

EXPO to be Show of Shows in 2006 MARK YOUR CALENDARS FOR JANUARY 10th & 11th

By Tom Schwab, O.J. Noer Turfgrass Research and Education Facility, University of Wisconsin-Madison

This year's Wisconsin Turfgrass and Greenscape EXPO is nothing short of spectacular. The list of speakers will delve into a variety of important subjects that are affecting every turf manager, if not right now then in the near future. The conference will be held at the Madison Marriott - West on Tuesday and Wednesday, January 10th and 11th.

Learn the very real threat of how activists are pushing to ban Kentucky bluegrass, creeping bentgrass, and other turfgrasses by claiming they are invasive species. Find out how the revitalized NR-151 technical standards will affect everyone who manages turfgrass areas greater than 5 acres. Join in the roundtable discussion with four prominent Wisconsin golf course superintendents as they reveal their putting green management strategies during the

brutal 2005 golf season.

Sports turf issues will be explored by several of the state's top field managers from the UW-Madison, UW-Stevens Point, Lambeau Field, and Miller Park. The variety of turf management subjects will cross all turf professions including lawn care, landscaping, sod production, golf, and sports turf. Researchers from Rhode Island, Minnesota, and Wisconsin along with other local and national experts will relate their latest findings in the area of turfgrass.

Other important subjects will likewise be covered. For instance, learn how immigration laws affect our employee pools, hear solutions to several pest problems that affect trees and other ornamentals in our landscapes, learn to use creative volunteer and internship programs to stretch that shoestring budget, and discover simple

solutions to irrigation problems.

Additionally there is the ever popular trade show segment of EXPO. You can compare features, prices, and options on every product, service, and piece of equipment used in the turf industry, all under one roof. The trade show will only occur during the first day of EXPO, so you must attend on Tuesday if you want to see products. An added bonus to the trade show this year is a vendor sponsored raffle for a \$1,000 travel voucher and tickets for several of our beloved state sporting events. The only catch is you must be present to win.

Another feature of the trade show will be an optional workshop for equipment mechanics. This workshop will focus completely on reel mower maintenance including sharpening, adjusting, rebuilding, and problem diagnosis. This workshop has an additional registration

The Wisconsin Turfgrass News

is the official publication of the Wisconsin Turfgrass Association, edited by Tom Schwab, O.J. Noer Turfgrass Research and Educational Facility.



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Rod Johnson
Sheboygan CC



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Dr. Jason Kruse
UW - Madison Extension



Dr. Wayne Kussow
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Dr. Nathaniel Mitkovski
University of Rhode Island



Pat Sisk
Milwaukee CC



Dr. Glen Stanosz
UW - Madison



Dr. John Stier
UW - Madison



Raechal Volkening
Milwaukee Brewers



Dr. Eric Watkins
University of Minnesota



Dr. Chris Williamson
UW - Madison

fee but it may be just what is needed for your crew. Speaking of your crew, be sure to bring them along. Additional members from the same organization register for a reduced cost.

The EXPO brochure and

registration form was mailed on December 1st. Another brochure is included in the newsletter for your convenience. Contact Audra at the WTA Office (ajander2@wisc.edu or 608-845-6536) if you have any fur-

ther questions. Time is running out for early registration, but you may also register at the door. The program is excellent this year and we hope you can be there. 🍀

MEET THE UW-MADISON TURFGRASS RESEARCHER

Understanding Host Resistance of Dollar Spot and Leaf Spot

By Dr. Young-Ki Jo, Department of Plant Pathology, University of Wisconsin-Madison

As a new post-doctoral researcher to University of Wisconsin-Madison, I joined Dr. Geunhwa Jung's turfgrass pathology lab in the Department of Plant Pathology in July 2005. Prior to UW-Madison, I spent four years in the doctoral program at The Ohio State University, where I studied turfgrass disease management for dollar spot caused by *Sclerotinia homoeocarpa* and gray leaf spot caused by *Pyricularia grisea*. My dissertation investigated the distribution of fungicide sensitivity in dollar spot isolates collected from golf courses throughout Ohio and genes associated with plant defense mechanisms against gray leaf spot. I found that dollar spot isolates insensitive to thiophanate-methyl and propiconazole are prevalent on golf courses in Ohio. Through the molecular genetic study on turfgrass and gray leaf spot interaction, I determined thirty genes that are associated with defense mechanisms of turfgrass against gray leaf spot infection.

