



Wisconsin Urban & Community Forests

A Quarterly Newsletter of the Wisconsin Department of Natural Resources, Forestry Division

Preparing for Emerald Ash Borer

by Laura Wyatt
DNR Urban Forestry Communications Specialist

(This article is excerpted from information developed by the Wisconsin DNR, Wisconsin Department of Agriculture, Trade and Consumer Protection, and the emerald ash borer multistate Web site.)

It has been five years since emerald ash borer was first detected in southeast Michigan. Since its discovery, EAB has killed more than 20 million ash trees in Michigan, Ohio and Indiana and cost municipalities, property owners, nursery operators and the forest products industry tens of millions of dollars. In June EAB was found in Kane County, Illinois, approximately 40 miles southeast of Beloit, Wisconsin. A second Illinois infestation was identified in Wilmette, just north of Chicago, in northern Cook County.

While some feel it is just a matter of time before EAB is discovered in Wisconsin, others feel the insect is already present but hasn't been detected. Regardless of when and where EAB is eventually found in Wisconsin, nearly all believe its appearance in Wisconsin is inevitable.

Although the future of ash trees seems dire, a concerted effort is being orchestrated by state and federal officials. **Research** is underway to investigate chemical and biological control methods, plant resistance, pest detection and containment. **Eradication** efforts have taken place to prevent small infestations from becoming large ones. **Quarantines** are in place to prevent infested firewood, logs or nursery trees from being transported and starting new infestations.



The adult emerald ash borer is a bright metallic-green beetle just under 1/2 inch (10–12 mm) long.

What should you be doing?

➔Begin making public officials and the community aware of the impending EAB threat to local ash trees. As the situation evolves and as new information becomes available be sure to keep these audiences informed.

➔Learn identification characteristics of ash trees and emerald ash borer, and be vigilant about inspecting trees and reporting concerns. Nearly 20 percent of Wisconsin's urban, non-forest tree population is ash. This percentage is much higher in communities where ash has been a popular replacement for elm.

For tree identification resources, visit <http://dnr.wi.gov/org/land/forestry/treedid/> or www.botany.wisc.edu/wisflora/scripts/SearchResults.asp?Genus=Fraxinus

For EAB identification resources, complete with color photos, visit:

Signs & Symptoms of Emerald Ash Borer – www.emeraldashborer.info/files/e-2938.pdf

Native Borers & Emerald Ash Borer Look-alikes – www.emeraldashborer.info/files/e-2939.pdf

Don't Be Fooled by Emerald Ash Borer Look-alikes – www.emeraldashborer.info/files/E2944.pdf

➔Conduct/review your tree inventory. Determine the extent of the ash population and begin projecting the impact an EAB infestation could have on your community forest.

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Number 2

Summer
2006



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Newsletter Survey Inside

To help us better serve you, please respond to the enclosed survey in the center of the newsletter. Your input is important as we look at better ways of addressing your interests and needs. Complete the survey, fold in half, secure with tape and place in the mail. Postage is prepaid for your convenience. If you have any questions concerning the survey, please e-mail Laura.Wyatt@dnr.state.wi.us or call 608-267-0568. ✉

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Community Profile:

Tree City USA:
20 years
Population: 10,250
Miles of Streets: 78
Number of Parks: 11

Program Profile:

Staff:
City Forester Dan Wendorf
Crew: Kortney Pike & Jim Yates
Street department employees
Equipment :
TreeKeeper Online inventory program
30-foot bucket truck w/hydraulic hook ups
chipper
power pole saw
5 chain saws

2005 Department Budget:

Forestry: \$83,236

2005 Program Statistics:

Trees Pruned: 810
Trees Planted: 129
Trees Removed: 56

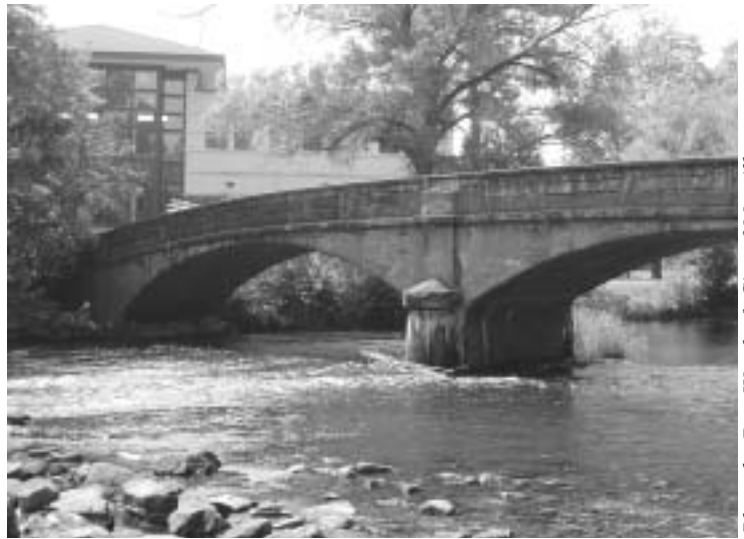
Community Profile:

City of Merrill

by Dan Wendorf
City Forester

After some strategic planning, a number of concerned citizens, the support of the parks and recreation department and a grant from the Wisconsin Department of Natural Resources, the City of Merrill began its urban forestry program in the summer of 1999. Merrill, population 10,250, is a historic logging town known as the *City of Parks*, with 11 city parks situated along the Wisconsin and Prairie Rivers. The initial urban forestry program was driven by the visible evidence of dead and dying boulevard trees suffering from years of neglect and posing safety risks to property owners.

To begin the program, Merrill hired a forestry consulting firm to perform a street tree inventory. The intent of the inventory was to collect and document specific information for every boulevard/street tree within the city limits. This information was entered into the forestry software that was purchased to manage all forestry related items. The survey found almost 7000 boulevard trees located throughout the city streets. These facts and figures were the basis for which the actual management plan was written. A tree board was formed consisting of an alderperson, three department heads, and a parks and recreation commission member. Their role is advisory to the city forester as a subsidiary to the parks and recreation commission. These two governing bodies composed a



The historic two-arch bridge crossing the Prairie River connecting Stanges Park to the national historic T.B. Scott Library, Merrill.

Photo by Dan Wendorf, City of Merrill

series of forestry ordinances to help govern the new forestry program; this was adopted by the common council.

With a new forestry program underway, there was a need for employees to carry out the actual work. The parks and recreation department and the tree board decided the best fit would be to have street department employees carry out the pruning and tree removal work. With the cooperation of the street department, through labor and equipment, the City of Merrill was ready to begin the task of eliminating the large number of hazard trees. This is a unique situation with departmental sharing of labor and resources that saves the city money while maximizing productivity. A used bucket truck was purchased along with chain saws, pole saws, hand pruners, safety equipment and accessories. The members of the street crew, along with the parks department

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Published quarterly by the Wisconsin Department of Natural Resources, Forestry Division.

Send your inquiries, address changes, or story ideas to Dick Rideout, Richard.Rideout@dnr.state.wi.us (608-267-0843) or Laura Wyatt, Laura.Wyatt@dnr.state.wi.us (608-267-0568).

