history of mankind. From Moses finding the Ten Commandments, to the Confederate states losing the Civil War, to Mark McGwire's record-breaking home run - all of these are the result of fungi! Welcome home one of Minnesota's native sons, and get excited about fungi. *George Hudler*

#### **Greening Our Neighborhoods**

Jay Walljasper, a resident of Minneapolis, has spent a professional lifetime examining neighborhoods of all sorts. Some of the neighborhoods are friendly, functional and full of enthusiasm and teamwork, more akin to villages within a larger city - and others are not. In this session, Jay will describe what constitutes a functional neighborhood, from the perspectives of its inhabitants, its infrastructure, and the role that the urban forest plays to pull everything together. *Jay Walljasper*

#### **Trees Have Hormones...and They Know How to Use Them**

When you leave this session, you will have a new appreciation for the long-term, internal effects that plants experience from seemingly noble maintenance practices such as pruning, fertilization and planting. This session will review the plant hormones that regulate plant growth, reproduction, and death, and more importantly, how we as tree care specialists either assist or hinder normal plant functions. To top it off, it will be an entertaining session, "punctuated with humor." *Joe Murray*

### Concurrent Sessions (in alphabetical order)

#### **Are you Purchasing the Best Nursery Stock?**

Learn what constitutes good trees from poor trees when purchasing from a grower. Most plants look decent from the ground up, but quality nursery stock is an easy thing to say - and a complicated thing to define. Philip joins us from Jeffries Nurseries in Manitoba, Canada, a major supplier of wholesale nursery stock for Western Canada and the United States, and a nursery with a long-standing reputation for growing the highest quality trees and shrubs. *Philip Ronald*

#### **Best New Trees and Shrubs for Minnesota Landscapes**

Just about every community and property-owner is asking the same question: what should we replace our ash trees with? This session features the best of the new introductions; some you may be familiar with, and others will be a real treat for you. Debbie is a popular speaker at urban forestry and landscape conferences, and brings with her decades of experience in plant materials - and her photographs are incredible. *Debbie Lonnee*

#### **Budget Slashed? Draft a Volunteer Work Force**

In these hard economic times as budgets are slashed or eliminated, help your tree program survive, even thrive. Learn how Casey Trees, a small, not-for-profit in the nation's capital, works with thousands of volunteers to fulfill its mission to restore, enhance, and protect the tree canopy of the District. *Sue Erhardt*

#### **The Case for Utility Vegetation Management: Research, Development, and Demonstration**

The Utility Vegetation Management (UVM) industry has a long history of innovation. A review of successful RD&D efforts sets the stage for this important discussion. Findings from industry benchmarking studies and a recent UAA survey of research, development, and demonstration efforts in the UVM industry will be presented, and the path for more RD&D efforts will be explored. *John Goodfellow*

#### **The Changing Landscape of Tree Inventories: GIS and Tree Inventories**

Are GPS and GIS right for your operation? What are they and how can they be used in the office and the field to manage your tree population? These questions and more will be discussed in this presentation on GPS/GIS applications for tree inventories.

#### **Common Tree and Shrub Insects**

We will learn about common tree and shrub insect problems, including sawflies, Japanese beetles, and borers with an emphasis on what was common in 2008. We will discuss how to identify these insects, give information on important biology, and look at the type of injury they cause. We will then discuss the non-chemical and pesticide options to manage them. *Jeff Hahn*

#### **Developing Neighborhoods for Commerce, People, and Trees**

If you are in the throes of redeveloping downtown areas and are balancing the demands for more parking, more visual access to businesses, more and healthier trees, more recreational spaces for people, restrictive guidelines, and declining budgets, you really need to attend this session. Both of these gentlemen have extensive histories of successfully working with urban areas, whether it's a large city like Minneapolis, or a small neighborhood or community. Learn to work successfully using guidelines to create livable commercial areas. Some good and not-so-good case studies will be discussed as examples of greening downtown districts. *Kit Richardson and David Frank*

#### **Diagnosing Tree Diseases**

Trees suffer from a number of conditions including environmental stress, insect infestation, poor cultural practices, and disease. Before management practices can begin, a proper diagnosis of the problem must be made. Come to learn how to diagnose tree diseases from signs and symptoms. Learn which symptoms can be shared among many problems, and which are diagnostic. Find out what factors should be taken into account when diagnosing a disease, what plant parts should be examined, what to look for, and when to send a sample to the clinic. *Joe O'Brien*