Because of my interest in university extension outreach to the turfgrass industry, I worked at The C. Wayne Ellett Plant and Pest Diagnostic Clinic and diagnosed turf samples while at The Ohio State. I also took a role of providing information about disease management to turfgrass managers through field days and fact sheets.

Before going to The Ohio State, I received an MS in entomology from Michigan State University. I specialized in the ecology of economically important turfgrass insect pests and beneficial predatory insects on golf courses. The primary objective of my research was to investigate contributing effects of soil moisture, mowing height and predation by natural enemies on the survival and distribution of black turfgrass ateniens (*Ataenius spretulus*) in golf course turf.

My current research at UW-Madison is focusing on two turfgrass fungal diseases: dollar spot and leaf spot caused by *Bipolaris sorokiniana*. Dr. Jung has been leading the

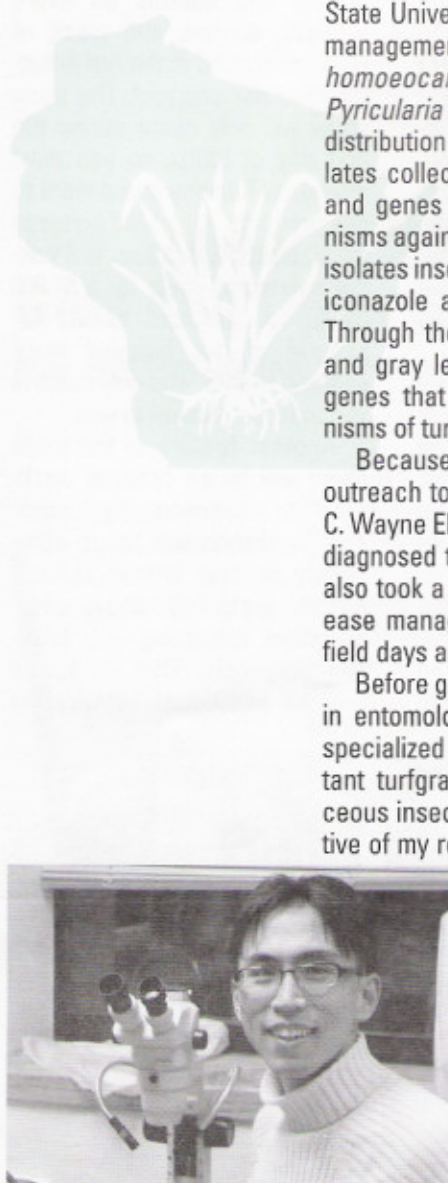
research about turfgrass host resistance in the nation and he identified chromosomal regions of turfgrass associated with resistance to fungal diseases. A recent example is he has found several dollar spot resistance genes in creeping bentgrass.

I will conduct the follow-up field experiment to confirm whether these resistance genes in creeping bentgrass are effective under different cultural practices (fairways and putting greens) and against different dollar spot isolates (wild type sensitive isolates, thiophanate-methyl insensitive isolates, or propiconazole insensitive isolates). In addition, I am interested in how dollar spot populations on putting greens and fairways are changing in the response to fungicide applications and cultural practices because this information enables us to understand mechanisms of how dollar spot fungus develops fungicide insensitivity in the field.

Hundreds of dollar spot isolates will be systematically sampled from research plots at the O.J. Noer Turfgrass Research Facility throughout the season. Fungal population dynamics of those isolates will then be investigated regarding fungicide sensitivities and genetic diversity of dollar spot.

The other research is focused on the host resistance of ryegrass to leaf spot. While I was assisting disease rating of crown rust (*Puccinia coronata*) on the ryegrass population in the field during this summer, I observed the phenotypic variation of leaf spot resistance in the same ryegrass population and could detect some potential chromosomal regions associated with leaf spot resistance. Currently, the artificial inoculation experiment at the greenhouse is in progress to confirm the effectiveness of leaf spot resistance genes detected in the field study.