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This newsletter is available in alternative format upon request and can also be downloaded in PDF format from our Web site: <http://dnr.wi.gov/org/land/forestry/UF/>

For breaking UF news, anecdotes, announcements and networking opportunities, sign up for The Urban Forestry Insider, DNR's twice-monthly e-newsletter. Archives are at <http://dnr.wi.gov/org/land/forestry/UF/resources/InsiderArchive.html>

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Arbor Day at the Capitol

by Laura Wyatt

DNR Urban Forestry Communications Specialist

While most celebrations remind us of past events, the celebration of Arbor Day looks toward the future. The future of Wisconsin's urban forests shone brightly as children celebrated Wisconsin's 134th annual Arbor Day on April 28th with a tree planting at the state capitol and achievement ceremony recognizing winners of the Forestry Appreciation writing contest and Arbor Day poster contest.

Students from Dousman and Green Bay joined state dignitaries and Smokey Bear in planting a large red oak on the capitol grounds as part of an effort to rehabilitate the Capitol Park urban forest. The red oak planting was a cooperative effort of the Wisconsin Nursery Association, the Bruce Company of Wisconsin and DNR—Division of Forestry.

Festivities moved indoors to the capitol senate parlor where statewide winners of the 2006 Arbor Day poster and essay contests were recognized and received congratulations from Lieutenant Governor Barbara Lawton, Deputy Secretary Bill Smith and Chief State Forester Paul DeLong.

This year over 2400 students from 165 schools across Wisconsin put their fondness for trees into words and artwork to commemorate Arbor Day. The theme of the 2006 poster contest, open to fifth grade students, was Trees are Terrific...in All Shapes and Sizes! The theme for the fourth grade writing contest was Gifts from the Forest. Both contests are sponsored by the Department of Natural Resources.

Winners of the poster contest are:

- Tayler Bowser, Barneveld Elementary School, Barneveld (first place)
- Kelly A. Sheehan, Hayward Intermediate School, Hayward (second place)
- Maya Medrow, General Mitchell Elementary School, Cudahy (third place)

Winners of the writing contest are:

- Isabella Devereaux, Sugar Camp Elementary School, Rhinelander (first place)
- Brandy Carroll, Royce Elementary School, Beloit (second place)
- Lyddia Elyse Calmes, St. Mary's Elementary School, Colby (third place)

The six winners received plaques and savings bonds worth \$100, \$75 and \$50 respectively from the Wisconsin Arborist Association and the Wisconsin Woodland Owners Association. In addition, the Wisconsin Nursery Association supplied a tree to each of the six student winners for planting at a local community site. Teachers of recognized students receive a scholarship for a Learning Experience &



Photos by Brent Nicastro

Students assist DNR State Urban Forestry Coordinator Dick Rideout (front & center) spread mulch on the newly planted red oak.

Activities in Forestry (LEAF) teachers' workshop plus additional classroom supplies.

The top 12 posters and essays from the contests are featured on-line at the DNR's Web site for kids, EEK! (Environmental Education for Kids). Click on "Cool Stuff" on the EEK! page, <http://dnr.wi.gov>. These top entries will also be featured in the 2007 Department of Natural Resources' Arbor Day—Earth Day calendar.

For information on how Wisconsin schoolchildren can enter the 2007 contests please visit <http://dnr.wi.gov/org/land/Forestry/Uf/awareness/>. ♻️

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*"Other holidays repose on the past; Arbor Day proposes for the future."
—J. Sterling Morton, Founder of Arbor Day*



Students, teachers and dignitaries celebrate Arbor Day at the 2006 statewide special achievement ceremony honoring the top three state winners of the fourth grade Forest Appreciation Week writing and fifth grade Arbor Day poster contests. From left to right (first row): first place poster, Tayler Bowser, Barneveld Elementary; third place poster, Maya Medrow, General Mitchell Elementary; second place poster, Kelly A. Sheehan, Hayward Intermediate; second place writing, Brandy Carroll, Royce Elementary; third place writing, Lyddia Elyse Calmes, St. Mary's Grade School; first place writing, Isabella Devereaux, Sugar Camp Elementary. Teachers and friends (second row): William (Bill) Smith, Deputy Secretary DNR; Mrs. Springer of Barneveld Elementary; Kathy Swingen, Wisconsin Nursery Association; Senator Roger M. Breske; Lieutenant Governor Barbara Lawton; Paul DeLong, Chief State Forester, DNR; Mrs. Michels of Royce Elementary; Kendra Johncock, Wisconsin Woodland Owners Association; Sarah Gilbert, Learning, Experiences & Activities in Forestry (LEAF) Program; Dave Graham, Wisconsin Arborist Association and Mrs. Jean Miazga of Sugar Camp Elementary.

A Celebration of Community Forestry

by Laura Wyatt
DNR Urban Forestry Communications Specialist

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Community representatives from throughout the state gathered in Madison in March to celebrate and recognize Tree City USA communities and Tree Line USA utilities. Over 350 mayors, council members, staff and community volunteers attended networking sessions and a reception and banquet honoring the award recipients for 2005.

Wisconsin ranks third in the nation with 162 Tree City USA communities. The group includes five new Tree Cities and 24 recertifying Tree Cities that received a Growth Award for going above and beyond the Tree City USA program standards.

To be recognized as a Tree City USA, a community must meet four requirements. It must have 1) a designated tree board or forestry department, 2) an annual forestry program expenditure of at least \$2 per capita, 3) a tree ordinance and 4) observe and proclaim Arbor Day.

Twelve utilities with Wisconsin service areas received Tree Line USA

recognition in 2005. To be recognized as a Tree Line USA, a utility must meet three requirements. It must 1) provide quality tree care that follows national tree care and protection standards, 2) provide annual worker training and 3) sponsor ongoing tree planting and public education.

The Tree City USA program, sponsored by the National Arbor Day Foundation and administered in Wisconsin by the DNR, provides communities with a tangible goal and national recognition for their community forestry efforts.

Congratulations to Wisconsin's 2005 Tree Line USA recipients:

Alliant Energy	Stoughton Municipal Utilities
East Central Energy	Vernon Electric Cooperative
Hartford Electric	WE Energies
Madison Gas and Electric	Wisconsin Public Service Corporation
Pierce Pepin Cooperative Services	Xcel Energy
Richland Electric Cooperative	
Shawano Municipal Utilities	

Congratulations to Wisconsin's 2005 Tree City USA recipients:

Adams	Greendale	Oak Creek*
Albany	Greenfield *	Oakfield
Algoma *	Greenville, town* (Outagamie)	Oconomowoc
Allouez	Hales Corners	Oconto
Amherst	Hartford	Onalaska
Antigo *	Hillsboro	Oshkosh
Appleton	Hobart	Paddock Lake
Ashland *	Horicon	Phillips
Ashwaubenon *	Howard	Plover
Baraboo	Jackson	Plymouth
Bayfield	Janesville	Port Washington
Beaver Dam *	Jefferson	Portage
Bellevue	Johnson Creek	Rice Lake
Beloit	Kaukauna	Richland Center
Bloomer	Kenosha	Ripon
Brillion	Kewaunee	Rosendale *
Brookfield	Kimberly	Rothschild
Brown Deer	La Crosse	Saukville
Cambridge	Lake Geneva	Shawano
Cedarburg *	Lake Mills	Sheboygan
Chenequa	Lawrence, town (Brown)	Sherwood
Chilton	Little Chute	Shorewood
Chippewa Falls	Lodi	Shorewood Hills *
Clinton *	Madison	Sparta
Clintonville	Madison, town (Dane)	Spooner *
Combined Locks	Manitowoc	Stevens Point *
Cottage Grove	Maple Bluff	Stoughton *
Cudahy	Marinette*	Sturgeon Bay
DeForest	Marion	Sun Prairie
Delafield	Marshall	Superior
Delavan	Marshfield	Theresa
Denmark	Medford	Thorp
DePere *	Menasha	Tomahawk
Dodgeville	Menominee, town* (Menominee)	Two Rivers
Dresser	Menomonee Falls	Verona
Eau Claire *	Menomonie	Washburn
Edgar	Mequon	Waterford, town (Racine)
Elkhart Lake	Merrill	Waterford, village
Elkhorn	Middleton	Waterloo
Elm Grove	Milwaukee	Watertown
Evansville *	Mineral Point	Waukesha
Fitchburg *	Monona	Waunakee
Fond du Lac	Monroe	Waupaca
Fontana	Monticello	Wausau
Fort Atkinson *	Mount Horeb	Wautoma
Fort McCoy	Muskego	Wauwatosa
Fox Point	Neenah	Wescott, town* (Shawano)
Franklin	New Berlin	West Allis
Fredonia	New Glarus	West Bend*
Fremont	New Holstein	Weyauwega
Germantown	New London	Whitefish Bay
Gilman	North Fond du Lac	Whitewater*
Glendale		Williams Bay
Grafton		Wisconsin Rapids
Grand Chute, town (Outagamie)		
Green Bay		

* 2005 Growth Award Recipient

New Tree Cities are shown in **bold**



Photo by Jeff Roe

Art Bushue, Clinton Village trustee and Tree Committee chair poses with the new Wisconsin Tree City USA display.



To learn how your community can become a Tree City USA, contact your DNR regional urban forestry coordinator (refer to contact information on the back cover of the newsletter) or visit the DNR Web site at www.dnr.state.wi.us/org/land/forestry/uf/.

Project Profile:

Trees for Viola

by Michael LaBissoniere
DNR South Central Region

(Portions of this article were gleaned from articles published in the April 29 and April 30, 2006, La Crosse Tribune. The author of the articles, Dan Simmons, has graciously approved our use of his work.)

The Village of Viola, Wisconsin, located on the border of Richland and Vernon counties, was the striking point for one of several tornados to affect southern Wisconsin on August 18, 2005. Thankfully, none of the population of 667 lost their lives in the storm. They did, however, lose an important part of their community—an estimated 1000 of the village's trees were destroyed or damaged.

Immediately after the storm, volunteers began arriving to assist with the clean-up effort and the planning to replant Viola began. The volunteers worked very hard. "They didn't show up to eat donuts," said Village President Dick Johannesen. A group named Trees for Viola was eventually formed to put Viola's urban forest back together.

The storm caused an estimated \$2.4 million in village and private property damage and Federal Emergency Management Agency funds were expected to help with the recovery effort. However, the agency was overextended due to the multiple disasters of the summer and fall. Fortunately, a \$600,000 Wisconsin Department of Commerce reconstruction grant and another \$821,800 block grant, shared by Vernon and Richland counties, assisted with the cleanup efforts. With the guidance of President Jill Corwith, Vice President Bill Wheeler, Treasurer Harley McMillen and Secretary Jim Mathes, Trees for Viola has raised over \$29,000 for replanting and other community restoration projects. An additional nonprofit organization, the Vernon-Richland Recovery Project, has raised over \$85,000 in private donations to be distributed to the community.

Upon learning of Viola's losses, the fifth- and sixth-grade students in nearby Cashton decided they needed to help their neighbors. By selling hot chocolate over a two-day period, the students raised \$717 for Trees for Viola. In addition, with the assistance of teachers Sue Hutchens and Rita Schaldach and parent Carol Gronernus, the sixth graders made a king-sized quilt to be used as a raffle prize. Upon finishing the quilt and selling raffle tickets, the quilt's winner was chosen—teacher Sue Hutchens, who decided she couldn't accept the prize. The alternate winner, who turned out to be Hutchens's mother, decided she couldn't accept the



Students from Cashton, WI, construct a quilt featured as a raffle prize for a Trees for Viola fundraiser.

quilt either. The Hutchens family re-donated the quilt to the village, which will be auctioned off to raise additional funds for Trees for Viola.

On the weekend of April 29, 2006, hundreds of volunteers again showed up to assist with sod removal, planting, mulch delivery and watering. Over the weekend 390 volunteers from over 30 different volunteer organizations, including members of the Richland Center and La Crosse, Wisconsin, forestry departments, chipped in to help restore the village's tree-lined streets and yards.

Approximately 300 trees were planted during the weekend. Additionally, two semitrailer loads of mulch ground from the original 27,000-cubic-foot storm debris pile were used to protect the new trees. In a way, the old is now helping to protect and nurture the new.

After the work was completed on Saturday, a celebration dance was held that night at Viola's community building. The dance was well attended, but according to Patrick Dayton of the Southwest Badger Resource Conservation and Development group, "Everybody went home early. Everyone was too tired from the day's events."

With Part 1 of their plan complete, Trees for Viola plans to replicate and improve upon this effort during the next two years, ending with the planting of the 1000th tree in April, 2008. According to Harley McMillen, "This small village has really demonstrated a spirit of community and caring. If there was ever a need to show good news to the world, Arbor Day in Viola would be a wonderful example."

"A green tree is a peaceful thing," says Jim Matthes. "And it's a sign we're finally starting to heal up." ❁



Over 390 volunteers gathered in Viola over Arbor Day weekend to assist with tree planting and other projects.

Photos by Michael LaBissoniere

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Community Tree Profile:

Canadian Hemlock, Eastern Hemlock (*Tsuga canadensis*)

by Laura G. Jull
Dept. of Horticulture
University of Wisconsin–Madison

Native To: Eastern US and Canada;
native to Wisconsin

Mature Height: 40–70'

Spread: 30–35'

Form: Graceful, pyramidal, with horizontal branches that are slightly pendulous; fine, lacy texture. Terminal leader is drooping.

Growth Rate: Moderate

Foliage: Evergreen, needle-like, soft, flattened, linear, horizontal, 2-ranked (paired with an extra row of needles along top of stem), 1/4 to 2/3" long; glossy, dark green above; two white stomatal bands underneath; obtuse tip, finely toothed margins, short petiole; needles borne singly on branch in overlapping, flattened sprays. New needles in spring are yellowish green.

Buds and Stems: Light grayish brown, slender, flexible, slightly pubescent when young becoming glabrous (smooth) when older. Buds are tiny, ovoid, non-resinous with pubescent scales.