#### **EAB: Now that It's Here, What Do We Do?**

Despite all of the information that is available, answering questions from your clients or constituency isn't easy. What chemical options are best? When should the infested trees be removed? Where should the fallen ashes be stored, and for how long? Have any inventories been conducted? For our community? Are there recommendations for reforestation or preforestation? Ken and Mark will do their best to give you the most complete, unbiased, best-knowledge-to-date answers in this session. *Mark Abrahamson and Ken Holman*

## Concurrent Sessions (in alphabetical order)

### **Fifteen (15) Years of Root Research at the U (of Minnesota)**

The University of Minnesota is one of the leaders in root research as it impacts tree health, condition, and longevity. The research team that includes faculty and researchers from the Departments of Forest Resources and Horticultural Science as well as University of Minnesota Extension has conducted field research ranging from the long-term effects of growing and planting techniques to some pretty severe “root pruning” tactics. This session will focus on the results of several projects, and make recommendations for the growing, planting, and care of landscape trees. *Gary Johnson*

### **Gypsy Moth in Minnesota: Damage, Range, and Control Tactics**

There is probably no other entomologist in the Midwest who can present this session as well as John. He has worked extensively with Wisconsin for several years, slowing the spread of gypsy moth, and is now working with Minnesota’s front line of defense. What kind of damage does a gypsy moth infestation incur? Is it any worse than forest tent caterpillar? How far into Minnesota can we expect it to venture? Which trees are most at risk, and finally, what can be done to “control” the insect? *John Kyhl*

### **Markets for Urban and Community Ash Trees in Minnesota**

Use of market forces to facilitate utilization can be an important strategy for reducing the cost and increasing the effectiveness of urban tree management and sanitation work, necessitated by EAB’s arrival. The presentation will give an overview of current wood product markets for urban and community ash resources, a “crystal ball” of future markets, as well as an overview of marketing resources for resource managers and homeowners. *Keith Jacobson and Lance Sorensen*

### **Nature’s Graffiti: Understanding Invasiveness**

This session is an excellent primer on invasive species, the different methods they use to dominate and affect native trees and shrubs, the genetic armor that invasive plants wear, and a realistic perspective on the prospect of controlling them. If Sun Tzu was right, then “Know thy enemy” should be your mantra and your first goal should be to attend this informative and entertaining session. *Joe Murray*

### **Physics for Arborists**

*(Note: Enrollment limited to 20 people each session; preregister at no additional cost.)*

This session focuses on working with heavy branches, large trees in residential spaces, and using some basic physics to avoid damaging property or arborists. **This session will begin in the classroom but quickly move outside. Dress appropriately. If there is snow on the ground or it’s windy, wear boots and warm clothing.**

Sam is an accomplished arborist, trainer, and teacher - and even if you have been working around trees for a while, you will pick up some new techniques. *Sam Kezar*

### **Problems with Pines**

If you have not been to a Glen Stanosz session before, you are in for a treat. He’s a plant pathologist with a sense of humor and a gift for teaching. Pines are a staple in Minnesota landscapes, and they have a host of disease issues. Glen is a noted plant pathologist with a lot of experience investigating pine diseases, as well as other problems with conifers. If you are a commercial or consulting arborist, this session is a “must see” for you. *Glen Stanosz*

### **Pruning for Structure, Not Just Fruit**

Fruit trees are often a frustration for homeowners, as well as the arborists who are asked to “fix them up” 15 years after they have been planted. Jeff will review the basics of not only pruning fruit trees (primarily apples) that yield a bounty of fruit, but of developing trees that are structurally sound and long-lasting additions to the edible, urban forest. *Jeff Johnson*

### **Recovering Communities after Catastrophic Losses**

Hurricanes, tornados, floods, and fires don’t just kill trees and wipe out urban forests - they can damage or destroy a community’s social fabric and spirit. This session will feature some lessons learned about community recovery, including recovery of the urban forest, and the role that trees play in recovery of the community. Terry has been a volunteer, helping communities such as those affected by hurricane Katrina in Louisiana, to those as close as Iowa City after the recent catastrophic flood. He’s watched, he’s helped, he’s learned. *Terry Robinson*

## Concurrent Sessions (in alphabetical order)

### **Redirects, Double-Crotching, and Repositioning**

Pruning mature trees is not about having the strength to bench-press 450 pounds or hauling up the biggest chainsaw - it’s about being efficient and safe. This session will focus on both climber safety in the trees, as well as developing the efficiency to increase your production and profit. If you have seen Pierce and Taylor climb and work a tree before, you know that two of the finest are teaching this session. *Pierce Wasmund and Taylor Hamel*