Having spent most of my education at Big Ten Universities, I am used to the unique geography of the north central region for growing cool season turfgrasses. I have also developed a fever for college sports, especially football. I am glad to continue my research in the land of Bucky Badger and the Big Ten traditions. 🍀



President's Message

I Wish You the Best for 2005

By Rich Riggs, WTA President

By now we have all winterized our golf courses, sod farms, and athletic fields. I hope you all had a great year. It was certainly a year with challenges and opportunity. Depending on where you were in the state it was either very wet or very dry. Again, without the weather challenges our jobs would be much easier but, then anyone could do them.

Wisconsin has some of the very best golf course superintendents and field managers anywhere. They are among the best trained and most dedicated professionals that I have ever seen. They are enthusiastic to put every effort into making sure there is no aspect of their job left undone. No obstacle is too big to overcome for Wisconsin turf managers. As I travel across the state I am very impressed and proud of what is accomplished.

You may hear about some of those accomplish-

ments at the Turfgrass and Greenscape EXPO on January 10th and 11th. This is a great place to continue expanding your knowledge and to catch up with old friends.

I would also like to mention that EXPO is coordinated by several dedicated board members and volunteers. This board of directors could use some new participants not just for EXPO, but in several other areas. If you are interested in serving on the WTA board of directors or on a committee, please contact a current board member. It's your organization, and I have found that the satisfaction I receive by volunteering some of my time for the profession is greatly satisfying.

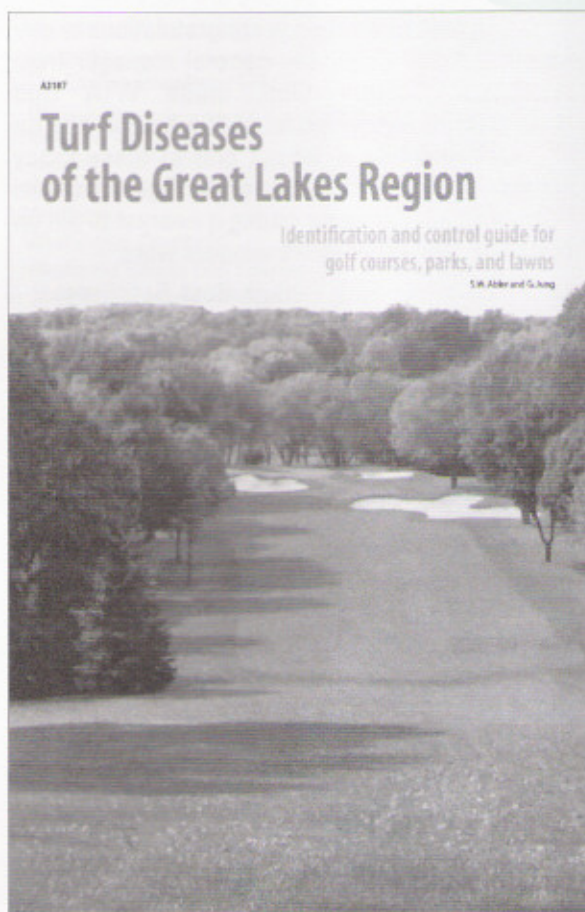
I look forward to visiting with many of you at EXPO and wish you all a happy holiday season. 🍀



Turfgrass Extension Publication Available Soon!!

By Paul Koch & Dr. Geunhwa Jung, Turfgrass Diagnostic Lab & Department of Plant Pathology
University of Wisconsin-Madison

The wait is almost over! The Turfgrass Diagnostic Lab and UW Extension are pleased to announce the upcoming release of the new extension publication, *Great Lakes Turf Diseases and Their Control*. The publication was written by Steve Abler and Dr. Geunhwa Jung and is a comprehensive update of the 1987 extension publication, *Wisconsin Turf Diseases and Their Control*, written by Dr. Gayle Worf. Like the previous edition, the new publication will include diagnostic keys, disease descriptions, control recommendations, and control products for the most common diseases found in Wisconsin landscapes and golf courses. In addition to these helpful references, *Great Lakes Turf Diseases and Their Control* has easy to use keys, expanded sections describing cultural control measures, and a table displaying what diseases are most active during each month of the year. What sets this publication apart from other references are the color photographs of each disease. The pictures allow the reader to confirm their identification using both a written description and photographs of real life symptoms. *Great Lakes Turf Diseases and Their Control* is due out soon and the easy to use format is ideal for homeowners, lawn and landscape workers, and golf course superintendents. The price of the publication is \$5. For information about ordering this publication you may contact UW Extension Publications at 877-947-7827 or online at <http://cecommerce.uwex.edu>. 🍀