Fall Color: None; evergreen, but does lose some inner needles each fall.

Cones: Pale green turning brown; small, ovoid, 1/2 to 1" long; borne on slender, pendulous stems in late summer to winter. Cones are persistent and resemble tiny ornaments.

Bark: Brown, flaky to scaly when young becoming cinnamon-red to darker brown; deeply furrowed with wide, flat ridges.

Site Requirements: Prefers an organic, rich, cool, loamy to sandy loam soil and slightly acidic to neutral pH. It will not tolerate poorly drained, compacted, heavy clay soils. It tolerates full sun to shade and requires moist, well-drained soil. Canadian hemlock is sensitive to drought, heat, drying winds, road salt and air pollution.

Hardiness Zone: 3b to 7a

Insect & Disease Problems: Can get spider mites, root rot, leaf miners, borers, scale, rust, cankers and hemlock woolly adelgids—an insect which has



Photos by Edward Hasselkus, Professor Emeritus, UW-Madison

Canadian hemlock tree

decimated trees in the eastern US. Can winter burn in exposed areas subjected to sweeping, drying winds and intense winter sun exposure. Canadian hemlock is susceptible to deer browsing.

Suggested Applications: Canadian hemlock is a beautiful, graceful, specimen tree for home yards or parks. It can be planted as a screen and can be trained as a hedge when young. This evergreen does quite well in the shade and does prefer some afternoon shading. There are numerous cultivars to choose from and many dwarf forms that can be used as foundation plants, in shrub borders or in rock gardens. Cones are very ornamental and cut foliage with cones can be used in Christmas arrangements and outdoor wreaths, though the foliage dries out quickly.

Limitations: Needs protection from winter sun and drying winter winds. Not tolerant to heavy clay, poorly drained soils, high pH, drought, hot, dry winds or road salt.

Comments: Canadian hemlock is a non-invasive, native, showy evergreen tree with soft, linear, dark green needles. The form is very graceful with pendulous branch tips and the cones are tiny and do not make a litter mess. Hemlock can be used in native woodland gardens. The needles can be used to make a tea that is high in vitamin C.

Common Cultivars or Selections: There are many more cultivars commercially available in addition to those listed.

'Albo-spica': white new growth, wider and faster growing than 'Gentsch White'; 6 to 15' tall

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Canadian hemlock cones

Notes from the Plant Disease Diagnostics Clinic

by Brian D. Hudelson, Director
UW-Madison Plant Disease Diagnostics Clinic

If there are two words to describe the 2005 growing season, they are *water stress*. In many areas of Wisconsin, the previous summer was one of the driest on record, and those dry conditions, in combination with drought in many areas of the state in 2002, 2003 and the late summer and fall of 2004, have been very tough on many trees and shrubs. The Plant Disease Diagnostics Clinic received numerous samples of woody ornamentals exhibiting varying levels of—and different variations on—water stress problems.

The earliest of the water stress-related issues that I saw in the PDDC in 2005 was “winter injury.” In its classic form, winter injury is a problem primarily of conifers/evergreens and is characterized by the browning and death of needles over the winter. In particular, I saw this problem on yews and less frequently on junipers. Winter injury is basically a dehydration problem. Conifers/evergreens that suffer from winter injury typically have not received adequate water in the fall, and thus do not have sufficient internally stored water to carry the tree or shrub through the winter. Winter injury-affected needles simply dry out. Variations of winter injury occur on deciduous trees as well and are typically manifested by trees that, while healthy the previous fall, may not leaf out the following spring. If the trees do leaf out, they may leaf late and have leaves that are smaller than normal. In 2005, ash trees in particular seemed to exhibit these sorts of symptoms.

The more traditional symptoms of water stress are those that occur during the summer from lack of rain, i.e., drought stress. When conifers/evergreens suffer from a lack of rain, they may initially show signs of a purpling of needles, typically starting at the tips of branches or the tops of trees, i.e., those areas farthest from the root system, and subsequently working its way into the interior of the tree. This purpling is oftentimes most distinct on Colorado blue spruce. As the water stress becomes more severe, needles brown and then can shrivel and drop off trees, leaving bare branch tips. Purpling of needles also can be caused by *Rhizosphaera* needle cast, a common fungal disease of Colorado blue spruce. However, *Rhizosphaera* needle cast initially leads to needle discoloration and loss on interior needles and the disease progresses out toward the branch tips. On deciduous trees, drought stress often manifests itself as leaf scorch, a marginal browning and death of leaf tissue. Extreme drought stress can lead to defoliation and eventually branch death.

In addition to having direct effects on plant growth and vigor, water/drought stress can also have indirect

effects through interactions with disease and insect pests. In the disease realm, vascular wilt diseases (e.g., Dutch elm disease, oak wilt and *Verticillium* wilt) often become more visible in drought years. The blockage of water due to the colonization of a tree’s xylem by vascular wilt pathogens, in combination with a lack of water in soil available for uptake by trees and shrubs, can be particularly lethal, resulting in an accelerated development of wilting, dieback and eventual plant death. In the insect world, activity by those such as the two-lined chestnut borer tends to be more prevalent on trees that are under water stress. In 2005, death of branches in oaks due to chestnut borer activity was quite common and was oftentimes confused with oak wilt.

The best means of preventing water stress on trees and shrubs is to have regular rains. However, over the past several years, Mother Nature has been extremely uncooperative. With a lack of rain, supplemental watering becomes critical, particularly for trees that are drought intolerant, or for those trees that are focal points of a landscape setting. I typically recommend using a soaker or drip hose for irrigation. Sprinkler irrigation tends

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What Damaged This Tree?



Photo by Jeff Haggfors, Wachtel Tree Science & Service

Hint: Topping the tree, while a contributing factor, did not cause the tree to die. Turn to page 15 to find out. . .

Wisconsin Urban Forestry Council Awards

by Laura Wyatt
DNR Urban Forestry Communications Specialist

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The Wisconsin Urban Forestry Council presents annual awards in recognition of outstanding individuals, organizations and communities that further urban forestry in Wisconsin. The 2005 awards were presented at the annual Wisconsin Urban Forestry Conference held in Green Bay, February 2006.

The Distinguished Service Award was presented to Paul Hartman, former Brown County Extension horticulture agent, in recognition of 30 years of service promoting horticulture and urban forestry knowledge to area residents. The Distinguished Service Award recognizes individuals for their outstanding contributions to urban forestry in Wisconsin.

The Project Partnership Award went to the City of Algoma and Algoma High School Environmental Science Class for their cooperation in developing the Algoma High School Arboretum. The Project Partnership Award recognizes outstanding projects that have developed new partnerships in urban forestry.



(L to R) UF Council Awards Committee Chair Mike Michlig poses with Project Partnership Award recipients Eric Nelson, Michelle Paul, Tom Romdenne, Joe Walag, Barb Rodgers and Gary Paape.