### **Sugar Maple Decline: Is This the End of Sugar Maples in Urban Landscapes?**

With all the attention surrounding green ash lately, the decline in the health and condition of sugar maples in our public landscapes has gone almost unnoticed. How could a Minnesota native be declining so steadily? Are forests the only landscapes worthy of sugar maples? Kevin Smith, noted plant pathologist from the US Forest Service and perennial favorite of the STSC, will review what it takes to grow healthy maples, what the urban landscapes don’t have (or have too much of!), and speculate on the future of one of Minnesota’s most beloved trees. *Kevin Smith*

### **Tree Biology**

This session will cover tree biology from the rhizosphere to the apical buds. An understanding of tree biology is important for all aspects of tree care from planting through removal. All of our tree care practices should be based on a fundamental understanding of tree biology and physiology. This session will illustrate tree biology and relate it to your everyday job of caring for trees. *Doug Courneya*

### **Tree Diseases to Watch For**

Get caught up on some new and emerging problems that are likely to challenge your diagnostic skills in the future. Thousand cankers of walnut, Tubackia leaf spot on oak, and bacterial leaf scorch will be featured. You will soon find that Tivon is one of the more accomplished forest health specialists and teachers, and you’ll have a hard time leaving this classroom. *Tivon Feeley*

### **Tree Root Ball Washing: A Better Way to Prepare Plants for the Landscape?**

Each year, we offer at least one controversial session - and this is it. Are you sick and tired of purchasing plants that have dysfunctional root systems that shorten their lives in the landscape, or are you satisfied with bur oaks that live for 25-30 years? Jim is not satisfied, and he’s doing something about it. Jim will “demonstrate” one of the more controversial pre-planting treatments for balled and burlapped as well as containerized trees. And despite the public outcries of “that won’t work!!” - It works. *Jim Flott*

### **Trees, Shrubs I.D.: Trees with Compound Leaves**

Have you ever mistaken a Kentucky Coffeetree with an Amur Corktree? Or a butternut with a pignut? Many of our native and introduced landscape trees have compound leaves - ash, for one. Dave will guide you through the confusion, and point you to the right leaf scars, bundle scars, and all of the features that you will need to know to identify this group of trees. *Dave Hanson*

### **What Every Arborist Should Know About Utility Arboriculture**

Admit it... We all complain about the way trees are pruned around utility lines, but no one has a perfect resolution. This session will address some of the more common complaints and misperceptions about clearing trees away from energized lines: ROW clearance distances, service interruptions, pruning cycles. Andy will also discuss a recent study conducted by East Central Energy on the return on investments from removing mature trees versus continued pruning. Finally, the relative value of buried versus above-ground utilities will be discussed. *Andy Olson*

## Map and Driving Directions to Bethel University

**From North:** Take I-35W south past I-694 to County Road E2 exit, turn left (east). Proceed to Old Snelling Avenue, turn right (south), and take first left into campus.