Luck of the Irish

By Tom Schwab, O.J. Noer Turfgrass Research and Education Facility, University of Wisconsin-Madison

Every one of the 144 attendees in the WTA Golf 'Fundraiser for the Fellowship' were overjoyed to play one of the most unique golfing venues in the country for this year's event. The Irish Course at Whistling Straits played host to the annual fundraiser for the second time in five years. This is the sister course to the Straits Course which hosted last year's successful PGA Championship, and is every bit as spectacular. Every shot hit throughout the 18 holes presented breathtaking beauty and an exhilarating challenge. Our hosts Mike Lee and Grant Davey deserve many thanks for having the course in great shape and for showing us such a fun day. We certainly feel lucky, even if we're not Irish.

The weather played to our favor with sunny skies, mid sixties temps, and moderate breeze. Lots of camaraderie was shared among the sold-out crowd from the time they arrived to hit practice balls to the post-game handing out of golf and door prizes. As if golf wasn't enough, it has become tradition at the WTA golf outing, that every attendee is awarded a door prize, some worth more than the price of admission. Thus, thanks also go to the generous door prize donators that make the day what it is. The list of donors and their prizes is listed on page 5. Many gifts were given anonymously, so some donors are not listed.

A side note to mention is congratulations to one attendee. Joe Coan, the general manager from Westmoor Country Club, made WTA Golf Fundraiser history when he shot a hole-in-one on #3. Unfortunately, it wasn't one of those fancy schmancy win-a-car hole-in-ones. But he did take home a smaller prize for hitting it nearest to pin on that hole. The other event winners were:

- 1st Place in the Four Person Best Ball Contest - Team of Bruce Schweiger, Scott Thompson, Scott Anthes, and Dave Boyce
- #1, Closest Drive to Center of Fairway - Jim Thomas
- #2, Shortest Drive - Tom Grimm
- #6, Nearest to Pin - Tom Kestly
- #8, Most Putts - Jesse Conto
- #10, Longest Drive - Bob Lohmann
- #11, Nearest to Pin - Brad Legnaioli
- #13, Nearest to Pin - Doug Stevens
- #14, Longest Drive - Mike Lee
- #18, Longest Putt - Dale Mondloch

The golf fundraiser was also made successful by the generous tee sign sponsors, who are likewise listed on the next page. The entire day was a success. Attendees had a memorable golf round that they'll cherish for a long time. The WTA raised lots of important funds to further their turf research objectives through their fellowship programs. Everyone went home with a nice door prize. And Joe



Our hosts Mike Lee and Grant Davey gave attendees a golf experience of a lifetime.



Paul Koch, like the rest of us, found himself having to make many creative shots.



Few golf outings will offer as generous door prize table as the WTA does — including numerous certificates for rounds of golf.



Coan will remember his shot on #3. Luck was in the air at the Irish Course on October 11th, 2005.

2005 WTA Golf Fundraiser Tee Sign Sponsors:

- Agrotain International
- Aquatrols
- Arysta LifeScience
- Bayer
- Cleary Chemical
- Contree Sprayer & Equipment Company
- DHD Tree Products
- Dr. Geunhwa Jung
- Dr. John Stier
- Dr. Wayne Kussow
- Hunter Golf
- Maple Bluff Country Club
- Pendelton Turf Supply
- ProSource One
- Reinders
- Reisterer & Schnell
- Sue Kershasky
- Tom Schwab
- Verdicon
- Wausau Country Club
- Westmoor Country Club



The day was full of smiles and shared friendship.