The Long Term Partnership Award went to the City of Ashland and Sigurd Olsen Environmental Institute in recognition of their cooperative commitment to urban forestry and the progress made in furthering urban forestry in the city of Ashland. The Long Term Partnership Award recognizes the work of groups that have established long-term working partnerships that involve new means of providing service to the urban forest.

The Innovations in Urban Forestry Award was not presented this year. This award recognizes a community, individual, association or organization exhibiting outstanding innovations in the development and enhancement of urban forestry projects or programs. ♻

Nominations are currently being accepted for the 2006 awards. Visit www.dnr.state.wi.us/org/land/forestry/UF/council/awards.html for nomination information. Deadline is December 15, 2006.



UF Council Awards Committee Chair Mike Michlig (left) congratulates Paul Hartman on receiving the Distinguished Service Award.



(L to R) UF Council Awards Committee Chair Mike Michlig poses with Long Term Partnership Award recipients Mike Gardner, Sigurd Olsen Environmental Institute, and Dan Maderich, City of Ashland.

Photos by Jeff Treu

Coming Events

September 19, 2006 – Wisconsin Urban Forestry Council Quarterly Meeting, Madison, WI. Contact Laura Wyatt, 608-267-0568, laura.wyatt@dnr.state.wi.us.

October 1–5, 2006 – Society of Municipal Arborists Annual Conference, Asheville, NC. Contact Jerri LaHaie at urbanforestry@prodigy.net.

October 11–13, 2006 – 7th Canadian Urban Forest Conference, Loews Le Concorde Hotel, Quebec City, Quebec, Canada. Contact www.7ccfu.ca/accueil_e.htm.

November 9–11, 2006 – TCI EXPO, Baltimore Convention Center, Baltimore, MD. Contact Tree Care Industry Association, 800-733-2622, ext. 106 or info@treecareindustry.org or www.tcia.org.



Urban Forest Insect Pests:

Redheaded Ash Borer

by Linda Williams, Forest Health Specialist
DNR Northeast Region

Redheaded ash borer (*Neoclytus acuminatus*) is a longhorned beetle that attacks ash, hickory, oak, linden and other species. The adult beetles are a reddish color with three pairs of yellow stripes on their wingcovers on their back. In spring the adults lay their eggs in crevices and cracks in the bark of trees that are under stress. The eggs hatch and the larvae bore into the tree. For the first few days the larvae, which look like white worms, tunnel under the bark in the cambium layer but then rapidly move deeper into the wood. The larvae spend most of the summer boring throughout the wood of the tree. As the larvae grow, the tunnels that they chew get larger and cause more structural damage. This damage can weaken the tree and the tree could break over. Mature larvae spend the winter inside the tree. They pupate and emerge as adults the following spring when they mate, lay eggs, and start the cycle over. Adult beetles chew a circular hole out of the bark as they emerge.

Newly planted ash trees are particularly prone to attack by this insect as are dying or declining ash trees and freshly cut logs. Signs of attack include circular exit holes, tunneling deep into the wood (you might notice this while pruning), branch dieback, stem breakage and tree mortality. Because this insect bores deep into the wood it is protected from insecticides, including systemic insecticides which primarily operate in the cambium layer just under the bark. Natural enemies that attack redheaded ash borer include nine species of parasites and predators, and woodpeckers that feed on larvae under the bark. Keeping your trees healthy will decrease the likelihood of attack by this insect; this should include watering your trees during a drought year. ❁



Photo by Linda Williams, WDNR

Redheaded ash borer larvae create tunnels deep into the wood of the tree causing structural weakness.

Notes from the Plant Disease Diagnostics Clinic

continued from page 7

to be inefficient in that much of the water can be lost to evaporation, particularly if water is applied during the hottest parts of the day. Also, with sprinkling systems, the leaves of trees and shrubs often get wet, and this can contribute to an increase in the incidence and severity of leaf diseases. For most established trees, about one inch of water per week (from rain and supplemental watering) is sufficient. Applying this amount of water to the entire root zone (the area delimited by on the order of three to five times the diameter of the dripline of the tree) is often impractical or impossible. Therefore I typically recommend concentrating watering

efforts in the area around the dripline. In addition, turf tends to compete very effectively with trees and shrubs for water. Therefore homeowners may want to consider removing as much turf as possible from around trees to reduce competition. Areas where turf is removed should be mulched with a high-quality mulch (my personal favorite is red cedar). Use one to two inches on heavy clay soils and three to four inches on sandy soils.

With proper care, including regular watering, homeowners can keep their trees healthier and happier, even in the driest of years. ❁

November 29, 2006 – Wisconsin Urban Forestry Council Quarterly Meeting, Madison, WI. Contact Laura Wyatt, 608-267-0568, laura.wyatt@dnr.state.wi.us.

December 3–6, 2006 – 2006 American Society of Consulting Arborists Annual Conference, Silverado Country Club & Resort, Napa, CA. Contact ASCA, 301-947-0483 or asca@mgmtsol.com or www.asca-consultants.org/conferences.html.

January 17–19, 2007 – Mid-Am Trade Show, McCormick Place, Chicago, IL. Contact www.midam.org.

February 20–23, 2007 – 2007 American Society of Consulting Arborists Consulting Academy, Hyatt Regency Hotel, Sacramento, CA. Contact ASCA, 301-947-0483 or asca@mgmtsol.com or www.asca-consultants.org/conferences.html. ❁

If there is a meeting, conference, workshop or other event you would like listed here, please contact Dick Rideout at 608-267-0843 with the information.

Urban Forestry Council Review of 2004–2006

by Dave Liska, Chair
Wisconsin Urban Forestry Council

Hard to believe, yet nevertheless true, it has been two years that I've had both the honor and the privilege to chair the Wisconsin Urban Forestry Council. Since this is my last official chairperson message, I thought it would be an ideal opportunity to present a two-year status report of council activities.

Council Structure

An executive committee consisting of the council chair, vice-chair and past chair was established. The incorporation of the past chair into the committee provides continuity and ensures *institutional memory* is maintained. The executive committee will be developing position descriptions for council members and consider the addition of a mid-population community representative.

Speaking of committees, the communication and conference committees were redefined and are now chaired by Heather Mann and Dan Traas, respectively. The former nominations committee has morphed into the nomination/orientation committee and the awards committee. These are currently chaired by Jeff Edgar and Mike Michlig, respectively.

Major UF Council Initiatives

Governor's Conference on Forestry

During November of 2004 the council was given the opportunity to actively participate in the Governor's Conference on Forestry. This conference was part of the *One Hundred Years of Wisconsin Forestry* observance. A broad array of forestry interests gathered to find common ground, explore partnerships and consolidate interests. It was extremely successful in identifying areas of concern between traditional forestry and urban forestry. Lines of communication were opened regarding invasive and exotic species, forest fragmentation/canopy loss and public awareness/education.

Learning, Experiences & Activities in Forestry (LEAF)

The Wisconsin Center for Environmental Education asked the council to provide input for an urban forestry component to the LEAF program. Previously this program focused exclusively on traditional forestry. In the future it will provide definitions, concepts and activities that focus specifically on urban forestry. This will be incorporated into all K–12 Wisconsin public school curriculums. It will become an invaluable tool that provides accurate urban forestry information and public awareness.