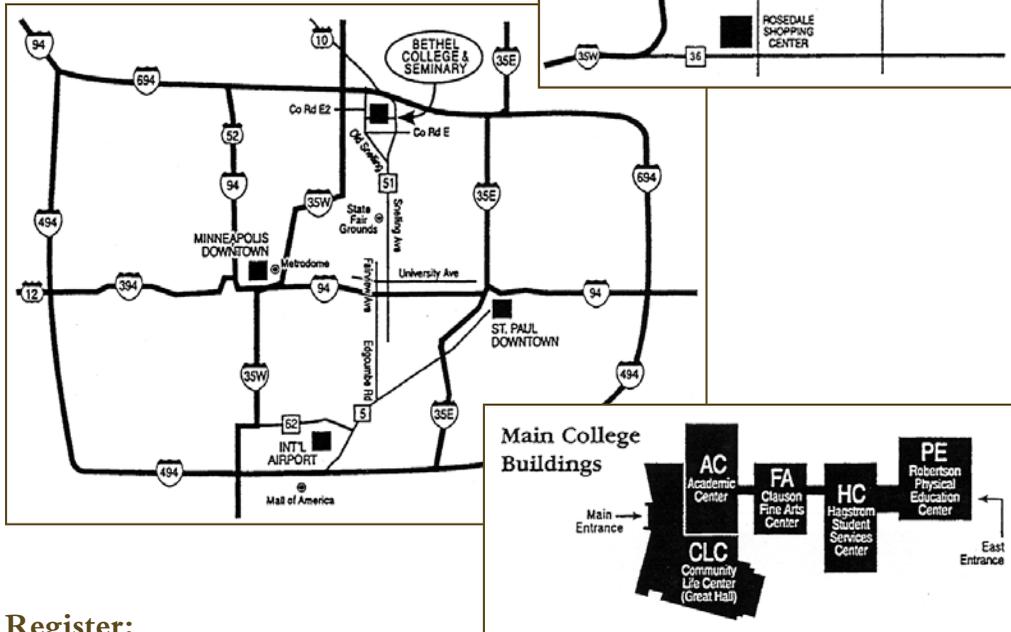
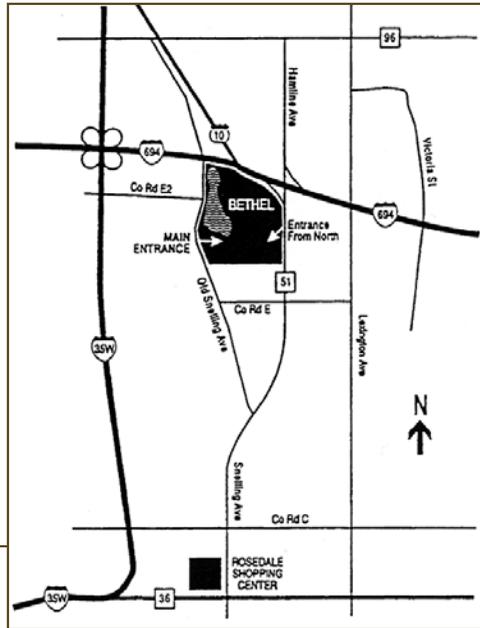
**From West:** From I-694, turn south onto I-35W to the County Road E2 exit. Go east to Old Snelling Avenue, turn right, and take first left into campus.

**From East:** From I-694 turn south onto I-35W to the County Road E2 exit. Go east to Old Snelling Avenue, turn right, and take first left into campus.

**From South:** Take I-35W north past I-694 to County Road E2 exit, turn right (east). Proceed to Old Snelling Avenue, turn right (south), and take first left into campus.

**From Downtown St. Paul:** Take I-35E north to I-694 west (see from East).

**From Downtown Minneapolis:** Take I-35W north to County Road E2 exit (see From South).



### Register:

1. Online at [www.cce.umn.edu/shadetree](http://www.cce.umn.edu/shadetree)
2. Fax your registration along with credit card number or purchase order number to 612-624-5359.
3. Mail registration form to:  
**University of Minnesota, 20 Coffey Hall, 1420 Eckles Avenue, Saint Paul, MN 55108-6069**

### Please Note:

1. Please print or type when you fill in the registration form.
2. Use separate forms for each individual. Registration form may be photocopied.
3. We may be working outdoors so dress appropriately.
4. Cell phone etiquette – please remember to turn off your cell phones during all course sessions.  
Cell phone ringing and talking is disruptive to other participants.

### Cancellations

Cancellations received up to five working days before the course are refundable, minus a \$30 cancellation fee. After that, cancellations are subject to the entire registration fee. Substituting another person for your registration can be made at any time provided we have a completed registration form for that person.

## Registration Form

NR 001  
183826

### Shade Tree Short Course – March 16-17, 2010

Last Name	First Name	M.I.
Company/Institution		
Title/Position		
E-mail		
Business Address		
City	State	Zip
Daytime Telephone	Fax Number	

### Occupation (please check one):

Corporate  Public Employee  Utility  Student  Other

### Registration Fees

- \$165 postmarked by March 2
- \$180 postmarked after March 2
- \$40 **Student Rate** (see requirements on page 4)
- \$85 **Tree Board/Park Board Member Rate** (see requirements on page 4)

### Please fill out your attendance plans:

- I will attend the MSA picnic, Tuesday, March 16.
  - I will attend Physics for Arborists, Tuesday, March 16.
  - I will attend Physics for Arborists, Wednesday, March 17.
- (Each session limited to 20 ppl.)

### Payment Method

- Check or purchase order made payable to the University of Minnesota
- Bill my U of M EFS # \_\_\_\_\_
- I authorize payment on my credit card:  
 VISA  MasterCard  American Express  Discover/Novus

Card Number	Expiration Date
Total Charge	Cardholder Name (please print)
Signature	

The University of Minnesota shall provide equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression.

©2010 Regents of the University of Minnesota. All rights reserved.