2005 WTA Golf Fundraiser Door Prize Donors:

(Partial List)

Al Nees	Print of Crooked Stick Country Club and other items
Anderson's (Dave Louttit)	Prizes
Aquamaster	Pond supplies
Aquatrols	Dozen Golf Balls
BASF	Golf Bags, few gift cards from Home Depot
Bayer	Putter, Driver, Camping Gear, 4 dozen Golf Balls, Kid's Driver, Volleyball, Head Cover
Bridges	Foursome of golf
Bruce Co	Baby Q Gas Grill
Cleary's (Tim Keating)	2 x \$75.00 Gander Mountain Gift Cards
Crystal Springs CC	2 x twosomes of golf
DHD	Golf Bag
Dow	Binoculars, Wind Breaker, Lounge Chairs, Golf Balls
Edgewood GC	Prizes
Evansville CC	Prizes
Evergreen CC	Twosome of golf with cart
Glen Erin GC	Foursome of golf with cart
Green Image	String Trimmer
Horst Distributing	Various of Logo Clothing
Horst	Prizes
John Deere Credit	4 x Golf Shirts, Bag Watch, Dozen Balls
John Stier	Logo Tee Shirt
Lawsonia	Twosome of golf with cart
Lohmann Golf Creations	Many Coolers, Windshirts, and Jackets
Maple Bluff CC	4 x Golf Shirts
Northern Bay	Foursome of golf with cart
Old Hickory	Prizes
Oneida G&CC	2 dozen balls, sweatshirt, cap
Pendelton Turf Supply	2 gift certificates, other prizes
Prosource One	8 shirts, 2 dozen balls, 2 stuffed animals
Reinders	\$350 worth of electronics
Roy Zehren	Prizes
SAS Management LLC	Several electronic items
Schwab	Golf Balls, Kids Toys
Schweiger	Bike
Stoughton CC	Foursome of golf
Syngenta	Driver, Putter, Windbreaker, 2 dozen balls
The Club at Strawberry Creek	Foursome of golf with cart
TIP	Prizes
Trappers Turn	Foursome of golf with cart
Two Oaks North GC	Foursome of golf
University Ridge	Logo sweatshirt
Verdicon	Ping Putter, Badger Windshirt
Washington County GC	2 x twosomes of golf
Waukesha County Golf Courses	One 18 hole round of golf
Waupaca Sand and Solutions	DVD Player
Wayne Horman	4 x \$25 Applebees Gift Certificates
Whistling Straits	2 PGA Posters, Putter, 20 PGA Caps
Windy Acres	Case of Berghoff Oktoberfest



CALENDAR OF EVENTS

Jan 10,11	Wisconsin Turfgrass & Greenscape EXPO	Marriott Madison West, Middleton
Jan 11	WNA Winter Workshop	Country Springs Hotel, Waukesha
Jan 18-22	STMA Annual Conference and Exhibition	Orlando, Florida
Jan 18-20	Mid-Am Horticultural Trade Show	Chicago, Illinois
Jan 19	WGIF Annual Convention & Banquet	Chicago, Illinois
Jan 25,26	Garden Center Symposium	Country Springs Hotel, Pewaukee
Feb 9-11	Golf Industry Show	Atlanta, Georgia
Feb 20-24	School of Turfgrass Management	St. Paul, Minnesota
Mar 1	NGLGCSA Annual Turf Symposium	Midway, Wausau
March 6	WGCSA Spring Business Meeting	Ramada Hotel, Fond du Lac
Mar 7	Spring Valley Turf Fair	Country Springs Hotel, Pewaukee
Mar 7	Reinders Turf Equipment Service School	Olympia Resort, Oconomowoc
Mar 7-10	Reinders Irrigation School/ NSN Training	Olympia Resort, Oconomowoc
March 25	WLCA Landscape Design Awards Program	Mitchell Park, Milwaukee
April 24	WGCSA Monthly Meeting	Geneva National, Lake Geneva
May 31	WGCSA Monthly Meeting	Hawks View GC, Lake Geneva
June 19	WGCSA Monthly Meeting	Mee-Kwon Park GC, Mequon
July 17-20	TPI Summer Convention and Field Day	Memphis, Tennessee
July 18	WGCSA Monthly Meeting	Lake Arrowhead GC, Nekoosa
July 25	Wisconsin Turfgrass Summer Field Day	O.J. Noer Facility, Verona
Sept 11	WGCSA Monthly Meeting	Ozaukee CC, Mequon
Sept 25	Wee One Foundation Fundraiser	Pine Hills CC, Sheboygan

WTA Members — If you have an important date you'd like to share with other members, call 608-845-6895, fax 608-845-8162, or email tgschwab@wisc.edu to include it in the next calendar.