Invasive and Exotic Species

The governor's Wisconsin Council on Forestry has identified invasive and exotic species as a critical issue facing both Wisconsin's traditional and urban forests. The governor's council has organized four committees to review and develop best management practices for addressing invasive species within urban forestry, traditional forestry, recreational forestry and transportation/right-of-way forestry. The Urban Forestry Council has accepted the daunting task of identifying best management practices for urban exotic and invasive species. Dr. Laura Jull, Department of Horticulture, UW–Madison, has graciously agreed to chair the committee on behalf of the Urban Forestry Council. Once the four committees have completed their work, a compendium outlining BMPs for Wisconsin's invasive and exotic species will be available.

Tree City USA Banquet III

The third Tree City USA state banquet was held in March 2006. It was a resounding success! Two-thirds of the Tree Line USA utilities and a majority of the Tree City USA award recipients were in attendance at Monona Terrace in Madison. This year's event featured a symposium, educational break-out sessions and numerous informational displays and educational booths. The highlight of the evening was the keynote address by the council's own Dr. R. Bruce Allison. His presentation was "Every Root an Anchor: Wisconsin's Famous and Historic Trees." The banquet not only recognizes communities and utilities for their efforts but it also fosters, reinforces and promotes the value of urban and community trees. This event owes its success to the efforts of DNR State Urban Forestry Coordinator Dick Rideout, the regional urban forestry coordinators, DNR support staff as well as council members. It was wonderful celebrating Wisconsin's urban forest with folks throughout the state. I'm looking forward to Tree City USA IV.

These last two years have been productive, eventful and quite hectic at times. The council has continued to define and refine itself. It is a body that has sharpened focus and clarified direction. Council members have become active participants on many fronts. However, to successfully promote and forward the cause of community and urban forestry, we need you!! Your input is absolutely essential. The council is the vehicle that conveys your thoughts, concerns and issues to DNR staff and State Forester Paul DeLong. Together we have the potential to become a very powerful team!!

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Recruiting Champion Tree Inspectors

by Ian Brown

DNR Urban Forestry Assessment Specialist

The Wisconsin Champion Tree program will be resurrected once again! As you may be aware, the most recent publication of the DNR Champion Tree registry was 1998. Needless to say, that is far too long for a publication originally designed to be published annually or biennially. Champion trees are a wonderful resource and interest in the program has continued to flourish despite the lack of updated publications. Regrettably, all contact information for previous and current Champion Tree Inspectors was lost due to database corruption. This is a call to citizens and forestry related professionals with an interest in verifying nomination measurements for the Wisconsin Champion Tree program. Please send your name, address and contact information, including phone (with area code) and e-mail, to Ian Brown, DNR, 101 S. Webster St., PO Box 7921, Madison, WI 53707; ian.brown@dnr.state.wi.us, 608-264-8852. In addition, please indicate the counties you would be available to service and if you have previously been a Big Tree Inspector. Thanks! 🌳



American elm in Kewaunee County

Photo by Tom Skubal

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City of Merrill *continued from page 2*

employees, were trained in tree pruning and removal techniques. These employees continue to attend forestry training courses each year, such as tree structure and function, identifying tree diseases, chain saw safety, bucket truck safety, and proper pruning techniques.

The new management plan called for the city to perform a number of initial tasks. First and foremost was to eliminate the hazard risks with dead and dying limbs and trees for public safety.

Another was public awareness and education. Parks and recreation department employees went door-to-door with a survey and informational brochures to inform the citizens of our new happenings. The city forester also gave presentations to local grade schools on the importance of trees and forestry in everyday life. In 2004, the city forester also received a grant to design, publish and distribute a forestry brochure. This brochure was very specific to the Merrill forestry program and what it offers Merrill residents, from plantings to prunings, tree structure and function, diseases and pests. The response to this brochure was overwhelming. Numerous residents have called the department to express their appreciation for the information that they had been unaware of.

Since the first year of the urban forestry program, Merrill's forestry program has been averaging expenditures of \$40,000 including labor, plantings and prunings. Street department crews prune 300–400 trees per year with removals averaging 30 per year.

The parks and recreation department has been planting and replacing 20–30 trees per year. We would like to maintain the level of replanting to keep up with removals.

Some notable accomplishments include the removal and replacement of approximately 60 trees along East Highway 64 in 2004. The highway was widened causing many large, beautiful trees to be removed along this one-mile stretch. Many residents affected by this project were very angry with the removal of their trees. The city forester, city engineer and street commissioner, along with their crews, worked together with the residents to ensure proper replacement of these trees. After the replanting was complete, the affected residents were very thankful for the effort and coordination to provide them with new trees. Another accomplishment came with the construction of Merrill's new Prairie Trails Park. Prairie Trails is a 99-acre park being developed with a \$450,000 stewardship grant. This park was previously under water so there were no trees when we began. To date we were able to plant, through purchase and donation, over 100 trees along the new 2.5-mile trail system and throughout the property.

In the future, the City of Merrill would like to continue its management program in an aggressive fashion, through updating equipment, employee trainings and public education. It is our goal to make beautifying Merrill's street trees a community-wide effort. 🌳

Preparing for Emerald Ash Borer

continued from page 1

➔ Survey existing ash to establish a health baseline. Declining ash trees could be removed and replaced on an accelerated schedule to help spread impending workloads over a longer period of time. The removal of undesirable ash trees and the disposal of wood will be easier before a local infestation occurs. A survey of existing ash will also help prioritize where efforts should be concentrated.

➔ Begin modifying or developing an EAB tree management response plan. How many trees could be lost? How much could removal costs run? Will additional funds be available for removals or will routine maintenance be delayed as funds are diverted to removal efforts? How will infested wood be handled? What about replanting?

➔ Begin to develop a readiness plan. Recruit key stakeholders to assist in the development of a plan which would be implemented if an infestation is identified in your community. Important components of your plan should include: communication and public relations, media contacts, ordinances, authority to remove nuisance trees on private property, debris handling and disposal, tree replacement and more. The DNR is producing guidelines to assist communities in developing readiness plans. Until the publication is available, reference the Illinois EAB preparedness planner at www.dnr.state.il.us/conservation/forestry/EmeraldAshBorer/EABCommReadinessPlan2006.htm. You will need to modify the information for the state of Wisconsin and your community.

➔ Report possible EAB sightings in Wisconsin to the toll-free EAB hotline, 1-800-462-2803, operated by the Department of Agriculture, Trade and Consumer Protection. Three or more of the following symptoms should be observed before calling the hotline:

- dying ash with sprouts on the trunk or at the base of the tree
- D-shaped exit holes in the bark
- winding, S-shaped tunnels underneath the bark
- bullet-shaped, iridescent green beetles from June to August
- increased woodpecker activity on ash trees

Alternatively, insect specimens can be submitted to your county extension office, DNR forester or the UW Insect Diagnostic Lab at 1630 Linden Drive, Madison, Wisconsin 53706. Instructions for sending samples to the Insect Diagnostic Lab are on the Web at www.entomology.wisc.edu/entodiag.html.

➔ Do all you can to prevent the spread of EAB. **DO NOT MOVE FIREWOOD.** This insect moves very slowly on its own but may be transported long distances in infested firewood, logs and nursery stock. Quarantines and restrictions on the movement of nursery stock and wood products are in place. **The**

movement of firewood by individuals—knowingly or otherwise—is the cause of most new infestations. EAB is just one of many foreign insect and disease pests transported on firewood.

A DNR emergency rule prohibits bringing firewood from outside Wisconsin into state managed properties this summer. A proposed permanent rule would prohibit firewood from farther than 50 miles of the campground or property from entry onto department lands. The goal of this rule is to prevent introduction of invasive pests into state parks and forests by limiting the movement of firewood that carries them.

For additional information:

- contact your nearest DNR service center for printed information
- the multi-state EAB Web site is www.emeraldashborer.info
- WDNR Web site <http://dnr.wi.gov/org/land/Forestry/FH/Ash/index.htm>
- WDNR invasives Web site <http://dnr.wi.gov/invasives>
- UW EAB Web site www.entomology.wisc.edu/emeraldashborer

What will happen once EAB is discovered in Wisconsin?

The Department of Agriculture, Trade and Consumer Protection is the lead agency and is drafting Wisconsin's State Response Plan in cooperation with the DNR and USDA Animal Plant Health Inspection Service. The plan outlines actions related to the discovery and confirmation of EAB in the state and provides the overall strategy for management of this insect.

If EAB is found in Wisconsin, the current plan calls for all ash trees within one-half mile of infested trees to be removed. The state strategy is guided by the national EAB Science Advisory Panel and its success relies heavily on federal funds. The state's strategy will be constantly evaluated and may change based on new science-based management options, available funding and any national strategic changes.

Who will pay for tree removal?

In Michigan where EAB was first discovered, associated costs have run into the millions of dollars. Federal funds may be available to help offset some local costs of tree removal in designated eradication sites. Funds for tree removal outside an eradication site are more limited with removal cost generally the responsibility of the property owner.

Can my ash trees be protected?

Chemical treatments to protect ash trees from EAB are somewhat controversial. Recommendations vary, with some recognized authorities suggesting treatment options be considered only for trees located within a two-mile perimeter of an eradication zone, others suggesting treatment within a fifty-mile

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Look for D-shaped exit holes the adults of EAB leave behind in the bark upon emergence in June and July.



Peel bark away to expose the S-shaped, serpentine-like tunnels.

Photos by Dave Cappaert, Michigan State University, courtesy of www.emeraldashborer.info

The Idea Exchange...

compiled by Olivia Witthun
DNR Northeast Region

Landfill to Become Urban Forest

A notorious landfill site in Glasgow, Scotland, will be transformed into the largest urban forest in the United Kingdom. More than a million trees will be planted on the 230-acre site which borders the M74 motorway. The ambitious project is part of a larger campaign to green the east end of Glasgow. It all began when 3000 surveys were sent to area residents. An astonishing 94 percent backed the proposal. The city council quickly approved the plan. Funding to create the urban woodland will come from the landfill tax. Once completed, motorists entering Glasgow from the east will drive through a lush, green forest rather than a landfill site, exactly the city image Glasgow wants to create. *Source: Chris McAuley, "Landfill Site to Become the UK's Largest Urban Forest," The Scotsman, April 29, 2005.*

Touch Trees

Third graders in Holden, Massachusetts, have an educational program called Touch Trees. The goal of the program is for students to develop a special relationship with the trees they plant to create a greater awareness of themselves and the world they live in by using tree biology, self-reflection, Native American teachings and hands-on learning. It begins

in the classroom with a discussion about the gifts trees provide and then shifts to what the students can give the trees. This teaches that the circle of giving comes back to the giver manyfold. Before planting, students get an opportunity to touch the tree roots and soil to gain an appreciation for the below-ground landscape of the tree. Students make a special wish, write it down on leaf-shaped paper and scattered it around the root ball as the trees are planted. Students checking back with their tree in coming years will remember the wishes they planted and their respect for the circle of giving. *Source: Tree Care Industry, Vol.16, No.11, November 2005.*

Fruit Trees Combat Hunger

TreePeople, a California nonprofit organization, has a program called Fruit Tree Giveaway. For the past 21 years, TreePeople has distributed free fruit trees in underserved Los Angeles County. Working with community organizations, about 3000 bare-root fruit trees are given to community gardens, schools, religious organizations and low-income people each year. The goal is to combat hunger and encourage self reliance for people who cannot afford fresh fruit. TreePeople also offers periodic workshops to teach recipients how to care for their new trees. *Info: www.treepeople.org.* ♻️

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Does your community or organization have an idea, project or information that may be beneficial to others? Please let your regional urban forestry coordinator know. We will print as many of these as we can. If you see ideas you like here, give the contact person a call. They may be able to help you in your urban forestry efforts.

Research Notes:

Wound Closure in Trees Affected by Paclobutrazol

by Shuju Bai¹, William R. Chaney² and Yadong Qi³

The effects of pruning and bark wounds on trees treated with the growth regulator paclobutrazol (PBZ) were investigated. Nine tree species were used in the research. Wound closure rates were reduced in five of the nine species treated with PBZ. These included black walnut, European black alder, red oak, sweetgum and white oak. Wound closure rates were not affected by PBZ treatment in American sycamore, white ash, white pine and yellow poplar. This rate of wound closure for PBZ treated trees parallels the rate of cambial growth for PBZ treated trees of the same species. The differences among the species wound closure rates were consistent with species' sensitivities to PBZ as reflected in dosage rate charts supplied by distributors.

Although slower wound closure rates can be considered a negative side effect, it is partially offset by the need for fewer pruning cuts and less frequent pruning. Additionally, the fungistatic property of PBZ may enhance decay resistance of a treated tree. ♻️

¹Department of Computer Science Assistant Professor, Southern University and A&M College, ²Department of Forestry and Natural Resources Professor of Tree Physiology, Purdue University, ³Urban Forestry Program Associate Professor, Southern University and A&M College

Reference: *Journal of Arboriculture*, Vol.31, No.6, November 2005.

Canadian Hemlock, Eastern Hemlock *continued from page 6*

'Bennett': dwarf shrub; layered, flat-topped branches; 3 to 4' tall

'Cole's Prostrate': stiff branches, prostrate form; 2' tall, mounded, wide-spreading, dwarf

'Geneva': upright, slow growing; thick main branches; dark green needles; 3 to 4' tall

'Gentsch White': white new growth; needs shade; shear to keep new growth coming; globular form; dwarf shrub; 5' tall

'Golden Splendor': upright with yellow foliage in sun; large, pyramidal form; 10' tall

'Jeddeloh': bright green, spreading mound; forms a bird's nest in center; 3 to 4' tall

'Monen': Emerald King™ hemlock; graceful branching, pyramidal form; stays green in winter; 40' tall

'Monler': Emerald Fountain® hemlock; dense, bushy, columnar form; 6 to 10' tall, 2 to 3' wide

'Nana': dwarf, globular form; cinnamon colored twigs and buds; dark green needles; needs shade

'New Gold': golden new growth in spring, turns all green; upright

'Pendula': weeping form, needs staking; 8 to 10' tall

'Sargentii': weeping form, pendulous branches; graceful; 10 to 15' tall, 8 to 10' wide or more; slow growing; needs staking to form leader and support weeping branches; if unstaked, it forms low-growing shrub

Related Hardy Species:

Tsuga diversifolia: Northern Japanese hemlock, hardy to zone 5; dark green foliage with twisted new shoots that reveal white stomatal bands underneath the needles. Graceful, pyramidal form, growing up to 30' tall; native to Japan where it grows much larger. Reported to be resistant to woolly adelgids.