Contact Telephone Numbers

GIS	Golf Industry Show (Formerly GCSAA Golf Conference).....	800-472-7878
Mid-Am	Mid-America Horticultural Trade Show	www.midam.org
NGLGCSA	Northern Great Lakes Golf Course Superintendents Assoc.	630-443-1008
STMA	Sports Turf Managers Association.....	800-323-3875
Reinders	Reinders Turf Equipment Service School	800-785-3307 ext 220
Reinders	Reinders Irrigation School/ NSN Training	800-785-3306 ext 245
Spring Valley	Spring Valley Turf Fair	800-635-2123
TPI	Turf Producers International Field Day	800-405-8873
Wee One	Wee One Foundation Fundraiser	920-458-6048
WGCSA	Wisconsin Golf Course Superintendents Association	414-786-4303
WGIF	Wisconsin Green Industry Federation Convention.....	414-529-4705
WNA	WNA Winter Workshop	414-529-4705
WSTMA	Wisconsin Sports Turf Manager Association	608-845-6895
WTA	Wisconsin Turfgrass Association	608-845-6536

Watch Out For Yet Another Potentially Destructive Insect Pest!

By Dr. Chris Williamson, Department of Entomology, University of Wisconsin-Madison

Sometimes it seems as if every time we turn around, yet another insect pest is discovered. The emerald ash borer, *Agrilus planipennis* Fairmaire, is no exception! In May and June of 2002, adults of the emerald ash borer (EAB) were collected from ash (*Fraxinus*) trees in the Detroit area of southeastern Michigan. This finding was quickly followed by the discovery of EAB in neighboring Ontario, Canada. It is suspected that the EAB entered into the United States and Canada via wood pallets from Asia. As a result, we are again faced with the challenge of managing yet another potentially destructive insect pest.

Origin and Native Range

The EAB is an exotic forest pest that is native to China, Japan, Korea, Mongolia, Russia, and Taiwan.

Identification

EAB is a Coleopteran (i.e., beetle) from the Buprestidae family (i.e., same as bronze birch borer). The adults are slender, elongate beetles approximately 1/4 – 9/16 inch long. They are metallic, emerald-green in color (Figure 1). Larvae are white, flat, slender, and have a pair of brown pincher-like appendages on the last abdominal segment. Fully-grown larvae reach approximately 1 to 1-1/4 inches in length. Compared to the thorax and abdomen, the head is relatively small, and retracted inside the thorax (Figure 2).



Figure 1. EAB Adult

Hosts

It is understood that the only host of EAB is ash (*Fraxinus*). In Michigan and Ontario, EAB has only been discovered in ash trees including *F. americana*, *F. nigra*, and *F. pennsylvanica*.

Biology

Unfortunately, the biology (i.e., life cycle, behavior, habits, etc.) of this important insect pest is vague at best. Based on the nominal information that is available, EAB typically completes one generation per year in northeastern China, however, some individuals may require two years to complete development. Adult EAB activity has been reported from mid-May through July. The adults appear to lay their eggs on the bark surface, inside bark cracks and crevices, typically from early-June through late-July. EAB larvae actively feed in the cambial region of the trunk from mid-June through mid-October. Thereafter, they overwinter as fully developed larvae in pupal cells constructed in the outer sapwood or in the bark. The following spring, late-April and May, the larvae pupate within the tree, and adults begin emerging approximately two weeks later. In climates where the larvae do not fully mature by fall, they will overwinter in the cambial region and initiate feeding again in April, completing their life-cycle later in the summer.



Figure 2. EAB Larva

Damage Patterns and Symptoms

It appears that the EAB does not discriminate between "healthy" and "unhealthy" trees, nor does it discriminate against tree size. In China, EAB most often attacks ash trees that are growing in the open or along the forest edge however entire tree stands can be killed during outbreaks. EAB appears to initiate attack along the upper trunk and lower portions of main branches, with succeeding years of attack being concentrated along the lower trunk. Generally, tree death typically occurs in 3 years however trees can die within 1-2 years when EAB populations are at outbreak levels. In Michigan and Ontario, EAB has reportedly infested apparently "healthy" ash trees ranging in size from 1 1/2 inches - 3 feet in diameter. Like most boring insects, EAB infestations are difficult to diagnose the first year, since eggs are laid deep inside bark cracks and larval feeding occurs under the bark. It is not until the following year that D-shaped exit holes appear, providing the first positive evidence of an EAB infestation (Figure 3).