References:

Landscape Plants for Eastern North America, 2nd ed., 1997, by Harrison L. Flint, John Wiley and Sons, Inc., New York, NY.

Manual of Cultivated Conifers, 1985, by Gerd Krüssmann, Timber Press, Portland, OR.

Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, 5th ed., 1998, by Michael A. Dirr, Stipes Publishing, Champaign, IL.

Native Trees for North American Landscapes, 2004, by Guy Sternberg and Jim Wilson, Timber Press, Portland, OR.

North American Landscape Trees, 1996, by Arthur Lee Jacobson, Ten Speed Press, Berkeley, CA.

The Right Tree Handbook, 1991, by Harold Pellett, Nancy Rose, and Mervin Eisel, University of Minnesota Extension Service, St. Paul, MN.

Trees of the Northern United States and Canada, 1995, by John Laird Farrar, Iowa State University Press, Ames, IA. 🌿

Urban Forestry Council Review of 2004–2006

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The following members of the Wisconsin Urban Forestry Council look forward to your input. For contact information refer to <http://dnr.wi.gov/org/land/Forestry/Uf/council/>.

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WI Chapter

Bob Dahl
Department of
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Matt Duvall
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Jeff Edgar
Silver Creek Nursery

John Gall
Wachtel Tree Science &
Service

Wayne Glowac
Glowac–Harris,
Madison, Inc.

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Foundation

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Blue Sky Tree Care

Ken Ottman
City of Milwaukee

Joan Stevens
Greenfield
Beautification

Dan Traas
Ranger Services, Inc.

Mark Weaver
National Park Service

Richard Welch
Superior Urban Forestry
Tree Board

Joe Wilson
Greening Milwaukee

Lisa Burban
USDA Forest Service

Dick Rideout
DNR State Urban
Forestry Coordinator 🌿

Urban Forestry Resources:

Trees Pay Us Back

compiled by Cindy Casey
DNR West Central Region

Do you need facts and figures to explain the benefits of community trees? Northeastern Area of the USDA Forest Service, State & Private Forestry's *Trees Pay Us Back* portal is as close as you can get to one-stop shopping for tree benefits information via links, PDFs and PowerPoints. Much of the data is specific to the upper Midwest. Visit <http://na.fs.fed.us/urban/treespayusback/index.shtm>.

Vol.1: i-Tree Results from Minneapolis, MN:

- “Minneapolis Municipal Tree Resource Analysis” — a cost-benefit modeling analysis based on forest structure and function (Are the city's public trees worth the cost?)
- “Assessing Urban Forest Effects and Values” — structure, health, benefits and values of the entire Minneapolis urban forest, both public and private
- “Midwest Community Tree Guide” — how to apply Minneapolis data to your own community; includes a worksheet for calculating benefits and comparing benefits of large, medium and small trees
- “Trees in Our City” — a short, simple PowerPoint presentation that communicates the benefits of community trees; particularly well suited for use with local elected officials

- “Trees Pay Us Back” — can be printed as a two-sided color brochure; succinct facts about tree benefits based on Minneapolis data

Vol.2: Tools for Communicating the Benefits of Trees:

- “Benefits of Trees in an Urban Setting: Selected Bibliography” — a comprehensive list of tree benefits citations by author and subject
- “Urban and Community Forestry Appreciation Toolkit” — educational materials include fact sheets, sample Letter to the Editor, action alerts, ready-made press articles, and more
- “Human Dimensions of Urban Greening” — a link to University of Washington, Center for Urban Horticulture Web site featuring several reports about the benefits of trees on the downtown business environment, parking lots and traffic safety
- “Conveying the Power of Trees” — a link to the Center for Human-Environmental Research at the University of Illinois at Urbana-Champaign Web site; contains articles, fact sheets and PowerPoint presentations about how trees and greenspace build better neighborhoods, and improve human health and wellbeing
- “Planting the Seeds of Success: Marketing the Urban Forest” — a handbook for reaching your audience to enlist their support for trees. 🌿

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Preparing for Emerald Ash Borer

continued from page 12

perimeter. A factor contributing to the different recommendations could be the difficulty in locating and demarcating initial EAB infestations. Nearly all agree chemical treatments are not 100 percent effective, need to be applied yearly and effectiveness can be negatively impacted by poor tree health.

If an EAB infestation is found, chemically treated ash trees will be cut and destroyed if they fall within the eradication zone. The decision to treat is a personal choice, but as long as eradication is planned, treated trees will not be given any special consideration in eradication efforts.

In future issues of *Wisconsin Urban & Community Forests* newsletter, we will explore in greater depth research and recommendations for chemical treatments for EAB. For current information and chemical recommendations, refer to the UW EAB Web site listed on page 12. As with most situations involving living organisms, the situation is fluid and ever changing. 🌿

What Damaged This Tree?

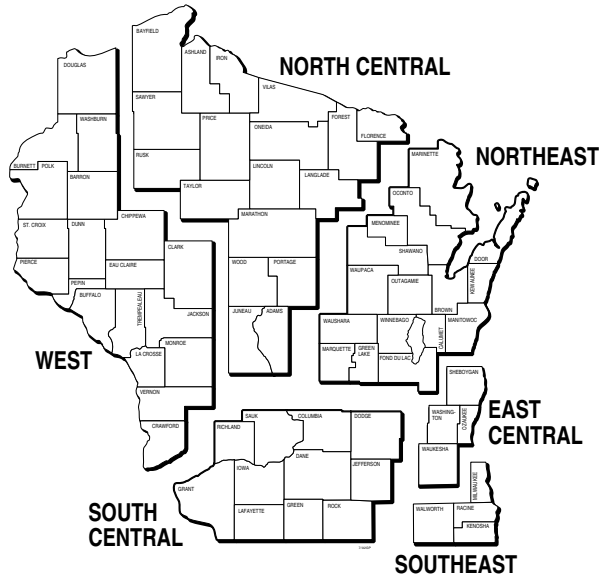


Improper staking – remove (or at least check) staking material after one year to prevent the tree from being strangled.

Photo by Jeff Hagfors, Wachtel Tree Science & Service

Do you have pictures of tree damage others ought to know about? Send them to Kim Sebastian (address on page 16) and we'll print them here!

Wisconsin DNR Urban and Community Forestry Contacts



World Wide Web Site: www.dnr.state.wi.us/org/land/forestry/uf/

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