Typical damage symptoms occur over a three-year period.



Figure 3. D-shaped adult exit

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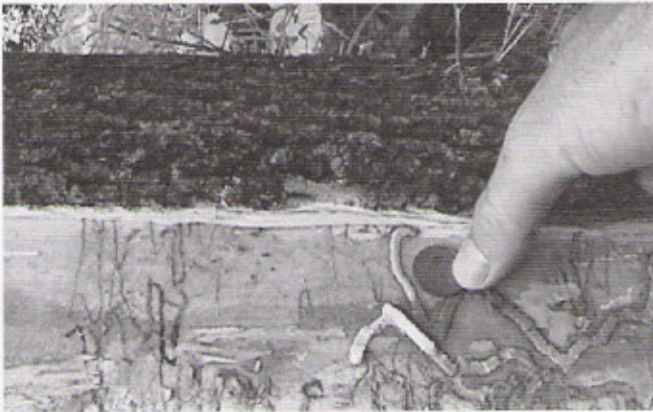


Figure 5. S-shaped larval feeding gallery

Year 1 shows a little crown dieback. Year 2 includes less development of foliage and crowns appear thinner (Figure 4), 2) the sapwood forms callus tissue around the larval galleries from the first year, which can result in longitudinal bark splits 2 – 4 inches in length, and 3) "sprout" development along the main trunk and on some branches. When EAB larval populations

are high, branches typically turn brown prematurely in late summer and characteristic S-shaped larval galleries (Figure 5) can be seen through cracks in the bark. These galleries are most common along the upper trunk in the first year of attack, however they can be found throughout the trunk in succeeding years. In Year 3, many branches are dead, little foliage is present, bark splits are common, and exit holes are present throughout the trunk.

Action

Because an outbreak population of EAB is less than 200 miles from Wisconsin, ash trees are commonly grown here, and numerous imported products are shipped into Wisconsin on wood pallets, it is essential that we be on the lookout for this important insect pest. Should you suspect an EAB infestation or discover



Figure 4. EAB damage

EAB specimen (adult or larva), be sure to contact the USDA-APHIS regional office immediately (in Wisconsin 608-231-9545).

All photos are courtesy of Michigan State University (Drs. McCullough and Roberts) 🍏

The School of Turfgrass Management Gets You Up to Speed

By Dr. John Stier, Department of Horticulture, University of Wisconsin-Madison



The annual School of Turfgrass Management will be held on the Saint Paul Campus of the University of Minnesota, from February 20 to 24th, 2006. This weeklong course annually alternates between the University of Minnesota and University of Wisconsin-Madison. It provides 40+ hours of practical training in the biology, ecology, and cultural management of turfgrass for all persons associated with the turf industry.

Persons new to the turf industry and those who want a refresher or additional training in turf will benefit from the class. Typical attendees hold positions at golf courses, lawn care firms, parks, athletic fields, schools, fertilizer/chemical/seed distributors, with an occasional golf course owner or other field (e.g.,

environmental consultants, equipment engineers, or landscape architects). The attendees' academic backgrounds range from high school diplomas to the occasional M.S. degree.

Topics for the school include turf establishment, laboratories for grass, weed, insect and disease identification, fertilizers and soils, irrigation, pesticide application and calibration training, law and regulations, and responding to environmental/pesticide concerns. A range of instructors, each specializing in a different topic, keeps the class interesting, fresh, and informative.

Class begins at 8:00 am on Monday and continues into the early evenings through Wednesday. Class continues on Thursday but a banquet and

"graduation" ceremony is held on Thursday evening rather than a lab. The class wraps up Friday at noon.

Each registrant receives a turfgrass management manual designed for future reference for all things turf. The class costs \$675 and is a value for those who want or need a crash-course in turf management or simply want to refresh their turf knowledge.

Enrollment is limited to the first 30 persons. For more information and a brochure, please contact Dr. Brian Horgan, from the University of Minnesota Department of Horticultural Sciences, at 612-624-0782 or bphorgan@umn.edu. Enrollment deadline is February 3, 2006. 🍏